



- UNESCO Chair on Experiential Learning, Work Education and Community Engagement
- Mahatma Gandhi National Council of Rural Education, India

# Action Research Project

Vocational Education by Subject Methodology in Teacher Education  
March 2023

Submitted by



Osmania University



महात्मा गांधी राष्ट्रीय ग्रामीण शिक्षा परिषद  
Mahatma Gandhi National Council of Rural Education

उच्चतर शिक्षा विभाग, शिक्षा मंत्रालय, भारत सरकार  
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Department of Higher Education, Ministry of Education, Govt. of India  
Shakkar Bhavan, Fateh Maidan Road, Basheer Bagh, Hyderabad 500004



# Action Research Project



## **Mahatma Gandhi National Council of Rural Education**

(Formerly National Council of Rural Institutes)

Department of Higher Education, Ministry of Education, Govt. of India  
Shakkar Bhavan, Fateh Maidan Road, Basheer Bagh, Hyderabad – 500004

**Title: Action Research Project – Vocational Education by Subject Methodology in Teacher Education**

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## Executive Summary

The Gandhian concept of education, which includes integrating work into the curriculum, has been a focus of Mahatma Gandhi National Council of Rural Education (MGNCRE). "Learning by doing" or Experiential Learning approach is being vigorously pushed forth and disseminated by MGNCRE and has been a policy cornerstone that National Education Policy 2020 supports. According to NEP2020 goals 16.5 and 16.6, at least 50% of students in the K–12 and postsecondary education systems must have access to professional training by 2025. This goal is in line with SDG 4.4 and enables India to fully utilise its population dividend. The development of professional capabilities will go hand-in-hand with the development of "academic" (P-44) or other talents, according to the policy paper. To achieve the same goal, MGNCRE started an action research programme (ARP). The programme has been put into action in conjunction with SCERTs from various states, Departments/Schools of Education from various institutions, as well as through apprenticeships with Research Scholars and M.Ed/MA (Edn.) students from numerous Universities and Higher Education Institutions (HEIs) across the country.

Workshops on Vocational Education in Teacher Education by Subject Methodology were conducted at SCERTs/Universities/HEIs all over India by collaborating with respective Departments of Education. The Workshops were meant for capacity enhancement of the faculty members in creating lesson plans integrated with vocational component. Subsequently, Minor Research Projects were sanctioned for the faculties who applied for one of four methodologies- Language, Science, Social Science and Mathematics. The researchers were required to develop 20 lesson plans per methodology for the successful completion of project.

The lesson plans that will be prepared as part of MGNCRE Minor Research Project will be an asset for future teachers and the participants will become Master Trainers for implementation of these lesson plans.

The goal of action research is to incorporate occupations into the classroom using subject methodology for Classes 9, 10, 11, and 12 in the areas of Language, Science, Social Science and Mathematics. It was carried out at two levels:

1. content analysis, which links professions to the central theme or subtopic of the researcher's selected textbook; and
2. creation of a fully developed lesson plan that is "ready to be implemented."

Workshops were also conducted by the apprentices across the states on Entrepreneurship and to spread awareness about Student Self Help Groups. On the other side, SCERT Level Minor Research Projects on Integration of Vocational Education in School Education through Subject Methodology are also coming to the stage of completion and submission.

Interns with M Ed and MA in Education from Universities of East, West, North, South and North Eastern States analyzed curricular content for a chosen grade and subject and integrated vocations that would allow students to experience income generation. This team is working on preparing Vocational Education Lesson Plans which are integrated with Teacher Education Methodology.

As Mahatma Gandhi said "True education must correspond to the surrounding circumstances. The function of Nai Talim is not to teach an occupation, but through it to develop the whole man." His principles and views on education have been MGNCRE's guiding force for its activities aligned with Nai Talim, Experiential Learning, Community Engagement, Vocational Education, Skilling and Entrepreneurship.

On the first day of the workshop, the faculty participants had to choose any book from Class 9 to Class 12 on Science (Biology, Physics, and Chemistry), Mathematics, Social Science (History, Geography, Economics, Political Science) and Language (Sanskrit, Hindi, and English) methodologies. Then from the book of their choice the participants were asked to take up twenty topics (and sub-topics from the topic) from all the given chapters in the book, and in the Content Analysis Format provided it was required to identify and analyze the content of the chosen topic in such a manner that as many vocations may be resourced from that very content. The four groups pertaining to four methodologies were formulated which were assigned group work of brainstorming, discussing and listing all the various possible vocations related to their given methodology and also those potential vocations which the students are mostly unfamiliar with but make up for viable enterprise or profession. On the second day, participants drafted Lesson Plans on the formats provided. The four groups of individual methodologies continued to work together to formulate their individual lesson plans (two each) on the chosen topic from the book of their choice with one major inclusion to the lesson plan i.e. to link one or more vocation to the content. Thus, the Learning Outcome of the lesson plan was to not only to include theoretical concepts, skill inclusion, and interdisciplinary concepts but also to have a glimpse of various vocations/ occupations possible from the lesson delivered.

The faculty then gave presentations of the lesson plans developed by the group members which was a very enlightening session as participants unfolded numerous occupations and livelihood options that can be integrated to syllabi of each methodology separately and on the whole.

I thank my team members and project guides who have meticulously worked on networking, collaborating and conducting workshops and then engaging the faculty on coming up with Lesson Plans. The highly professional and outcome-oriented project was duly completed with encouraging outcomes and the results are there to see. The feedback and suggestions given by faculty are indeed encouraging as they emphasized on gaining of practical knowledge about entrepreneurship, skill development and research. The content analysis helped in making faculty look at lesson from an income generating perspective. The key learning points from this exercise were creativity, cooperation, knowledge, writing of new style of lesson plans, full content analysis before writing the lesson plan, involvement of vocational input in education, vocational activity as learning and earning, improvised method as learning by doing, Increase in content knowledge through innovative ideas, and gaining new ideas about vocational teaching.

This book outlines and presents the subject lesson plans given by Osmania University, Hyderabad. I profoundly thank Osmania University for deputing the faculty for different subject heads who have spent voluminous hours in brainstorming and coming up with effective lesson plans. The lesson plans will be an asset for future teachers and the participant faculty are poised to become Master Trainers for implementation of these lesson plans.



**Dr. W G Prasanna Kumar**  
**Chairman MGNCRE**

**Minor Research Project Report on**  
**Integration of Vocational Education in School Education by Subject Methodology**  
**<Mathematics>**

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**Submitted To**  
**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Ministry of Education, Govt. of India, Hyderabad**



**Joint Project**  
*March/2023*

## Foreword

Mathematics is a subject that can be challenging for many students, and traditional teaching methods often fail to engage students and help them develop a deeper understanding of the subject. Experiential learning, however, is an approach to education that actively involves students in the learning process and helps them make connections between abstract concepts and real-world experiences.

This research project focuses on developing effective mathematics lesson plans using an experiential learning approach through vocational activities. The project was motivated by a need to improve the quality of mathematics education and to provide students with a more engaging and meaningful learning experience through connection of the curriculum with income generation activities.

The research project consists of a series of lesson plans designed for different levels (i.e., Classes 9 & 10). These lesson plans incorporate vocational (experiential learning) activities that allow students to actively engage with mathematical concepts and make connections to real-world situations. The activities include hands-on experiments, simulations, and collaborative projects that challenge students to think critically and creatively and make the curriculum more meaningful.

The lesson plans are designed to be flexible and adaptable, allowing educators to modify them to suit the needs and interests of their students. Each lesson plan includes clear objectives, vocational instructional strategies, assessment methods, and materials needed, making it easy for educators to implement them in their classrooms.

We look forward that these lesson plans will provide educators with new ideas and strategies for teaching mathematics using a vocational/experiential learning approach, and that they will inspire students to develop a deeper appreciation for the subject and its real-world applications.

Mahatma Gandhi National Council of Rural Education's initiative towards promoting vocational education and experiential learning integration approach is a step towards creating a generation of students who will be confident in their abilities and will be able to apply their knowledge to solve real world problems. I commend their efforts to encourage educators and students alike to embrace this approach in learning Mathematics

Prof A Ramakrishna  
HoD, Education  
Osmania University

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## 1. Introduction

Mathematics learning is an ongoing process that requires active engagement and practice. By developing a solid foundation in mathematical concepts and problem-solving strategies, students can develop the skills they need to succeed in their future academic and professional pursuits.

Mathematics learning involves the acquisition and understanding of mathematical concepts, skills, and problem-solving strategies. It is an essential subject that forms the basis of many other disciplines, including science, engineering, and technology.

Mathematics learning starts in the early years of schooling and continues throughout a student's education. It is important for students to have a strong foundation in basic mathematical concepts, such as number sense, algebra, geometry, and statistics, before moving on to more advanced topics.

Effective mathematics learning involves a combination of teaching methods, including lectures, demonstrations, hands-on activities, and problem-solving exercises. Students should be encouraged to work collaboratively with their peers, ask questions, and engage in critical thinking to develop a deeper understanding of mathematical concepts.

Assessment plays an important role in mathematics learning, as it provides feedback to students on their progress and helps teachers identify areas where students may need additional support. Assessment methods can include quizzes, exams, projects, and real-world problem-solving tasks. In addition to traditional classroom instruction, there are many online resources available to support mathematics learning, such as videos, tutorials, and interactive simulations. These resources can be useful for students who require additional support or prefer to learn at their own pace.

Experiential learning is a powerful tool for teaching mathematics as it allows students to develop a deeper understanding of mathematical concepts and apply them in real-life situations. This approach to learning is essential in the 21st century, as it equips students with the skills they need to succeed in an ever-changing world.

Experiential learning is a type of learning that involves hands-on activities, problem-solving, and reflection. It is a student-centered approach that allows learners to engage in the learning process actively. The Mahatma Gandhi National Council of Rural Education (MGNCRE) has initiated the project on experiential learning in mathematics for class VIII and XII students.

The aim of this initiative is to promote conceptual understanding and problem-solving skills among students. Students will be encouraged to explore mathematical concepts through practical activities such as games, puzzles, and real-life problem-solving scenarios. They will be provided with opportunities to apply mathematical concepts to real-world situations, which will help them

understand the relevance of mathematics in their daily lives.

Through these types of initiations of MGNCRE teachers get training and resources to implement experiential learning in their classrooms effectively. Teachers will be encouraged to create a positive learning environment that fosters creativity, critical thinking, and collaboration among students. They will be given guidance on how to design lesson plans that incorporate experiential learning activities and assessments that measure student learning outcomes.

## Content Analysis



Mahatma Gandhi National Council of Rural Education (MGNCRE)

Department of Higher Education, Ministry of Education, Government of India



Name of the Faculty: **Dr. Padala Laxman**

Subject: **Mathematics**

Mobile Number: 8886400086

S No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	X	Mensuration	Volume of Combination of Solids	<p><b>Carpentry:</b> Carpentry involves the construction of structures made of wood.</p> <p><b>Woodworking:</b> Woodworking involves working with card board to create furniture, decorative items, and other products.</p> <p><b>Cabinetmaking:</b> Cabinetmaking involves constructing cabinets, cupboards, and other storage units made of wood.</p> <p><b>Joinery:</b> Joinery involves the joining of card board pieces without using nails or screws.</p>
2.	X	Probability	Mutually Exclusive Events, Finding Probability,	<p><b>Gambling:</b> Many games of chance, such as craps, use dice. Understanding the probabilities of different outcomes when rolling dice is crucial for success in gambling.</p> <p><b>Finance and risk management:</b> The concept of probability is used extensively in finance and risk management to assess risk and make informed decisions. For example, actuarial science uses probability to calculate insurance premiums and assess risks.</p> <p><b>Manufacturing and quality control:</b> Dice are used in manufacturing and quality control to ensure that products are consistent and meet quality standards. Random sampling is often used to test products, and dice can be used to select random samples.</p> <p><b>Simulation and modeling:</b> In fields such as engineering and physics, simulation and modeling are used to predict the behavior of systems under different conditions. Dice can be used to generate random inputs for simulations and models.</p> <p><b>Data analysis:</b> In data analysis, randomness and probability are important concepts. Random sampling is often used to collect data, and probability distributions are used to analyze and model data.</p>



S No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can be connected to this lesson
3.	X	Mensuration	Surface Area of the Combination of Solids	<p><b>Manufacturing Engineer:</b> A manufacturing engineer can use their knowledge of mensuration and materials to design and produce sand timers in a factory setting.</p> <p><b>Carpenter:</b> A carpenter can use their knowledge of geometry and measurement to create a wooden sand timer with accurate dimensions.</p> <p><b>Architect :</b> An architect can use their understanding of geometry and measurement to create sand timers for use in buildings or outdoor spaces.</p> <p><b>Science Educator:</b> A science educator can use the sand timer as a visual aid to teach students about time, measurement, and volume.</p> <p><b>Toy Designer:</b> A toy designer can use their knowledge of mensuration to create sand timers as part of a game or toy.</p>
4.	X	Probability	Use of Probability, Applications of Probability, Making of Spinner	<p><b>Statistician:</b> Statisticians use probability and statistical methods to design experiments, collect data, and analyze data to make predictions or identify trends.</p> <p><b>Actuary:</b> Actuaries use probability and statistics to assess and manage risk for insurance companies, financial institutions, and other businesses.</p> <p><b>Game Designer:</b> Game designers use probability and chance to create games of chance or strategy, such as casino games or board games.</p> <p><b>Risk Analyst:</b> Risk analysts use probability and statistics to assess and manage risk in a variety of industries, including finance, insurance, and healthcare.</p> <p><b>Sports Analyst:</b> Sports analysts use probability and statistics to analyze player and team performance, predict game outcomes, and develop strategies for coaches and players.</p> <p><b>Market Research Analyst:</b> Market research analysts use probability and statistics to collect and analyze data on consumer behavior, market trends, and product performance.</p>

S No	Class	Topic	Subtopic	Vocation(s) or Occupation(s) that can be connected To this lesson
1.	IX	Congruency	Similar figures	Friendship Band, Earrings, Pendant, Necklace
2.	IX	Surface Areas & Volumes	CSA of Cylinder	Pen Stand, Flower vase
3.	IX	Areas	Area of Circle, Concentric Circles	Types of Coasters
4.	IX	Surface Areas & Volumes	Hemisphere	Paper Weight, Cookies

Name of the Faculty: M. Anitha

Subject: Mathematics

Mobile Number: 8886400086

S No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	IX	Areas	Area of planar region- Rectangle, Square	Occupation- Farmer Vocation- preparing envelopes
2.	IX	Triangles	Congruency	Occupation-Architecture Vocation- Preparing banners with triangles
3.	IX	Surface area	Sphere	Occupation-Cook, Toy making, Crafts Vocation- Preparing laddus
4.	IX	Volume	Volume of Cone	Occupation- Business, Chef, Crafts Vocation- preparing herbal mehendi cones

Name of the Faculty : Dr. B. Deevena Pauleen

Subject: Mathematics

Mobile Number: 9397018658

S No	Class	Topic	Subtopic	Vocation(s) or Occupation(s) that can be connected To this lesson
1.	X	Coordinate Geometry	ii) Collinear points/non collinear points	Fashion designing/Handicrafts - Matty cloth designs - making handkerchiefs/hand purse etc.
2.	X	Polynomials	Types of polynomials	Handicrafts/Fashion Industry - Representation of types of polynomials in terms of squares, rectangles etc. - old cloth reused to make quilts/doormats/table cloths etc.
3.	X	Sets	Concept of sets	Handicrafts - Traditional Art & Craft - Origami cups of different shapes for school canteen/shops
4.	X	Tangents & Secants to a circle	Theorem-9.2: The lengths of tangents drawn from an external point to a circle are equal.	Handicrafts - Home Décor - Craft paper Chandelier

S No	Class	Topic	Subtopic	Vocation(s) or Occupation(s)that can be connected To this lesson
1.	IX	Surface Areas and Volume	3D and 2D shapes, Surface Areas, Volume, Measurements, Money	Food Industry(Making and selling peanut, chickpea, sprouts salad)
2.	IX	Circles,	Circles, Measurements, Symmetry and Patterns, Money	Fashion Industry, Marketing
3.	IX	Lines and Angles	Lines and Angles, Ratios and Proportions, Volume, Measurements, Symmetry and Patterns, Fractions and Data Handling	Textile Industry
4.	IX	Volume and conversions	Volume and conversions	Food Industry Entrepreneur

# LESSON PLANS

Name of Faculty: **Dr. Padala Laxman**

<b>Class</b>	X	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	Mensuration	<b>Duration of the Lesson</b>	2 periods (90 minutes)
<b>Concept(s) Covered</b>			LIDS
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
Carpentry: Carpentry involves the construction of structures made of wood.			
Woodworking: Woodworking involves working with card board to create furniture, decorative items, and other products.			
Cabinetmaking: Cabinetmaking involves constructing cabinets, cupboards, and other storage units made of wood.			
Joinery: Joinery involves the joining of card board pieces without using nails or screws.			
<b>Skills that will be inculcated</b>			
1. Precision                      7. Entrepreneurship                      12. Memory Enhancement 1. Manipulation                      8. Observation                      13. Patience 4. Creativity                      9. Imitation                      14. Visualization & Imagination 5. Communication                      10. Geometry                      15. Problem Solving 6. Motor Skills                      11. Eye - Hand Coordination                      16. . Measurement skills			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Measurements 2. Cognitive Skill 3. Symmetry and Patterns 4. Geometry 5. Data Handling			
<b>Learning Outcomes</b>			
Students will understand how to measure and calculate the dimensions of a Book Shelf using a measuring tape and mathematical formulas.			
Students will develop skills in arithmetic by calculating the cost of materials required for the Book Shelf and determining the pricing of the final product.			
Students will learn about geometry by understanding how to cut the wood pieces at the correct angles to ensure that the Book Shelf is stable.			
Students will apply problem-solving skills to overcome challenges during the preparation process, such as fixing errors or adjusting the design to fit the available materials.			
Students will develop practical vocational skills, such as cutting, drilling, assembling, and finishing wood pieces, which are useful in the woodworking industry.			
Students will learn about the importance of accuracy and precision in woodworking and how small measurement errors can affect the final product's stability and functionality.			
Students will understand the value of teamwork and collaboration while working on a woodworking project, where each student's contribution is crucial to the success of the final			

product.

Students will be able to reflect on the process of creating a Book Shelf and the skills they have learned, such as problem-solving, vocational, and mathematical skills.

### **Tools/Material Needed**

Pieces of card board

scissors

fevistick/ Gum

Colour Charts

Measuring tape

Pencil and paper

### **Steps**

1. **Pre-Activity:** Introduce the lesson by explaining that students will be preparing a Book Shelf using mathematical concepts.  
Ask students if they have any prior experience with wood working and what skills they think are necessary for this project.

### **Planning and Design:**

Teacher shows students an example of a Book Shelf and explain the importance of planning and design. Demonstrate how to use a measuring tape to measure the dimensions of the Book Shelf and how to calculate the cost of materials required.

### **2. Measurements:**

Students estimate the different lengths of cardboard needed to be folded to make different models.

Height: The height of the bookshelf ranges from 36 inches to 42 inches.

Width: The width of the bookshelf should be based on the available space in the room and the number of books you want to store on the shelf. A typical bookshelf width ranges from 15 inches to 18 inches.

Depth: The depth of the bookshelf will depend on the size of the books you plan to store on the shelf. A typical bookshelf depth ranges from 8 inches to 12 inches.

### **3. Money:**

Students purchase the materials needed to make the book shelf.

### **4. Data Handling:**

Students are asked to collect information of various sizes & shapes of cardboard needed to prepare book shelf

### **5. Process:**

Teacher divides students into small groups and assign each group a set of cardboard pieces to prepare

#### **Cutting:**

Students cut the pieces of cardboard according to the dimensions calculated in the planning stage.

#### **Drilling**

Students use drill to make holes in the wood pieces where they will be joined together.

#### **Assembly**

Students assemble the Book Shelf by joining the pieces together using fevistic.

Have students assemble their wood pieces to create the Book Self.

#### **Finishing :**

Students use sand the Book Shelf to smooth any rough edges with colour and paste the color papers.



2. Students work on folding and cutting the cardboard into different models.  
(Here students connect the knowledge of **Length, Breadth, Square, Rectangle, angles, and other geometrical concepts while making folds**)



Making Book Shelf :- <https://www.youtube.com/watch?v=eiEwp3Jw5fc>  
:- <https://www.youtube.com/watch?v=pobDN3kbQP8>

### 3. **Post-Activity:**

Students fix a selling price so as to gain suitable profit.

### 4. **Students sell the book self nearby stores/friends/schools**

### 5. Income generation –

The total cost of Material = Rs 400

(5 card board (15 mm thickness) x 40 = 200Rs, scissors -1 = 30Rs, fevistick/ Gum -2 x 20 = 40Rs, Colour Charts -5 x 6 = 30Rs)

Selling price of Book Shelf = Rs600 and Profit = Rs600-Rs400=Rs200.

Amount earned on selling one book Shelf = Rs 200

Students share the profit among themselves.

### **Precautions**

1. Every student should actively participate.
2. Teacher should monitor the team work.
3. Be careful while using sufficient material as per the requirement.
4. Students should be careful while handling the material.

### **Assessment**

1. Students will be assessed based on their participation in the cutting, and assembling process.
2. Students will also be assessed based on their ability to apply mathematical concepts such as measurement, arithmetic, and geometry.
3. Students can be assessed on their ability to market and sell their book shelf to potential customers



## Lesson Plan-2

Name of Faculty: **Dr. PADALA LAXMAN**

<b>Class</b>	X	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	Probability	<b>Duration of the Lesson</b>	2 periods (90 minutes)
<b>Concept(s) Covered</b>			S,
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<b>Vocational or occupational value of dice in mathematics</b> Dice have vocational value in mathematics, particularly in the study of probability. Understanding probability is important in fields such as finance, insurance, and risk management. Here are some ways dice are used in vocational settings: <b>Gambling:</b> Many games of chance, such as craps, use dice. Understanding the probabilities of different outcomes when rolling dice is crucial for success in gambling. <b>Finance and risk management:</b> The concept of probability is used extensively in finance and risk management to assess risk and make informed decisions. For example, actuarial science uses probability to calculate insurance premiums and assess risks. <b>Manufacturing and quality control:</b> Dice are used in manufacturing and quality control to ensure that products are consistent and meet quality standards. Random sampling is often used to test products, and dice can be used to select random samples. <b>Simulation and modeling:</b> In fields such as engineering and physics, simulation and modeling are used to predict the behavior of systems under different conditions. Dice can be used to generate random inputs for simulations and models. <b>Data analysis:</b> In data analysis, randomness and probability are important concepts. Random sampling is often used to collect data, and probability distributions are used to analyze and model data.			
<b>Skills that will be inculcated</b>			
Mathematical skills:	Critical thinking skills:		
Creativity:	Fine motor skills:		
Time management skills:	Measurement skills		
<b>Interdisciplinary concepts that may be integrated</b>			
1. Science: The process of making dice involves concepts from science, such as chemical reactions and material properties. 2. Art: Making dice allows for creativity in terms of choosing the shape, color, and labeling of the dice. 3. Technology: Students can use technology to design and create the dice. They can use 3D modeling software to design the dice shape and use a 3D printer to print the mold. They can also use digital tools to create graphics and labels for the dice. 4. History: Students can learn about the history of dice and their use in different cultures and time periods. 5. Language Arts: Students can develop their writing skills by creating rules and instructions for the dice game that they create.			
<b>Learning Outcomes</b>			

Dice are objects used in games of chance and probability, and they are often used in mathematics to teach concepts related to probability.

1. Students can learn and apply mathematical concepts such as probability, geometry, measurement, and fractions in creating the dice and the game. They can understand the principles behind the numbers and shapes on dice and how they relate to probability.
2. The process of making dice requires critical thinking skills such as problem-solving, decision-making, and analysis. Students can identify the challenges and obstacles in the process and develop strategies to overcome them.
3. Making dice can be a group project that involves collaboration and teamwork. Students can learn to work effectively in groups, communicate their ideas, and support each other in achieving the project goals.
4. Making dice allows for creativity in terms of choosing the shape, color, and labeling of the dice. Students can develop their creative skills and express their ideas through the design of the dice and the game.
5. Students can present their dice and game to the class, which can help develop their presentation skills such as public speaking, organization, and clarity.
6. Students can reflect on their experience and the skills that they developed during the project. They can identify their strengths and weaknesses and set goals for future learning.

#### **Tools/Material Needed**

Mould for a six-sided dice  
Casting material  
Mixing container and spoon/stirrer  
Measuring cup  
Release agent (e.g. petroleum jelly)  
Dice template or shape cutter  
Paint or markers

#### **Steps**

##### **5. Pre-Activity:**

Students purchase the materials needed to make the models.

Teacher forms the groups in the class and assign the work to the students to the preparation of Dice.

Gives instructions to the students towards preparation of dice.

<https://www.youtube.com/watch?v=vUws412hdjo&t=129s> \_

<https://www.youtube.com/watch?v=XzObZDaQJkY> \_

<https://www.resinobsession.com/resin-tutorials/how-to-make-resin-dice/> \_

##### **Measurements:**

Student take measurement to prepare a dice

Student

##### **Money:**

Casting material : 40 Rs

Mixing container and spoon/stirrer: 20Rs

Measuring cup: 40Rs

Release agent (e.g. petroleum jelly): 40Rs

Dice template or shape cutter: 40Rs

Paint or markers : 40Rs

##### **Total cost 220**

##### **Steps:**

Creates a template or use a shape cutter to create the desired shape of dice.

Distribute molds for a six-sided dice to each student. Explain that the mold needs to be treated with a release agent before casting material is poured into it.

Instruct students to mix the casting material according to the manufacturer's instructions.

This usually involves mixing two components together in a specific ratio.

Students pour the mixture into the mold, filling it up to the top and Tap the mold gently on a flat surface to release any air bubbles.

Students cast the material to cure for the recommended amount of time.

Once cured, the dice can be removed from the mold. If there are any rough edges or imperfections, students can use sandpaper to smooth them out.

If desired, students can paint or mark the sides of the dice to create their own unique design.



### **Data Handling:**

Students are asked to collect material on the various sizes Casting material, mixing container and spoon/stirrer, Release agent (e.g. petroleum jelly) Dice template or shape cutter, and Paint or markers to make the dice.

### **Process:**

Teacher divides the class into groups as follows

- one group collects material used to prepare dice
- one group is involved in Mixing container of the dice
- One group will draw the Dice template
- one group in sales and profit/loss analysis

Here is a general process for preparing a pair of dice:

Student Create a template cutter to create the desired shape of dice.

And follow the instructions for the mould-making material and create a mould of the dice template.

Uses a release agent to help the mold release from the dice.

Student will mix the casting material according to the instructions and adds color, add pigments or dyes to the casting material and mix well and pour the casting material into the mold. Tap the mould on a surface to remove any air bubbles. Let the casting material cure according to the instructions. This may take several hours to overnight.

Once the casting material is fully cured, by removing the dice from the mold. And sand and polish the dice to make them smooth and shiny.

Student adds numbers or symbols to the dice using paints, inks, or stickers, if desired...

### **Post-Activity:**

Students will use the dice for planned activity or game

Students fix a selling price so as to gain suitable profit.

### **Profit and Loss, Money, Conversions and Basic Maths**

Casting material : 40 Rs

Mixing container and spoon/stirrer: 20Rs

Measuring cup: 40Rs

Release agent (e.g. petroleum jelly): 40Rs

Dice template or shape cutter: 40Rs

Paint or markers : 40Rs

Total Cost of the dice = 300

Students can sell these dice to stationary shops and students of the various schools.

Profit = Rs300 –Rs220= Rs80

### Precautions

1. Every student should actively participate.
2. Teacher should monitor the team work.
3. Quality of material should be checked.
4. Make sure that the dice is well shaped and proper numbering is given.

### Assessment

Performance rating→ Criteria ↓	Excellent	Good	Satisfactory	Needs to be improved
Accuracy in				
1. Cutting edges				
2. Handling material				
3. Assigning Numbers				
4.Selling ability				

### Lesson Plan-3

Name of Faculty: **Dr. PADALA LAXMAN**

<b>Class</b>	X	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	Mensuration	<b>Duration of the Lesson</b>	2 periods (90 minutes)
<b>Concept(s) Covered</b>			SOLIDS
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<p><b>Making of sand timer</b></p> <p><b>Manufacturing Engineer:</b> A manufacturing engineer can use their knowledge of mensuration and materials to design and produce sand timers in a factory setting.</p> <p><b>Carpenter:</b> A carpenter can use their knowledge of geometry and measurement to create a wooden sand timer with accurate dimensions.</p> <p><b>Architect:</b> An architect can use their understanding of geometry and measurement to create sand timers for use in buildings or outdoor spaces.</p> <p><b>Science Educator:</b> A science educator can use the sand timer as a visual aid to teach students about time, measurement, and volume.</p> <p><b>Toy Designer:</b> A toy designer can use their knowledge of mensuration to create sand timers as part of a game or toy.</p> <p>One entrepreneurship skill that can be connected to the making of sand timers using mensuration is product design. The entrepreneur also uses problem-solving skills to overcome any challenges in the manufacturing process, such as finding cost-effective materials or designing a production line that maximizes efficiency. They can then market and promote their sand timers through various channels such as online marketplaces, social media, and trade shows to reach their target customers and increase sales.</p>			
<b>Skills that will be inculcated</b>			
Measurement Skills Geometry Skills Problem-Solving Skills Time Management Skills Attention to Detail Creativity Patience Hand-Eye Coordination Teamwork			
<b>Interdisciplinary concepts that may be integrated</b>			
<p><b>Science:</b> The principles of physics are involved in making a sand timer, such as gravity and motion, and density of the sand used. It involves the measurement of time, volume, and weight.</p> <p><b>Art and Design:</b> The sand timer can be used as a decorative item, and its design can be customized with unique shapes, colors, and materials.</p> <p><b>History:</b> Sand timers have been used for thousands of years, and their history and evolution can be studied to provide context to the creation of the sand timer.</p> <p><b>Environmental Science:</b> The materials used in making the sand timer, such as glass or plastic, can have an environmental impact, and the concept of sustainability can be integrated into the design and production process.</p> <p><b>Language Arts:</b> Writing a set of instructions or creating a user manual for the sand timer</p>			

involves using language arts skills such as writing, reading comprehension, and effective communication.

**Social Studies:** The concept of time and its measurement has been an important part of human history, and the social and cultural significance of the sand timer can be studied in the context of various cultures and civilizations.

### **Learning Outcomes**

- Understanding of measurement: Students will have an understanding of measurement and conversion of units.
- Knowledge of geometry: Students will be able to apply their knowledge of geometry to design and create the sand timer.
- Problem-solving skills: Students will develop problem-solving skills by identifying and finding solutions to challenges in the design or manufacturing process.
- Time management skills: Students will develop time management skills by managing their time effectively to ensure the sand timer is completed on time.
- Attention to detail: Students will learn the importance of attention to detail and its impact on the finished product.
- Creativity: Students will be able to apply their creativity to design and customize the sand timer with unique materials, colors, and shapes.
- Hand-eye coordination: Students will improve their hand-eye coordination and fine motor skills by handling and manipulating small parts and tools.
- Teamwork: Students will develop teamwork skills by working collaboratively to source materials and assemble the final product.
- Understanding of physics: Students will learn about the principles of physics involved in making a sand timer, such as gravity, motion, and density of the sand used.
- Understanding of math: Students will be able to apply their knowledge of mathematical concepts such as geometry, algebra, and trigonometry to the creation of the sand timer.

### **Tools/Material Needed**

Two plastic bottles (500 ml each)  
Sand or salt  
Cardboard  
Scissors  
Glue  
Ruler  
Stopwatch

### **Steps**

**Pre-Activity:** Teacher begins the class by discussing concept of mensuration( Surface Area Of The Combination Of Solids ) and its importance in real-life situations.

Divide the students into various groups and making the sand timer

#### **Measurement**

Teacher Introduce the concept of mensuration and explain that it is the branch of mathematics that deals with the measurement of geometric figures.

Review the formulas for calculating the volume of common geometric shapes such as cubes, cuboids, cylinders, cones, and spheres.

Ask students to measure the dimensions of the plastic bottles and calculate their volumes using the appropriate formula.

#### **Process:**

Teacher divides the class into groups as follows

- one group collects material used to prepare Sand Timer

- one group is involved in measuring the sections of the Sand Timer
- One group will draw the sections and prepare the Sand Timer
- one group in sales and profit/loss analysis

### **Cutting the Cardboard**

Teacher explains and assigns to one group the Cutting the rectangular piece of cardboard that is slightly larger than the base of one of the plastic bottles.

Students Cut out a smaller rectangular piece of cardboard that is approximately 1/4 the size of the larger piece.

Students Cut out two identical circles from the cardboard that are slightly smaller than the mouth of the plastic bottles.

### **Assembly**

Students apply glue to the bottom of one of the plastic bottles and place it on the larger rectangular piece of cardboard. And fill the bottle with sand or salt, leaving a small space at the top.

Students apply the glue to the smaller rectangular piece of cardboard and place it on top of the sand.

Students apply the glue to the mouth of the second plastic bottle and place it upside down on top of the first bottle.

And allow the glue to dry.

Once the glue has dried, flip the sand timer over and use the stopwatch to time how long it takes for the sand to flow from one bottle to the other.

Ask students to compare the timing of their homemade sand timer with a store-bought sand timer to see how accurate it is.

### **Money:**

Students purchase the materials needed to make the models.

### **Data Handling:**

Students are asked to collect material i.e., Two plastic bottles (500 ml each)

Sand, Cardboard, Scissors, Glue, Ruler, Stopwatch to make the Sand Timer.

Making of sand timer: <https://www.youtube.com/watch?v=uG0ubTx2jMw>  
<https://www.youtube.com/watch?v=DzyLTBAcTP0>

### **Post-Activity:**

Students will use the sand timer for planned activity or game

Students fix a selling price so as to gain suitable profit.

### **Profit and Loss, Money, Conversions and Basic Maths**

Students invested the price of sand timer making cost of

Two plastic bottles (500 ml each): 20Rs

Cardboard: Rs 30 per sheet

Scissors: 15Rs

Glue: 25 Rs

Ruler 20Rs

Total Cost of the sand timer = 120

Students can sell these sand timers to stationery shops and students of the various schools.

Profit = Rs200–Rs120= Rs80 each

Precautions				
1. Ensure that appropriate safety measures are taken while handling any tools or materials. Wear protective gear such as gloves and safety glasses. 2. Choose materials carefully: 3. Accurate measurement: 4. Handle glass with care: 5. Follow instructions carefully: 6. Be patient: 7. Supervision: Ensure that children are supervised when making a sand timer, especially when using sharp tools or hazardous materials.				
Assessment				
Performance rating→ Criteria ↓	Excellent	Good	Satisfactory	Needs to be improved
Accuracy in 1. Cutting bottles				
2. Measuring the material				
3. Arranging the pieces				
4. Handling the instruments				



### Lesson Plan-4

Name of Faculty: Dr. PADALA LAXMAN

<b>Class</b>	X	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	Probability	<b>Duration of the Lesson</b>	2 periods (90 minutes)
<b>Concept(s) Covered</b>			, Making of
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<p><b>Statistician:</b> Statisticians use probability and statistical methods to design experiments, collect data, and analyze data to make predictions or identify trends.</p> <p><b>Actuary:</b> Actuaries use probability and statistics to assess and manage risk for insurance companies, financial institutions, and other businesses.</p> <p><b>Game Designer:</b> Game designers use probability and chance to create games of chance or strategy, such as casino games or board games.</p> <p><b>Risk Analyst:</b> Risk analysts use probability and statistics to assess and manage risk in a variety of industries, including finance, insurance, and healthcare.</p> <p><b>Sports Analyst:</b> Sports analysts use probability and statistics to analyze player and team performance, predict game outcomes, and develop strategies for coaches and players.</p> <p><b>Market Research Analyst:</b> Market research analysts use probability and statistics to collect and analyze data on consumer behavior, market trends, and product performance.</p>			
<b>Skills that will be inculcated</b>			
<p><b>Mathematical skills:</b> The students will use mathematical skills such as measuring, dividing a circle into sections, assigning probabilities, and calculating probability.</p> <p><b>Critical thinking skills:</b> The students will use critical thinking skills to solve probability problems and compare their results to their assigned probabilities.</p> <p><b>Creativity:</b> The students will use their creativity to design and color their spinners.</p> <p><b>Fine motor skills:</b> The students will use fine motor skills to draw and cut out their spinners.</p> <p><b>Communication skills:</b> The students will work together and share their spinners with each other, which will improve their communication skills.</p> <p><b>Time management skills:</b> The students will need to manage their time effectively to complete their spinners within the given timeframe.</p> <p><b>Attention to detail:</b> The students will need to pay attention to detail to ensure that their assigned probabilities add up to 1 and that their spinners are accurately divided into sections.</p>			
<b>Interdisciplinary concepts that may be integrated</b>			
<ol style="list-style-type: none"> <li>1. Art: The students can use their artistic skills to design and color their spinners.</li> <li>2. Technology: The students can use digital tools to design their spinners, such as using graphic design software or creating a digital spinner using a virtual spinner tool.</li> <li>3. Science: The students can learn about probability in scientific experiments, such as the probability of certain outcomes in physics experiments or biology experiments.</li> <li>4. Social Studies: The students can use the spinner to simulate real-world situations, such as the probability of certain outcomes in political elections or economic events.</li> <li>5. Language Arts: The students can write a report or a creative story that uses the spinner to explore probability and its applications in real-life situations.</li> <li>6. Physical Education: The students can use the spinner in physical activities, such as spinning the spinner to determine which exercise to do next or using the spinner to create a workout routine.</li> </ol>			

<b>Learning Outcomes</b>
<ol style="list-style-type: none"> <li>1. Understanding probability: The students will be able to understand the concept of probability and its applications in real-life situations.</li> <li>2. Applying mathematical skills: The students will be able to use mathematical skills such as measuring, dividing a circle into sections, assigning probabilities, and calculating probability.</li> <li>3. Developing critical thinking skills: The students will be able to develop critical thinking skills to solve probability problems and compare their results to their assigned probabilities.</li> <li>4. Improving creativity: The students will be able to use their creativity to design and color their spinners.</li> <li>5. Enhancing fine motor skills: The students will be able to enhance their fine motor skills by drawing and cutting out their spinners.</li> <li>6. Improving communication skills: The students will be able to improve their communication skills by working together and sharing their spinners with each other.</li> <li>7. Developing time management skills: The students will be able to develop time management skills by completing their spinners within the given timeframe.</li> <li>8. Enhancing attention to detail: The students will be able to enhance their attention to detail to ensure that their assigned probabilities add up to 1 and that their spinners are accurately divided into sections.</li> </ol>
<b>Tools/Material Needed</b>
<ul style="list-style-type: none"> <li>• Paper</li> <li>• Pencil</li> <li>• Ruler</li> <li>• Compass</li> <li>• Colored pencils</li> <li>• Scissors</li> <li>• Cardboard</li> <li>• Glue</li> </ul>
<b>Steps</b>

**Pre-Activity:** Teacher begins the class by discussing probability and its importance in real-life situations.

Show the students examples of spinners used in games and simulations.

Ask the students if they have ever used a spinner before.

Explain to the students that they will be preparing their own spinner with assigned probabilities.

Hand out the materials to the students.

Demonstrate how to use a compass and ruler to divide a circle into sections.

**Measurements:**

Students estimate the different sections of cardboard needed to be prepared to make different parts.

Students use a compass and ruler to divide a circle into sections.

**Money:**

Students purchase the materials needed to make the models.

**Data Handling:**

Students are asked to collect information on the various sizes color charts and color pens to make the spinner.

**Process:**

Teacher divides the class into groups as follows

- one group collects material used to prepare spinner
- one group is involved in measuring the sections of the spinner
- One group will draw the sections and prepare the spinner
- one group in sales and profit/loss analysis

Making of Spinner: <https://www.youtube.com/watch?v=mza4Sre9LHM>  
: <https://www.youtube.com/watch?v=CVQ2tti5dLc>

The first step is to determine the number of sections for spinner. Next, to determine the size of the spinner. This will depend on the number of sections and the size of the material or cardboard using.

Drawing a large circle on the cardboard. Use a compass or trace around a circular object to make sure the circle is even. Divide the circle- dividing it into equal sections- Label the sections: Label each section with a number or a specific color or design, depending on the activity or game that planning to use it for. Cut out the circle along the outer edge, and then cut out the individual sections.

Attach a spinner arrow to the center of the circle. This can be a paperclip, a pushpin, or a small plastic arrow. Test the spinner: Test the spinner by spinning it to make sure it works properly. Adjust the arrow if necessary to make sure it lands on each section evenly.

**Post-Activity:**

Students will use the spinner for planned activity or game

Students fix a selling price so as to gain suitable profit.

**Profit and Loss, Money, Conversions and Basic Maths**

Students invested the price of spinner making cost of cardboard Rs 30 per sheet, colors pens Rs 60.

Total Cost of the spinner = 300

Students can sell these spinners to stationary shops and students of the various schools.

Profit = Rs500 –Rs300= Rs230

**Precautions**

1. Every student should actively participate.
2. Teacher should monitor the team work.
3. Quality of paper should be good to hold the items in it.
4. Use a compass or a circular object to draw a perfect circle. The circle should be large enough to fit all the possible outcomes of the spinner.
5. Label each section with the corresponding outcome. Make sure that each label is clear and easy to read.
6. Make sure that the spinner is balanced, meaning that each section has an equal area. If the sections are not equal, the spinner will not be fair and may give biased results.
7. Securely attach the spinner to a pointer or pivot point at the center of the circle. The pointer should be able to spin smoothly and freely.

### Assessment

Performance rating→ Criteria ↓	Excellent	Good	Satisfactory	Needs to be improved
Accuracy in 1. Cutting sheets				
2. Dividing sections				
3. Coloring the each section				
4. Handling the instruments				

### Lesson Plan-5

Name of Faculty: DR. SABREENA BOBBY

<b>Class</b>	<b>IX</b>	<b>Subject</b>	MATHEMATICS
<b>Lesson Name</b>	<b>CONGRUENCY</b>	<b>Duration of the Lesson</b>	2 periods
<b>Concept(s) Covered</b>		SIMILAR FIGURES	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Friendship bands			
2. Earrings			
3. Pendant			
<b>Skills that will be inculcated</b>			
1. Communication skills			
2.creativity of the students			
3.Enterpreneaur skills			
4.Information skills			
5.Leadership quality			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Triangular shapes			
2. Profit and loss			
3. Eco friendly materials			
4. Fabrics and fibers			
<b>Learning Outcomes</b>			
1.Understanding the concept of different shaped objects and similarities			
2. Students develop communication skills			
3. Working as a team			
4. Development of positive attitude			
<b>Tools/Material Needed</b>			
1. Silk threads		4. Casting resins and catalyst	
2. Beads or pearls		5. Small moulds	
3. Hooks and other accessories for making earrings		6. Different shaped glitter	

<b>Steps</b>
<ol style="list-style-type: none"> <li>1. Teacher divides the class into 4 groups each group consists of 5 students.</li> <li>2. Students were informed to bring the required material.</li> <li>3. Students were shown and explained about how to make friendship bands, earrings and pendants.</li> <li>4. Students work as a team to complete the task and tries to make as much as possible.</li> <li>5. One period is used for making and the 2nd period for decorating the item.</li> <li>6. After making the friendship bands, earrings and pendants now students sell their products.</li> <li>7. The estimated cost of friendship band is 5 rupees, earrings are 20 rupees and pendant 10 rupees and the profit were shared equally among the students.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. Mixing of casting resin and catalyst should be proper.</li> <li>2. The work done should be neat.</li> <li>3. Decoration done should be attractive.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. Students were assessed on their creativity, neatness and ideas.</li> <li>2. While working on the product the students were continuously assessed on the concept of congruency and similarity.</li> <li>3. Points were given on how students finally sold the products and the profit made.</li> <li>4. Team work was also assessed.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. <a href="http://youtu.be/EOiS522ZvDA">http://youtu.be/EOiS522ZvDA</a></li> <li>2. <a href="http://youtu.be/qyfG3rFcY6c">http://youtu.be/qyfG3rFcY6c</a></li> </ol>

## Lesson Plan-6

**Name of Faculty: DR. SABREENA BOBBY**

<b>Class</b>	<b>IX</b>	<b>Subject</b>	MATHEMATICS
<b>Lesson Name</b>	<b>SURFACE AREAS AND VOLUMES</b>	<b>Duration of the Lesson</b>	3 periods
<b>Concept(s) Covered</b>		CURVED SURFACE AREA OF CYLINDER	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1.Making of pen stand			
<b>Skills that will be inculcated</b>			
1. Communication skills			
2.creativity of the students			
3.Enterpreneur skills			
4.Information skills			
5.Leadership quality			
<b>Interdisciplinary concepts that may be integrated</b>			
1.CSA of cylinder			
2.Profit and loss			
3. Average			
4.Environmentally friendly materials			
<b>Learning Outcomes</b>			
1.Understanding the concept of CSA of cylinder			
2. Students develop communication skills			
3. Working as a team			
4. Development of positive attitude			
<b>Tools/Material Needed</b>			
1. Popsicle sticks		4. Hot glue	
2. Glitter sheets		5. Decorative items	
3. Fabric paints and brushes		6. Thick chart paper	

<b>Steps</b>
<ol style="list-style-type: none"> <li>1. Teacher divides the class into 4 groups each group consists of 5 students.</li> <li>2. Students were informed to bring the required material.</li> <li>3. Students were shown and explained about how to make pen stands using popsicle sticks.</li> <li>4. Students work as a team to complete the task and tries to make as much as possible.</li> <li>5. One period is used for making and the 2nd period for decorating the item.</li> <li>6. After making the different varieties of pen stands now students sell their products.</li> <li>7. The estimated cost of pen stands is 15 rupees and the profit was shared equally among the students.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. Hot glue should be handled carefully.</li> <li>2. While sticking the popsicle sticks extra care should be taken for neatness.</li> <li>3. Decoration done should be attractive.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. Students were assessed on their creativity, neatness and ideas.</li> <li>2. While working on the product the students were continuously assessed on the properties of cylinder.</li> <li>3. Points were given on how students finally sold the products and the profit made.</li> <li>4. Team work was also assessed.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. <a href="http://youtu.be/AmlzKnAALIA">http://youtu.be/AmlzKnAALIA</a></li> <li>2. <a href="http://youtu.be/26AXA3FMzhl">http://youtu.be/26AXA3FMzhl</a></li> </ol>



## Lesson Plan - 7

**Name of Faculty: DR. SABREENA BOBBY**

<b>Class</b>	<b>IX</b>	<b>Subject</b>	<b>MATHEMATICS</b>
<b>Lesson Name</b>	<b>AREAS</b>	<b>Duration of the Lesson</b>	3 periods
<b>Concept(s) Covered</b>			IRCLES
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Making different types of coasters			
<b>Skills that will be inculcated</b>			
1. Communication skills 2. creativity of the students 3. Entrepreneur skills 4. Information skills 5. Leadership quality			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Area of an object 2. Concept of concentric circles 3. Profit and loss 4. Average 5. Environmentally friendly materials			
<b>Learning Outcomes</b>			
1. Understanding the concept of area of circle 2. Recognizes 2D shaped objects 3. Students develop communication skills 4. Develops collaborative team work 5. Development of positive attitude			
<b>Tools/Material Needed</b>			
1. Discarded CDs 2. Wooden clips 3. Fabric paints and brushes			
<b>Steps</b>			
1. Teacher divides the class into 4 groups each group consists of 5 students.			

2. Two groups are given the same task and the other two groups another task is given.
3. Students are informed to bring the required material.
4. Two groups are shown and explained about how to make coaster using discarded cd's and the other group using wooden cloth clips.
5. Students work as a team to complete the task and tries to make as much as possible.
6. One period is used for making and the 2nd period for decorating the item.
7. After making the desired coaster now students to sell to their school teachers and friends.
8. The estimated cost of paper weight if 10 rupees and the profit was shared equally among the students.

#### **Precautions**

1. While using hot glue students should be careful.
2. Joining of the clips should be neat.
3. Decoration done should be attractive.
4. CD's edges are sharp hence students were requested to handle the material carefully.

#### **Assessment of Student Activity**

1. Students were assessed on their creativity, neatness and ideas.
2. While working on the product the students were continuously assessed on the properties of circle and concentric circles.
3. Points were given on how students finally sold the products and the profit made.
4. Team work was also assessed.

#### **Reference Links**

1. <http://youtu.be/UaKMgM7KY8k>
2. <http://youtu.be/hQBceCVtOiA>

## Lesson Plan - 8

**Name of Faculty: DR. SABREENA BOBBY**

<b>Class</b>	<b>IX</b>	<b>Subject</b>	<b>MATHEMATICS</b>
<b>Lesson Name</b>	<b>SURFACE AREAS AND VOLUMES</b>	<b>Duration of the Lesson</b>	3 periods
<b>Concept(s) Covered</b>		VOLUME OF SPHERE	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1.Making different types of paper weights			
<b>Skills that will be inculcated</b>			
1. Communication skills 2.creativity of the students 3.Enterpreneur skills 4.Information skills 5.Leadership quality			
<b>Interdisciplinary concepts that may be integrated</b>			
1.Volume of an object 2.Concept of ratio 3.Profit and loss 4. Average 5.Environmentally friendly materials			
<b>Learning Outcomes</b>			
1.Understanding the concept of volume of cylinder 2. Differentiating between 2D and 3D objects 3. Students develop communication skills 4. Working as a team 5. Development of positive attitude			
<b>Tools/Material Needed</b>			
1. Wall putty 2. Casting resins and catalyst 3. Fabric paints and brushes			lish

**Steps**

1. Teacher divides the class into 4 groups each group consists of 5 students.
2. Two groups are given the same task.
3. Students are informed to bring the required material.
4. Two groups are shown and explained about how to make paper weight using wall putty and the other two groups using casting resins.
5. Students work as a team to complete the task and tries to make as much as possible.
6. One period is used for making and the 2nd period for decorating the item.
7. After making the desired paperweights now students to to their school teachers to sell their products.
8. The estimated cost of paper weight if 30 rupees and the profit was shared equally among the students.

**Precautions**

1. Mixing of the wall putty should be perfect neither too soft nor too hard.
2. Spherical shapes should be neat.
3. Decoration done should be attractive.
4. Wall putty and casting resins should be handled properly under the supervision of the elders.

**Assessment of Student Activity**

1. Students were assessed on their creativity, neatness and ideas.
2. While working on the product the students were continuously assessed on the properties the sphere.
3. Points were given on how students finally sold the products and the profit made.
4. Team work was also assessed.

**Reference Links**

1. <http://youtu.be/SrGKPdXmul>
2. <http://youtu.be/2uLC7HhJurw>

## Lesson Plan 9

**Name of Faculty: M.Anitha**

<b>Class</b>	<b>IX</b>	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	<b>Volume</b>	<b>Duration of the Lesson</b>	2 hrs
<b>Concept(s) Covered</b>		Volume of Cone	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Occupation- Businesses like milkman, supplying water, oil			
2. Chef- making ice creams			
3. Craftsmen- preparing decorative caps conical in shape			
4. Vocation – making herbal mehendi cone			
<b>Skills that will be inculcated</b>			
1. Measuring – measuring the radius and height using appropriate units			
2. Accuracy- finding the volume of cone accurately			
3. Creativity- making variety of cones with different volumes			
4. Communication- gathering information, listening, speaking and writing			
5. Motor skills- fine movement of hands in preparing cones			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Making symmetrical cones of equal volume			
2. Ecofriendly- making herbal mehendi cones			
3. Biology – finding botanical name of henna tree			
4. Chemistry- reaction of ingredients			
5. Entrepreneurship- Marketing the mehendi cones			
<b>Learning Outcomes</b>			

Student will be able to

1. Connect the concept of cylinder and find the relation between them
2. Applying this knowledge to find the no of persons that can applied mehendi using a mehendi cone
3. Comparing the quantities of ingredients added in mehendi
4. Create mehendi designs innovatively
5. Interpersonal skills will be developed through social interaction , working in team
6. Entrepreneurship skills will be inculcated through marketing of cones, doing mehendi designs

Tools/Material Needed				
1. 250gm of henna powder – Cost Rs120	4. Small coconut oil packet of 10 ml- Rs 2			
2. Sugar powder 150 gm- Cost Rs 10	5. Used empty milk packets of ½ litre milk packet ( 10 packets )			
3. Water as per consistency	6. Cello tape- Rs 20			
Steps				
1.Pre activity- Students will be divided into groups and asked to bring all the required material				
2. Activity - One group will prepare mehendi batter by mixing mehendi with sugar powder and coconut oil and add water to this slowly and keep mixing it until it attains a perfect consistent, another group will prepare cones with empty milk packets where two cones of length 15cm can be prepared from one half liter milk packet, another group will fill the batter in the cones and seal them with plaster.				
3. The batter prepared will be 600gm and the capacity of each cone is 30gm and with this batter 20 mehendi cones can be formed				
4. Amount spent on Mehendi cones- $Rs120+Rs10+Rs2+Rs20 = Rs 152$ . Selling price of each cone Rs 20 and total amount to be received is Rs400. Profit = $Rs400 -Rs152= Rs 248$ .				
5. Post activity – selling the mehendi cones to bangle stores .				
6. Students who can apply mehendi designs can apply one cone for two persons and charge Rs150 per person for simple design.				
Precautions				
1. Add water little by little to form batter with smooth consistency and see that no lumps are formed.				
2. Cones should be prepared well to ensure that the mehendi batter does not leak from it.				
3. Cone should be closed with tape properly and see that mehendi does not leak from it.				
4. Prepared cones should be handled with care and place them in a empty box one beside the other.				
Assessment of Student Activity				
Performance rating→	Excellent	Good	Satisfactory	Needs improvement
Criteria↓				
1. Consistency of batter				
2. Cutting the empty milk packets appropriately				
3. Preparing cones				

## Lesson Plan 10

Name of Faculty: M.Anitha

<b>Class</b>	<b>IX</b>	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	<b>Triangles- Congruency</b>	<b>Duration of the Lesson</b>	2 hours
<b>Concept(s) Covered</b>		Congruency of triangles	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<p>1. Occupation – Architecture is the occupation that can be linked to this topic as skill of drawing similar and congruent figures are inculcated through this topic</p> <p>2. Vocation –making triangle color banners from color sheets of paper</p>			
<b>Skills that will be inculcated</b>			
<p>1. Measuring- Drawing line segments, angles, circles, squares, rectangles of same shape and size .</p> <p>2. Precision- Refinement in measurement.</p> <p>3. Creativity- new and innovative congruent and similar designs</p> <p>4. Interpersonal – by knowing one another</p> <p>5. Motor-fine motor skills in movement of hand wrists</p> <p>6. Entrepreneurship- through marketing</p> <p>7. Estimation- in estimating the number of triangles that can be drawn, price etc.</p>			
<b>Interdisciplinary concepts that may be integrated</b>			
<p>1. Communication- Gathering information, listening, speaking and writing.</p> <p>2. Theorems- applying these properties in proving theorems in geometry</p> <p>3. History- Cultural festivals, national festivals</p> <p>4. Color theory- mixing and matching different colors</p> <p>5. Biology- ingredients of homemade gum (maida, sugar and salt)</p> <p>6. Ecofriendly- homemade gum</p>			
<b>Learning Outcomes</b>			



Students will be able to –

1. Identify congruency and similarity of figures with measures.
2. Visualize and represent different types of similarity of triangles.
3. Draw and create new decorative items at home for birthday party
4. Social interaction enhances interpersonal relationships among students
5. Entrepreneurship is developed through marketing and sale of items prepared

<b>Tools/Material Needed</b>	
1.Color paper sheets of different colors ( 20 sheets) 2. scissors 3.Scale/tape 4.pencil	5.Gum (3 teaspoons Maida, 2 teaspoons sugar, 1 tea spoon salt) 6.Sutli rope one bundle- Rs 90 7. plastic bowl and spoon
<b>Steps</b>	
<p>1. Pre activity- The students will be divided into groups and asked to bring the required material for preparing triangle shape banner and prepare the gum in a plastic bowl by adding 3 teaspoons Maida, 2 teaspoons sugar, 1 teaspoon salt and adding water little by little to form a smooth paste.</p> <p>2. Activity- One group will cut the color sheets into A4 size sheets by drawing the outline with pencil( 6 sheets from one color paper sheet), next group will draw 3 congruent triangles on the A4 size sheet with pencil , another group will cut them, last group will stick 6 triangular shapes at equal distanceson one metre rope with gum.</p> <p>3. Students will fix the price of banners – Cost of 20 sheets Rs 80, Sutli rope Rs 90 ( amount spent Rs 170)</p> <p>4. Number of banners prepared – One color sheet can be divided into 6 parts of A4 size and each of the A4 size sheet into 3 triangular parts, so total from one sheet – 18 triangles and 6 triangles are needed in 1 meter length banner and one meter can be sold for Rs10. So total 3 meters banner can be formed from 1 sheet of color paper. Total no of banners from1 sheet of color paper– 3 one-meter banners, from 20 sheets we get 60banners of one meter. Total selling price of all banners- one banner Rs 10 of one meter length, for 60 banners <math>10 \times 60 = \text{Rs } 600</math></p> <p>5. Post activity –Students can sell these banners to stationary shops. Profit = <math>\text{Rs}600 - \text{Rs}170 = \text{Rs}430</math></p> <p>6. Further flag color banners can be prepared for National festivals in schools.</p> <p>7. The banners can further be made creative by writing alphabets and sold, so that they can be used for birthday parties.</p>	
<b>Precautions</b>	
1. Water to be added carefully in small quantities while preparing gum.	

2. Color sheets should be cut carefully into A4 size and then into triangular shapes.
3. Stick the triangle shapes to sutli rope one by one and allow them to dry.
4. If students are not able to sell them to stationary shops , they can be sold to schools.

#### Assessment of Student Activity

Performance rating→ Criteria ↓	Excellent	Good	Satisfactory	Needs to be improved
Accuracy in 1. Cutting sheets				
2. Triangular shapes				
3. Sticking triangles at equal distances on sutli rope				

## Lesson Plan 11

**Name of Faculty: M. Anitha**

<b>Class</b>	<b>IX</b>	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	<b>Sphere</b>	<b>Duration of the Lesson</b>	2 hours
<b>Concept(s) Covered</b>		Curved surface area of sphere	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Occupation – Cook ( preparing variety of laddus), Toy making, Crafts- making decorative items			
2. Vocation- preparing laddus			
<b>Skills that will be inculcated</b>			
1. Measuring – Drawing circles by measuring the radius , where area of sphere is 4 times that of a circle.			
2.Estimation- estimation of ingredients in preparing laddu			
3.Approximation- guessing the price of laddus			
4. Creativity- idea of preparing new variety of laddus			
5. Interpersonal – through interaction and working in team			
6. Motor skills- Movement in hand and wrist while preparing laddu			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Content related – Finding the curved surface area of hemisphere, calculating nutritive value in percentage			
2. Biology- Botanical name of plant, ingredients and nutritive value of the ingredients			
3.Goegraphy- Area where the crop( urad dal ) is grown more			
4. Communication- Gathering information, listening, speaking, reading and writing			
5. Entrepreneurship – Through marketing, financing.			
<b>Learning Outcomes</b>			
Student will be able to			
1. Find the relation between circle and sphere			
2. Connect the concept in finding area of hemisphere			
3. Decision making, creative thinking in preparing new recipes of laddu making and social skills will be enhanced through interaction with peers and society.			
4. Entrepreneurship – Marketing, financing will be developed through sale of laddus			

<b>Tools/Material Needed</b>
------------------------------

1. 500 gm of urad dal –Rs76 2. 300gm of sugar- Rs12 3. ghee – 50 ml,Rs 60 4. Mixer to grind sugar and urad dal 5. 2-3 cardamoms	6. 1 kg capacity steel kadai/pan induction friendly 7. Induction stove 8. 1 wooden or steel table spoon 9. Steel plate to dry laddus
<b>Steps</b>	
1. Pre activity- Students will be divided into groups and instructed to contribute and bring all the required material 2. Activity-One group of students will fry urad dal in the kadai until it turns slightly brown, another group will grind sugar and fried urad dal and cardamoms in mixer, next group will now place the kadai on the stove and pour the ghee into it, when the ghee starts heating mix urad dal powder, sugar into it and stir them for some time and keep it aside for a while until it is warm and then the group will start taking this semisolid mixture into the palm and start preparing laddus of 2-3 inches size, and dry them by placing in a plate, approximately 30 laddus can be prepared 3. Amount spent on laddus is Rs76+ Rs12+Rs60 = Rs148, Selling price of each ladduRs10 , total amount received will be Rs300 and Profit Rs150. 4.Laddus can be sold to nearest kirana shop or sell it in the school premises by arranging stall and informing the community about the sale. 5. Parents also have to be invited while arranging stalls for the sale.	
<b>Precautions</b>	
1. Electronic gadgets should be handled with care. 2.Urad dal should be fried carefully until it turns slightly brown and not too dark brown 3. Start preparing laddus when the mixture is warm & not too hot nor cold 4. Care should be taken to dry laddus carefully 5.Laddus have to be saled within 2-3 days of preparation 6. Preserve laddus carefully if they are not able to sale them immediately	
<b>Assessment of Student Activity</b>	
Report writing Components  1. Nutritional value of 1 laddu  2. Finding the radius of the laddu prepared by winding thread and filling the thread in 4 circles.	

## Lesson Plan 12

**Name of Faculty: M. Anitha**

<b>Class</b>	<b>IX</b>	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	<b>AREAS</b>	<b>Duration of the Lesson</b>	2 hours
<b>Concept(s) Covered</b>			square
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<p>1. Occupation – The occupation linked to this lesson is Farmer. The measure of planar region (ie.Areas) will help the student to know how to divide the land into plots, estimate the amount of fertilizer , manure, seeds etc required for farming.</p> <p>2. Business – The vocation linked to the topic is preparing envelopes with brown sheets and newspapers by cutting them into square and rectangular shapes and joining them.</p>			
<b>Skills that will be inculcated</b>			
<p>Skills related to <b>subject</b></p> <p>1.Estimation- Students will be able to estimate the number of sheets required for making envelopes, their cost.</p> <p>2. Measurement- Students will acquire the skill of measuring the dimensions of envelopes.</p> <p>3. Accuracy– Students will be able to cut rectangular and square shapes accurately.</p> <p><b>Life skills</b></p> <p>Communication- Students will acquire information and demonstrate the skills of listening, speaking , writing through interaction with peer group.</p> <p>Interpersonal relationship – Students will develop interpersonal relations through marketing and team work.</p> <p><b>Entrepreneurship</b></p> <p>Students will be able to handle finance, accounting and marketing</p>			
<b>Interdisciplinary concepts that may be integrated</b>			
<p>1. Congruency &amp; Similarity of figures through drawing and cutting rectangles and squares of same shape and size</p> <p>2.Biology- Natural gum from the ingredients maida, sugar , salt and water</p> <p>3. Ecofriendly- home made gum</p>			

4. Communication-knowing information, reading, writing and listening through working in team and marketing

5. History – Envelopes were first developed by Chinese and postal envelopes developed through middle ages

### **Learning Outcomes**

Students will be able to

1.Connect the concept of area in daily life to calculate the paper required to gift wrap and to spread sheets in racks, prepares gift covers, covers from newspapers.

2. Develop social skills, decision making through working with peer group.

3. Acquires marketing skills and handle finance through sale of envelopes.

### **Tools/Material Needed**

1. Brown sheets

2. Newspapers

3.Homemade gum ( Maida 3 teaspoons, sugar 2 teaspoons, 1 teaspoon salt and water)

4. Scissors

5.Scale, tape

6. Plastic bowl and spoon

### **Steps**

1. Pre activity – Students will be divided into groups and informed to bring all the required material to prepare envelopes.

2.Activity-The work will be divided among all the groups –one group will cut brown sheets into rectangular shapes ie. one sheet can be cut into 8 parts of A6 size, another group will cut newspapers into square and rectangle shapes, one group will prepare gum and one group will prepare covers of size 25 cm x12cm dimensions.

3. Gum preparation- take 3 teaspoons of Maida in a bowl, add 2 teaspoons of sugar and 1 teaspoon of salt to it and mix them, now add water little by little to make it a smooth paste which is ready for use.

4. Fold the rectangular sheets, square sheets cut from brown sheets, newspaper sheets and join them with gum to form envelopes and dry them.

5. Post activity- envelopes can be sold to kirana stores, medical shops and stationary shops.

6. Income generation – Cost of 20 brown sheets –Rs 140, 8 envelopes can be prepared from one sheet, Total no of envelops prepared are  $20 \times 8 = 160$ . Selling price of one envelop Rs3, Selling price



of 160 envelopes = Rs480 and Profit = Rs480-Rs140=Rs340. Covers prepared from old newspapers of different sizes can be sold to kirana, general and medical stores , Profit 100%.

### Precautions

- 1.Measurement should be done accurately.
2. Sheets should be cut carefully and neatly.
3. Water should be added little by little slowly while preparing the gum.
4. Envelops should not be placed one over the other while drying them.

### Assessment of Student Activity

Rating of performance through peer assessment

Performance → Criteria ↓	Excellent	Good	Satisfactory	Needs improvement
1. Cutting sheets neatly				
2. Preparing gum with proper consistency				
3. Preparation of covers				
4. Marketing and sale of envelopes				

### Lesson Plan 13

Name of Faculty: **Dr. B. Deevena Pauleen**

<b>Class</b>	X	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	Coordinate Geometry - Matty cloth designs	<b>Duration of the Lesson</b>	2 periods (90 minutes)
<b>Concept(s) Covered</b>		Coordinate Geometry	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<ol style="list-style-type: none"> <li>1. Handicrafts and Carpet Sector Skill Council</li> <li>2. Fashion Industry</li> </ol>			
<b>Skills that will be inculcated</b>			
<ol style="list-style-type: none"> <li>1. Precision</li> <li>2. Manipulation</li> <li>3. Creativity</li> <li>4. Communication</li> <li>5. Fine Motor Skills</li> <li>6. Dexterity</li> <li>7. Observation</li> <li>8. Imitation</li> <li>9. Coordinate Geometry</li> <li>10. Eye - Hand Coordination</li> <li>11. Memory Enhancement</li> <li>12. Patience</li> <li>13. Visualization &amp; Imagination</li> <li>14. Problem Solving</li> <li>15. Entrepreneurship</li> </ol>			
<b>Interdisciplinary concepts that may be integrated</b>			
<ol style="list-style-type: none"> <li>1. Art - Visual Arts</li> <li>2. Measurements</li> <li>3. English - Communication, LSRW skills</li> <li>4. Color Theory/Cognitive Skill (While choosing matching or contrasting colors)</li> <li>5. Geometry - Symmetry and Patterns, Fractions</li> <li>6. Science – Fabric</li> <li>7. Social - Ancient Textile Art &amp; Culture</li> </ol>			
<b>Learning Outcomes</b>			
<ol style="list-style-type: none"> <li>1. Connects the knowledge of coordinate Geometry while creating various embroidery designs.</li> <li>2. Apply the concept of fractions, symmetry &amp; patterns while using matty cloth design.</li> <li>3. Develops patience, eye-hand coordination, visualization &amp; representation skills.</li> <li>4. Creates masterpieces of items with matty cloth.</li> <li>5. Students develop communication skills while selling their product.</li> <li>6. Students are initiated to entrepreneurship.</li> <li>7. Evaluates cost benefit analysis while fixing price for each item.</li> </ol>			
<b>Tools/Material Needed</b>			
<ol style="list-style-type: none"> <li>1. Matty cloth</li> <li>2. Measuring Scale</li> <li>3. Embroidery Needle</li> <li>4. Scissors</li> <li>5. Marker</li> <li>6. Embroidery threads different colors</li> </ol>			
<b>Steps</b>			
<ol style="list-style-type: none"> <li>1. <b><u>Pre-Activity:</u></b> Teacher discusses the concept of Coordinate geometry and its application in Handicrafts</li> </ol>			

industry & fashion industry. Teacher considers students opinions and ideas. Teacher then shows the technique of sewing simple cross embroidery on Matty cloth.

<https://www.youtube.com/watch?v=ldsJluLODPY>

<https://www.youtube.com/watch?v=lhHgVi-Ctbc>

2. Teacher gives practice of stitching design on Matty cloth with different threads (concept of **coordinates - finding the point** on the matty cloth).
3. Students develop expertise in using thread and needle with precision and dexterity.
4. Teacher gives the freedom to the child to make any design on the cloth.

#### **Measurements:**

5. Students estimate the ideal size of a handkerchief i.e., 12" X 12".

#### **Money:**

6. Students purchase the materials needed to make the Handkerchiefs.

1 Matty cloth handkerchief = Rs 15

Embroidery threads (5) = Rs 50

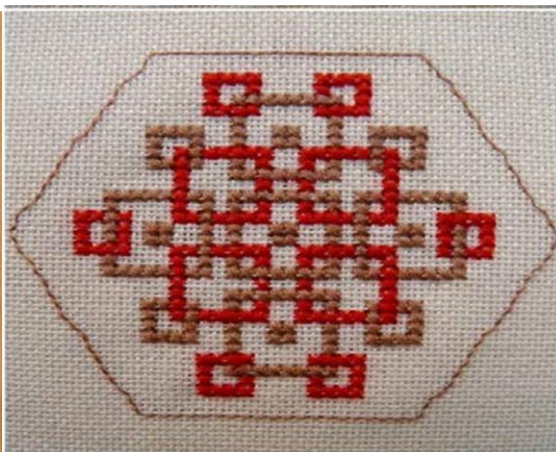
Embroidery Needle (1) = Rs 2

Embroidery Frame = Rs 25

#### **7. Process:**

i) Teacher asks the students to draw a simple design on the Matty cloth to stitch (**concept of coordinate axis**)

ii) Students use simple cross design patterns to stitch borders and center designs (**Concept of patterns, symmetry, visualization of coordinate points**).



iii) Students create beautiful designs on handkerchiefs.

<https://www.youtube.com/watch?v=Pj3-es2vTSo>

[https://www.youtube.com/watch?v=KoNwVV4B\\_Go&list=RDCMUcu\\_uHzYH1K1YOzvwAJawepA&index=19](https://www.youtube.com/watch?v=KoNwVV4B_Go&list=RDCMUcu_uHzYH1K1YOzvwAJawepA&index=19)

#### **Post-Activity:**

Students fix a selling price so as to gain suitable profit.

#### **Profit and Loss, Money, Conversions and Basic Maths**

Investment on making 1 design handkerchief = Rs. 20 approx.

Investment on making 10 design handkerchiefs = Rs 170 approx. (15x10 + multiple use of thread/needle & frame)

Students sell each handkerchief for Rs. 35.00.

Amount earned on selling 10 Handkerchief =  $10 \times 35 = \text{Rs } 350$

Profit = Amount earned - Amount invested =  $350 - 170 = \text{Rs } 180$

### **Precautions**

Every student should actively participate.

Teacher should monitor the students while using needle.

Students should do multiple estimations on their sales. If whole quantity is not sold, students should be aware of not effecting the sales with their cost of expenditure.

Students can analyze the demand of the customers and think of manipulating the product (making pillow covers/bedsheet borders etc.) as per the requirement.

Students can use data handling while making a report on consumer choice of color, size of handkerchief, etc., from data collected for future product making.

### **Assessment**

1. Creative use of optimum materials.
2. Use of color and patterns, designs.
3. Report writing will be assessed.
4. Application of concepts.

## Lesson Plan 14

Name of Faculty: Dr. B. Deevena Pauleen

<b>Class</b>	X	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	Polynomials - Quilt/Doormat/Table cloth making	<b>Duration of the Lesson</b>	4 hrs (2 days)
<b>Concept(s) Covered</b>		Polynomials, Geometrical shapes, Measurements,	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Apparel Made-Ups			
2. Handicrafts and Carpet Sector Skill Council			
3. Fashion Industry			
<b>Skills that will be inculcated</b>			
1.Precision		6. Entrepreneurship	11. Cutting
2. Manipulation		7. Imitation	12. Self Confidence
3. Creativity		8. Observation	13. Patience
4. Communication		9. Drawing	14. Critical Thinking
5.Fine Motor Skills		10. Visualization & Imagination	
<b>Interdisciplinary concepts that may be integrated</b>			
1. Social - (Reuse of old clothes)		6. Basic Mathematics	11. Science - Fabric & thread
2. Measurement		7. Profit and Loss	
3. English – Communication		8. Patterns	
4. Symmetry		9. Money	
5. Areas		10. Art & Craft	
<b>Learning Outcomes</b>			
1. Connects the knowledge of polynomialswhile making the quilt from various pieces of cloth.			
2. Applies the concept of trinomial, quadrinomial etc. while cutting the used cloth pieces to make patterns.			
3. Visualizes the size and shape of the quilt that can be created from the number of pieces used.			
4. Evaluates the price to be assigned based on the time and effort put.			
5. Creates unique patterns of quilts/table cloths/doormats using the concept of polynomials.			
6. Develops interpersonal skills while working in team.			
7. Students develop communication skills while selling their product.			

8. Students are initiated to entrepreneurship.

### **Tools/Material Needed**

1.Used clothes	4.Measuring scale/tape
2.Scissors	5. Markers
3. Needle	6. Threads of different colors

### **Steps**

#### **Pre-Activity:**

Teacher provides information on the concept of polynomials like Monomial, Binomial, Trinomial, Quadrinomial.

Teacher discusses how the polynomial can be represented using tiles through the video

<https://www.youtube.com/watch?v=mIISU7jyVCK>

Teacher correlates the use of tiles to the pieces of cloth that can be used to make the quilt.

Teacher asks the students to cut the cloth in different shapes keeping the concept of algebraic tiles. Square pieces of cloth ( $x^2$ ), Rectangular pieces ( $x$ ), small square pieces (1 unit). Similarly with a different cloth ( $y^2/y/1$  unit).

#### **Measurements:**

Students estimate the different lengths of cloth cut to make different sizes of quilts/table cloth/doormats.

#### **Money:**

As old clothes are used, purchase of needle and thread is only required.

#### **Process:**

Teacher divides the class into 3 groups as follows

- one group makes quilt
- one group makes table cloth
- one group makes door mats

Students cut the clothes of different colors and shapes as per the concept being taught.



Students arrange the cut pieces of cloth in different patterns with optimum utilization of cloth.





Teacher guides the students in stitching the cut pieces with precision and proper eye-hand coordination in a sequence/pattern.

The stitched pieces are then seamed on border to give a complete look. The table cloth can also be cut into circular shape for a presentable look.

Double cloth can be used to give stiffness to the product or a single cloth can be used as a base to complete the product.



The quilt is made by the students



The doormat/table cloth is made by the students.



Once the pieces are hand stitched, teacher can help the students to stitch them on a sewing machine and use some embroidery stitches.

Students estimate the price of the quilt/doormat/table cloth (**Concept of Areas/Money/Profit and Loss/Basic Mathematics/Conversions**)  
(Estimations)

Handmade quilt market price is between Rs 1500 to Rs 2000

Handmade table cloth market price is between Rs 200 to Rs 300

Handmade doormat market price is between Rs 200 to Rs 300

Students do the estimation and set the price for the products created.

#### **Post-Activity:**

Students fix a selling price so as to gain suitable profit.

Students market their product in the school as well as local community.

Divide the amount among themselves.

Each student share =  $\text{Selling Price} / \text{Number of students}$

#### **Precautions**

1. Every student should actively participate.
2. Teacher should monitor the team work.
3. Be careful while using scissors & needle.
4. Make sure that similar fabric should be used to make an item. Different fabric can be used to make different items.
5. The old clothes brought should be neatly washed and if needed ironed.
6. Students should do multiple estimations on their sales. Selling price should not be too low than the market price.

#### **Assessment**

1. Creative use of optimum materials.
2. Creative use of patterns and color combination.
3. Neat and proper finishing of stitching cloth pieces.
4. Application of concepts of algebraic tiles to form polynomial patterns.
5. Group participation.
6. Report writing will be assessed.



## Lesson Plan 15

Name of Faculty: Dr. B. Deevena Pauleen

<b>Class</b>	X	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	SETS - Origami cups of different shapes for school canteen/shops	<b>Duration of the Lesson</b>	2 periods (90 minutes)
<b>Concept(s) Covered</b>		Sets, Measurements, Symmetry and Patterns, Fractions and Data Handling	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Food Industry Capacity & Skill Initiative			
2. Handicrafts and Carpet Sector Skill Council			
3. Paints and Coatings Skill Council			
<b>Skills that will be inculcated</b>			
1.Precision            6. Entrepreneurship            11. Memory Enhancement			
2.Manipulation        7. Observation                12. Patience			
3. Creativity            8. Imitation                    13. Visualization & Imagination			
4. Communication 9. Geometry                14. Problem Solving			
5. Motor Skills        10. Eye - Hand Coordination			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Traditional Art (Japanese)			
2. Measurements			
3. English - Communication			
4. Color Theory/Cognitive Skill (While choosing matching or contrasting colors)			
5. Geometry Shapes, Symmetry and Patterns, Fractions			
6. Social - Culture, folk arts, handicrafts			
7. Science - (Recycled paper)			
8. Data Handling			
<b>Learning Outcomes</b>			
1. Connects the knowledge of lines and angles while folding paper in order to create various patterns.			
2. Applies the concept of measurements, fractions, symmetry & patterns while folding the paper.			
3. Develops patience, eye-hand coordination, visualization & representation skills.			
4. Creates masterpieces of items with paper as required by the consumer.			
5. Students develop communication skills while selling their product.			
6. Students are initiated to entrepreneurship.			
7. Evaluates cost benefit analysis while fixing price for each item.			
<b>Tools/Material Needed</b>			
1.Thick white/colored paper/Recycled paper		4.Scissors	
2.Measuring Scale		5. Marker	
3. Glue			
<b>Steps</b>			

**Pre-Activity:** Teacher carries out a discussion on how mathematical concepts can be related to food industry, Handicrafts industry and Paints & coating vocation. Teacher considers students opinions and ideas. Teacher then shows the technique of origami and asks students to relate mathematical concepts to it.

<https://www.youtube.com/watch?v=aMKYAcI8vO8>

Teacher gives practice on the different types of folds that are needed to create a model.

Students develop expertise in folding paper with precision and perfection.

Teacher gives the freedom to the child to use either colored paper or white paper/recycled paper.

Students color White paper in different designs/patterns to make the model unique and beautiful.

**Measurements:**

Students estimate the different lengths of paper needed to be folded to make different models.

**Money:**

Students purchase the materials needed to make the models.

**Data Handling:**

Students are asked to collect information on the various sizes& shapes of paper bowls needed in the school setting (canteen/lunch etc.)

**Process:**

Teacher divides the class into groups as follows

- one group collects information required on different sizes and shapes of paper bowls required
- one group makes the paper bowls by paper cutting and folding
- one group in sales and profit/loss analysis

First group visits the canteen and lunch room in the school to find the different sizes& shapes of paper bowls (**Concept of SETS**) required (bowls for samosas/puffs/ etc.)

*Origami*

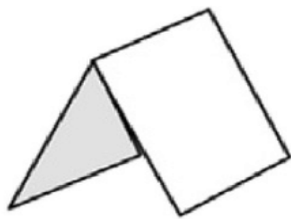


*Bowl*

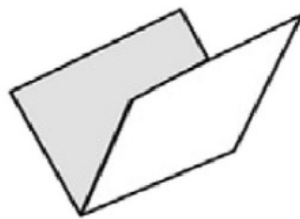




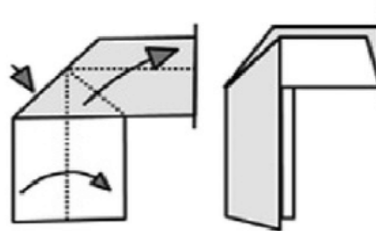
Second group works on folding the paper into different models.  
 (Here students connect the knowledge of **parallel lines, angles, triangles, symmetry and other geometrical concepts while making folds**)



Mountain fold



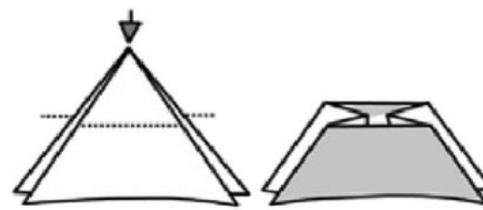
Valley fold



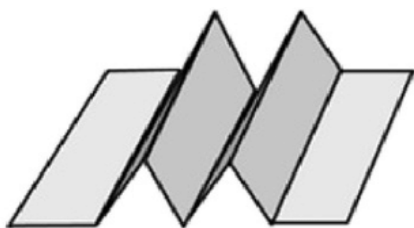
Swivel fold



Squash fold



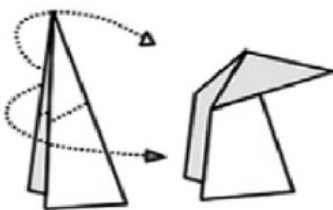
Sink fold



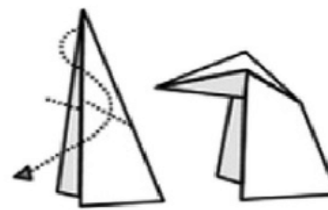
Pleat fold



Yoshimura/diamond fold



Inside reverse fold



Outside reverse fold

Simple paper bowl :- <https://www.youtube.com/watch?v=SEKVyRyMO38>

Round paper bowl :- <https://www.youtube.com/watch?v=PPxpJKZXyTI>

Rectangular bowl :- [https://www.youtube.com/watch?v=J4lgFE\\_Jlpw](https://www.youtube.com/watch?v=J4lgFE_Jlpw)

Square bowl :- <https://www.youtube.com/watch?v=2kK5Odv5xQY>

Students color the bowls (if in white paper) with different designs and patterns.

### **Post-Activity:**

Students fix a selling price so as to gain suitable profit.

### **Profit and Loss, Money, Conversions and Basic Maths**

Investment on making 50 simple paper bowls and 50 rectangular paper bowls = Rs. 150

$$\begin{aligned} 1 \text{ paper bowl} &= \frac{\text{Cost of sheets}}{\text{No. of sheets}} \\ &= \frac{150}{100} \\ &= 1.50 \text{ rupees each} \end{aligned}$$

Cost of 100 paper bowls = Rs 150 then cost of each paper bowl – Rs 1.50 approximately

After calculating the approximate amount spent on each paper bowl, students decide a selling price for each paper bowl in order to gain a suitable profit that can be shared by everyone in the team.

Students sell each paper bowl for Rs. 3.00. A packet of 25 paper bowls is sold at Rs. 75.

Students sell the paper bowls in the canteen/lunch room

Amount earned on selling 100 paper bowls =  $4 \times 75 = \text{Rs } 300$

Profit = Amount earned - Amount invested =  $300 - 150 = \text{Rs } 150$

Students share the profit among themselves.

### **Precautions**

1. Every student should actively participate.
2. Teacher should monitor the team work.
3. Initial data handling on finding the required sizes should be done carefully & appropriately.
4. Quality of paper should be good to hold the items in it.
5. Students should do multiple estimations on their sales. If whole quantity is not sold, students should be aware of not effecting the sales with their cost of expenditure.
6. Students can analyze the demand of the customers and think of manipulating the product (making the paper bowls little big /small as per the requirement)
7. Students can use data handling while making a report on consumer choice of color, size of paper bowl, choice of product and use this data collected for future product making.

### **Assessment**

1. Creative use of optimum materials.
2. Group participation.
3. Quality of paper used.
4. Report writing will be assessed.
5. Application of concepts.
6. Design as per requirement.

## Lesson Plan 16

Name of Faculty: Dr. B. Deevana Pauleen

<b>Class</b>	X	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	Tangents & Secants - Craft paper Chandelier	<b>Duration of the Lesson</b>	2 periods (90 minutes)
<b>Concept(s) Covered</b>			
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Handicrafts and Carpet Sector Skill Council 2. Fashion Industry			
<b>Skills that will be inculcated</b>			
1.Precision                      6. Dexterity                      11. Memory Enhancement 2.Manipulation                7. Observation                      12. Patience 3. Creativity                    8. Imitation                      13. Visualization & Imagination 4.Communication    9. Problem Solving            14. Entrepreneurship 5.Fine Motor Skills 10. Eye - Hand Coordination			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Art - Visual Arts 2. Measurements 3. English - Communication, LSRW skills 4. Color Theory/Cognitive Skill (While choosing matching or contrasting colors) 5. Geometry -Symmetry and Patterns 6. Progressions 7. Social - Handicrafts/Chandeliers history 8. Science - Chandelier - light illumination, refraction			
<b>Learning Outcomes</b>			
1. Connects the knowledge of Tangents and secants of a circle while creating various hanging designs. 2. Apply the concept of symmetry & patterns while making the origami shapes. 3. Applies the concept of progressions (arithmetic progression) in deciding the length of each hanging thread. 4. Develops patience, eye-hand coordination, visualization & representation skills while using origami to make different sized objects. 5. Creates masterpieces of hanging chandeliers with origami art. 6. Students develop communication skills while selling their product. 7. Students are initiated to entrepreneurship. 8. Evaluates cost benefit analysis while fixing price for each item.			
<b>Tools/Material Needed</b>			
1. String/wire for craft work (d=35cm) 2.Measuring Scale 3.Embroidery Needle 4. Different color papers/news papers		5.Scissors 6. Marker 7. Embroidery/woolen thread (any color) 8. Beads (different sizes & colors)	
<b>Steps</b>			

**Pre-Activity:**

Teacher discusses the concept of Tangents of a circle, the point at which they meet outside the circle and the angles formed etc. Teacher brain storms the students on the application of tangents in making Handicrafts/DIY wall hangings and decorative items. Teacher considers students opinions and ideas. Teacher then shows the technique of origami to make shapes of different sizes.

<https://www.youtube.com/watch?v=Z4Z0reQy1Ro> (start at 35 mins)

Teacher gives practice of making the origami shapes.

Students develop expertise in using paper folding with precision and dexterity.

Teacher gives the freedom to the student to choose different color combinations for the hangings.

**Measurements:**

Students estimate the ideal size the chandelier hanging i.e., 35 cm diameter circle.

Length of metal wire (circumference of the circle) = 110 cm.

Length of each hanging string (in progression) - students decide on their own

Total number of strings - 15 strings

**Money:**

Students purchase the materials needed to make the Handkerchiefs.

1.5 meters craft wire = Rs 45

Woolen threads (1) = Rs 15

Embroidery Needle (1) = Rs 2

Craft paper of 5 color X 3 sheets = Rs 2 \* 15 = Rs 30

**Process:**

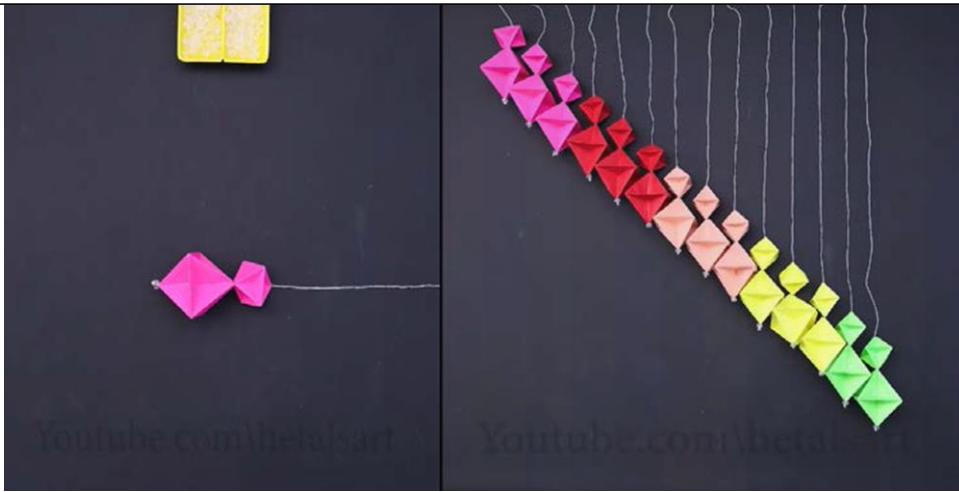
Teacher asks the students to make a circle with the craft wire of diameter 35cms (**concept of circle & its circumference**)

Students make the origami shapes in two different sizes with different color papers (**Concept of patterns, symmetry, visualization of geometrical shapes**).

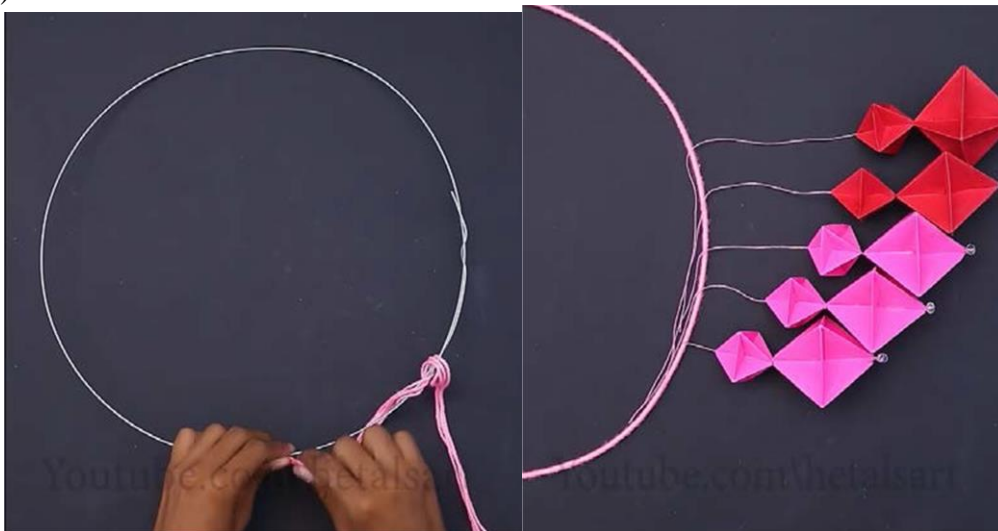


iii) Students use beads and woolen thread to make the strings of different heights (in progression). 15 strings are made.

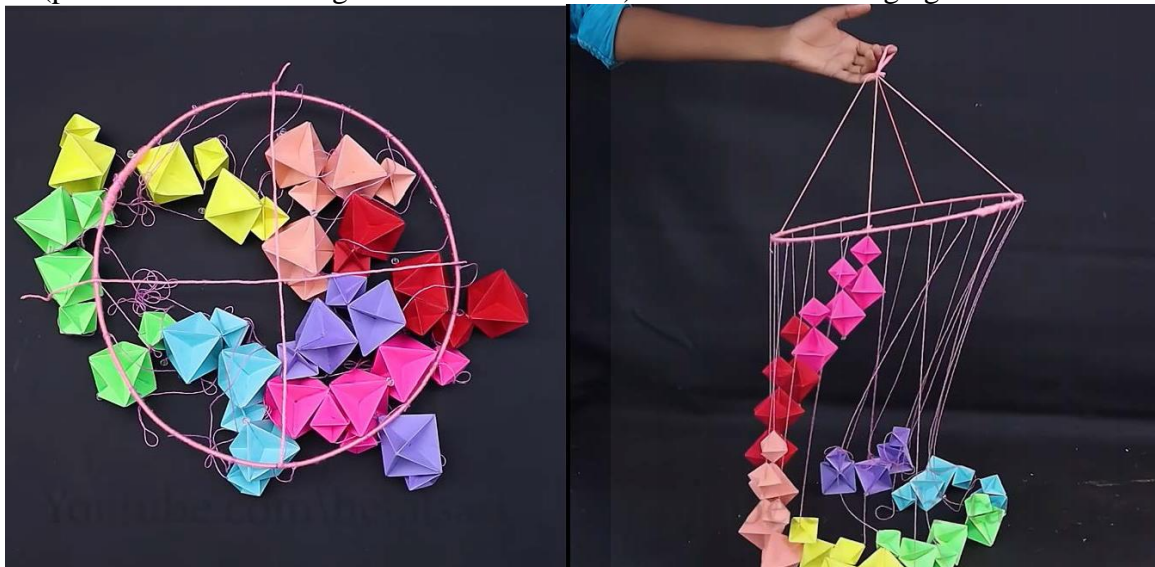




iv) The craft wire of 35 cms diameter is covered with the woolen thread. Mark points at a distance of 2cm on the circumference of the circle and attach the strings (concept of tangents to the circle).



v) Attach woolen threads on the circumference of the circular ring at four points equidistant from the radius. The thread at the centre from all the four points is extended and knotted at a point (point of contact of tangents outside the circle). This holds the hanging.





### **Post-Activity:**

Students fix a selling price so as to gain suitable profit.

### **Profit and Loss, Money, Conversions and Basic Maths**

Investment on making 1 hanging Chandelier craft= Rs. 92 approx.

Students sell each hanging chandelier for Rs. 150 to Rs 200.

Profit = Amount earned - Amount invested = Rs50 to Rs 100

### **Precautions**

1. Every student should actively participate.
2. Teacher should monitor the students while making the origami.
3. Be careful while estimating the length of each hanging thread (should be in arithmetic progression).
4. Students should do multiple estimations on their sales.
5. Students can analyze the demand of the customers and think of manipulating the product (making use of different shapes and sizes/ theme based) as per the requirement.
6. Students can use data handling while making a report on consumer choice of color, size of hanging, etc., from data collected for future product making.

### **Assessment**

1. Use of color and patterns, designs.
2. Report writing will be assessed.
3. Application of concepts.



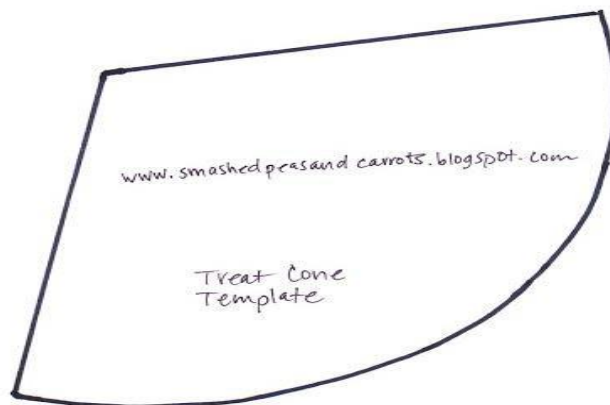
## Lesson Plan 17

**Name of Faculty:** B.Dhanalaxmi

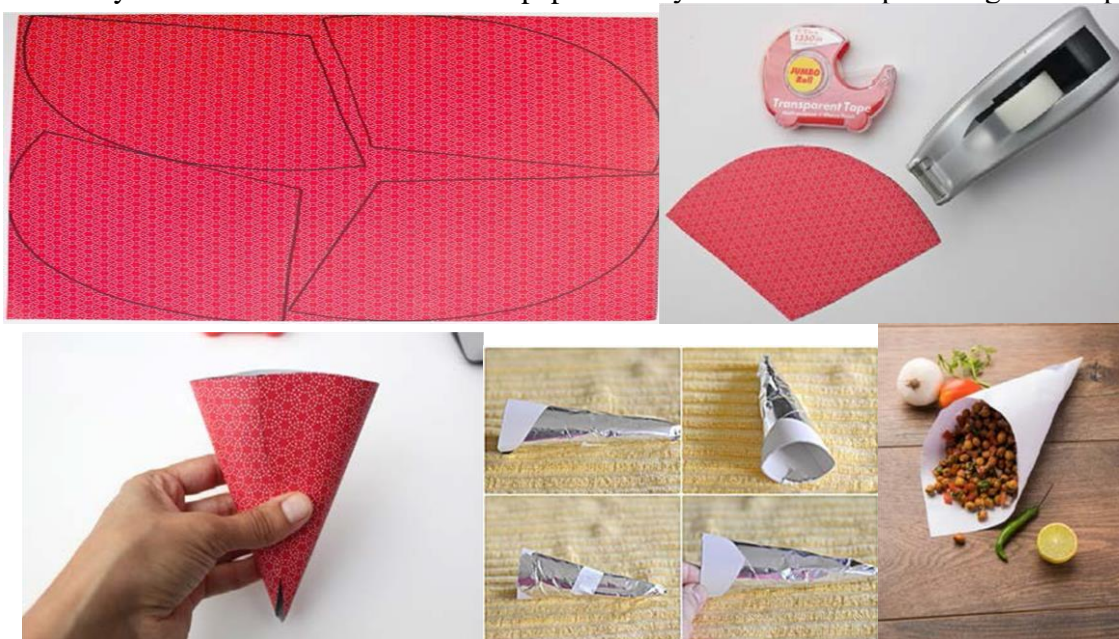
<b>Class</b>	IX	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	Surface Areas and Volume	<b>Duration of the Lesson</b>	2 periods
<b>Concept(s) Covered</b>		3D and 2D shapes, Surface Areas, Volume, Measurements, Money	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Food Industry(Making and selling peanut, chickpea, sprouts salad)			
<b>Skills that will be inculcated</b>			
1. Precision		6. Entrepreneurship	
2. Manipulation		7. Imitation	
3. Creativity		8, Observation	
4. Communication			
5. Motor Skills			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Nutrition (Healthy Life Style)			
2. Measurements			
3. Communication			
4. Mensuration			
5. 3D and 2D shapes			
<b>Learning Outcomes</b>			
1. Connects the knowledge of the 2-Dimensional shapes and 3-Dimensional shapes while making the cone.			
2. Apply the concept of surface areas and volumes while calculating the required material in order to make a cone of particular size.			
3. Develops interpersonal skills while working in team.			
4. Students develop communication skills while selling their product.			
5. Students are initiated to entrepreneurship.			
<b>Tools/Material Needed</b>			
1. Paper or old newspapers		4. Cello Tape	
2. Food ingredients required to make different salad		5. Ruler or Measuring tape	
3. Scissors			

## Steps

1. **Pre-Activity:** Teacher discuss with students about some healthy salads. Students share their ideas. Here in this activity students will learn how to make sprouts salad and then design a paper cone as packaging in order to sell their end product.
2. Teacher plays a video on hw to make a sprout salad with no fire cooking.  
<https://www.youtube.com/watch?v=F98AxI4dNmM>
3. **Process:** Students divide the task and work in groups. They start with gathering the ingredients to make the salad.
4. Understand and become familiar with cones.  
Students make several attempts and finally make a template and use this to make packing.  
They use the template to make a 5 inch cone as the end product.



5. Students try to make best use of a sheet of paper as they cut out the shapes using the templates.



**Post-Activity:** Students fix a selling price so as to gain suitable profit.  
Organise and arrange the stall.



6. Each student share = Total profit/Number of students
7. Selling price, Cost of making the salad (including packaging and stall installation) = Rs. 400  
Quantity of salad prepared = 600 grams  
Quantity per cone = 30 grams  
Amount spend on one cone =  $(30 \times 400) / 600 = \text{Rs } 20$   
Selling Price of each cone = Rs 30  
Amount earned on selling =  $(600 / 30) \times 30 = \text{Rs } 600$
8. Profit = Selling price – Cost price =  $600 - 400 = \text{Rs. } 200$
9. Divide the profit among themselves.

### **Precautions**

1. Every student should actively participate.
2. Teacher should monitor the team work.
3. Be careful while using sufficient material as per the requirement.
4. Students should do multiple estimations on their sales. If whole quantity is not sold, students should be aware of not effecting the sales with their cost of expenditure.
5. Students should take care of hygiene.
6. Students should devise a plan in case there is no sale as per expectations. Students can maintain a data, noting the costumer's preference and modify the recipe if needed.

### **Assessment**

1. Creative use of optimum materials.
2. Group participation.
3. Report writing will be assessed.
4. Application of concents.

## Lesson Plan 18

**Name of Faculty:** B.Dhanalaxmi

lass	IX	Subject	Mathematics
Lesson Name	Circles	Duration of the Lesson	2 periods 90 minutes
Concept(s) Covered		Circles, Measurements, Symmetry and Patterns, Money	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. Fashion Industry 2. Marketing			
Skills that will be inculcated			
1. Precision		6. Entrepreneurship	
2. Manipulation		7. Imitation	
3. Creativity		8. Observation	
4. Communication			
5. Motor Skills			
Interdisciplinary concepts that may be integrated			
1. Eco-friendly (Reusing old bangles)			
2. Measurements			
3. Communication			
4. Colour Theory/Cognitive Skill (While choosing matching or contrasting colours)			
5. Symmetry and Patterns (Sticking kundans at equal distance, making patterns while designing)			
Learning Outcomes			
1. Connects the knowledge of diameter while making bangles of different sizes for different age groups.			
2. Apply the concept of circumference while calculating the length of lace or other materials.			
3. Develops interpersonal skills while working in team.			
4. Students develop communication skills while selling their product.			
5. Students are initiated to entrepreneurship.			
Tools/Material Needed			
1. Old bangles		4. Fevicol (Fabric Glue)	
2. Silk thread		5. Measuring tape or ruler	
3. Decorative materials (Kundan, ball chain lace)			

## Steps

1. **Pre-Activity:** Teacher initiates a discussion on how can we relate maths and different topics of maths while designing bangles. Students give their opinions and talk about maths topics such as measurements, diameter, circumference of circle etc.
2. Teacher also initiates discussion on selling and organizing a stall for their products. After few discussions and sharing ideas, teacher then introduces the topic of decorating bangles and selling the end product. Where, students are instructed to be grouped under teams, each with a task to execute and for their complete participation.
3. Teacher plays a video on making bangles as a reference idea.

<https://www.youtube.com/watch?v=42nrggfatYs>

4. Later teacher divides students into groups. Students arrange the materials needed to decorate bangles.



5. **MONEY:** Students estimate the price spent to decorate bangles.

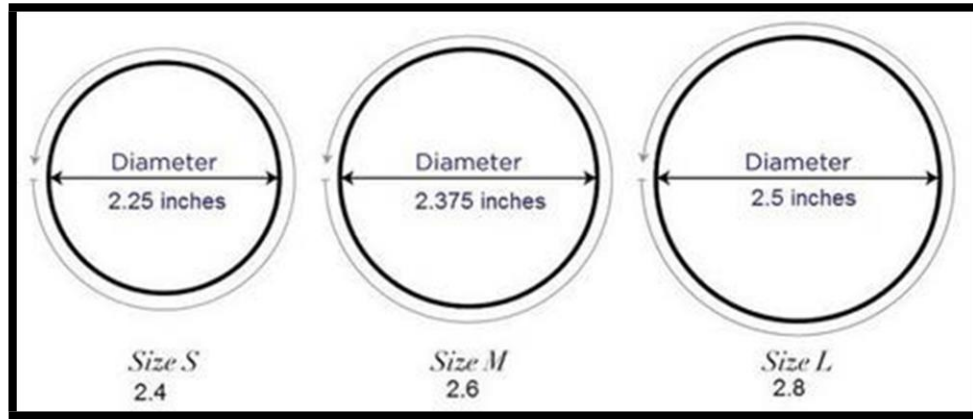
Amount spent on materials (Silk thread, ball chain lace, fevicol, Kundans) = Rs. 60

Cost price of plastic bangles (8mm 2.6 size 24 bangles) = Rs. 100

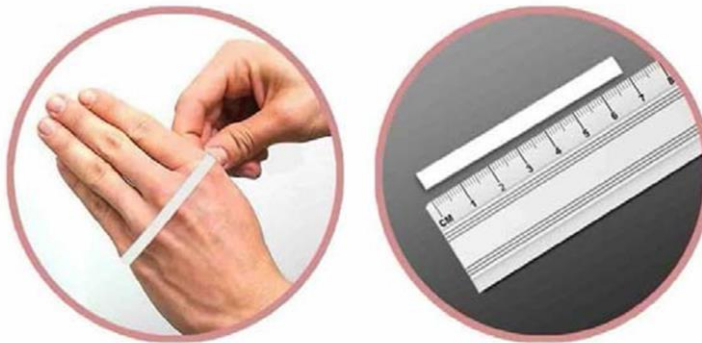
Total cost price = Rs. 160

6. **Process:**  
One group of students make thread strands, another group wind the thread to bangles and the other group finish the bangles with suitable decorative patterns.

## Circles/Measurements? Symmetry and Patterns:



- Bring your thumb and little fingers together.
- Measure the circumference of your hand at the widest point using tape or thread.
- Then measure that with a ruler. You will get the circumference of your bangle and compare with the measurement chart.







7. **Post-Activity:** Students fix a selling price so as to gain suitable profit.

**Collaborative Learning:** Students work as a team to organise and arrange the stall.



### Money:

1. Selling price, Cost of each bangle = Rs. 20  
After selling 24 bangles, received amount =  $24 \times 20 = \text{Rs. } 480$
2. Profit = Selling price – Cost price =  $480 - 160 = \text{Rs. } 320$
3. Divide the profit among themselves.
4. Each student share = Total profit/Number of students

**CONCLUSION:** Students relate mathematics concepts and experience how maths can be resourceful and can be productive in entrepreneurship.

**Precautions**

1. Every student should actively participate.
2. Teacher should monitor the team work.
3. Be careful while using sufficient material as per the requirement.
4. Students should do multiple estimations on their sales. If whole quantity is not sold, students should be aware of not effecting the sales with their cost of expenditure.

**Assessment**

1. Creative use of optimum materials.
2. Group participation.
3. Report writing will be assessed.
4. Application of concepts.



## Lesson Plan 19

Name of Faculty: **B. Dhanalaxmi**

Class	IX	Subject	Mathematics
Lesson Name	Lines and Angles	Duration of the Lesson	3 periods (120 minutes)
Concept(s) Covered		Lines and Angles, Ratios and Proportions, Volume, Measurements, Symmetry and Patterns, Fractions and Data Handling	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. Textile Industry			
Skills that will be inculcated			
1. Precision		6. Entrepreneurship	
2. Manipulation		7. Observation	
3. Creativity		8. Imitation	
4. Communication			
5. Motor Skills			
Interdisciplinary concepts that may be integrated			
1. Eco-friendly (Natural dye)			
2. Measurements			
3. Communication			
4. Colour Theory/Cognitive Skill (While choosing matching or contrasting colours)			
5. Symmetry and Patterns			
6. Ratios and Proportions			
7. Volume			
8. Fractions			
9. Data Handling			
Learning Outcomes			
1. Connects the knowledge of lines and angles while folding fabric in order to create various patterns.			
2. Apply the concept of volume, ratio and proportions while mixing the colours with water.			
3. Develops interpersonal skills while working in team.			
4. Students develop communication skills while selling their product.			
5. Students are initiated to entrepreneurship.			
Tools/Material Needed			
1. Cotton white colour fabric		4. Salt and water	
2. Natural dye colours		5. Equipment to measure the quantities	
3. Thread for tying the knots		6. Scissors, cloth hanging clips etc.	

## Steps

1. **Pre-Activity:** Teacher carries out a discussion on how mathematical concepts can be related to textile industry. Teacher considers students opinions and ideas. Teacher then shows the technique of tie and dye of fabrics and asks students to relate mathematical concepts to it.  
<https://www.youtube.com/watch?v=rgeNLV0huXA>

2. Teacher divides students into groups. Students gather the materials to tie and dye the fabric.
3. Students conduct estimations in making 20 handkerchiefs

### Measurements:

4. Students estimate the length of cloth need to be purchased to make square shape handkerchiefs or table clothes.

### Money:

5. Students purchase the materials needed to make the product.

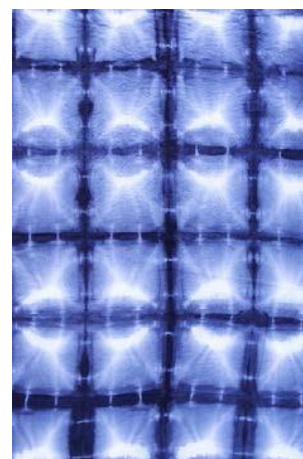
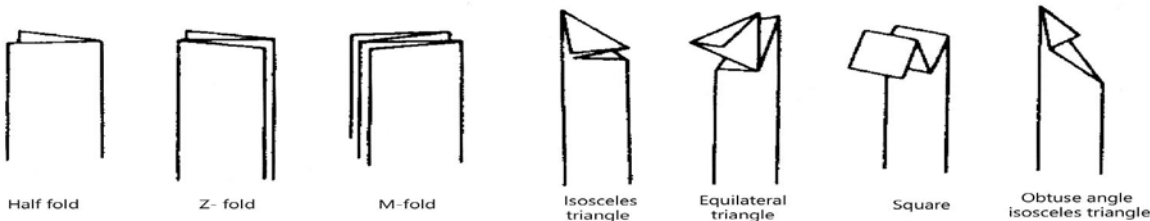
6. **Process:** Teacher divides the students in groups.

One group prepares the solution of colour dye. (Here students uses concept of **volume, ratio and proportion** while making the solution)



7. Another group works on folding fabric into different patterns.  
(Here students connect the knowledge of **parallel lines, right angles, triangles and other geometric concepts while making folds**)

### Accordion fold



Another group takes care of dipping the fabric in the solution and let the fabric dry.

1. **Post-Activity:** Students fix a selling price so as to gain suitable profit.

Organise and arrange the stall.

## 2. Factors and Measurements

Students measure the fabric and use the concept of area while cutting down the whole fabric into small cut pieces making square shape handkerchief or rectangle shape scarf.

Students also apply the concept of factors while using the complete factor without any wastage.

## 3. Profit and Loss, Money, Conversions and Basic Maths

Investment on making 20 handkerchiefs and 10 scarves = Rs. 500

Area of fabric =  $500\text{cm} \times 350\text{cm} = 1,75,000 \text{ sqcm}$

(Length is  $5\text{m} = 500\text{cm}$ , width is  $3.5\text{m} = 350\text{cm}$ )

Since total investment is Rs 500, cost of tie and dye the fabric of  $1,75,000 \text{ sqcm} = \text{Rs } 500$

Number of square shaped with side  $50\text{cm}$  that can be made from the fabric of area

$$1,75,000 \text{ sqcm} = \frac{\text{Area of fabric}}{\text{Area of handkerchief}}$$

$$= \frac{1,75,000}{2500}$$

$$= 70$$

Cost of 70 handkerchiefs = Rs 500, then cost of each handkerchief – Rs 8 approximately

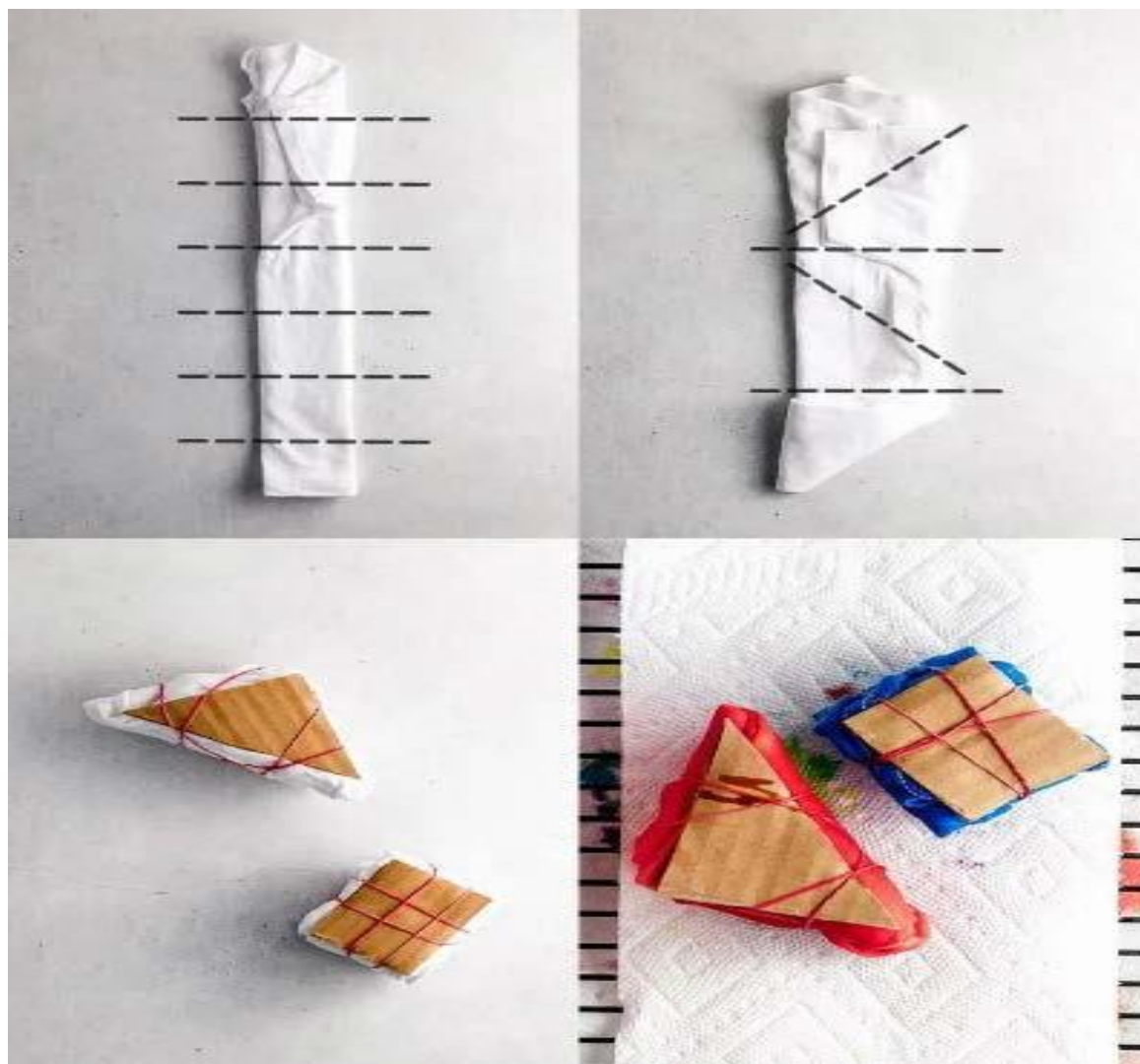
After calculating the approximate amount spend on each kerchief, students decide a selling price for each kerchief in order to gain a suitable profit that can be shared by everyone in the team.

Students now organize and set the stall.



4. Students sell each handkerchief for Rs. 20
5. Amount earned on selling 70 kerchiefs for a fixed price of rupees 20 =  $20 \times 70 = \text{Rs } 1400$
6. Profit = Amount invested – Amount earned =  $1400 - 500 \text{ Rs} = 900$
7. Students share the profit among themselves.





### Precautions

1. Every student should actively participate.
2. Teacher should monitor the team work.
3. Be careful while using sufficient material as per the requirement.
4. Students should do multiple estimations on their sales. If whole quantity is not sold, students should be aware of not effecting the sales with their cost of expenditure.
5. Students can analyse the demand of the customers and think of manipulating the product (converting handkerchief to scarf, table cloth, can make fabric bags using same tie and dye fabric)
6. Students can use data handling while making a report on customer choice of colour of fabric, size of kerchief, choice of product and use this data collected for future product making.

### Assessment

1. Creative use of optimum materials.
2. Group participation.
3. Report writing will be assessed.
4. Application of concepts.

## Lesson Plan 20

Name of Faculty **B.Dhanalaxmi**

<b>Class</b>	IX	<b>Subject</b>	Mathematics
<b>Lesson Name</b>	Volume and Conversions	<b>Duration of the Lesson</b>	3 periods (120min)
<b>Concept(s) Covered</b>			
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Food Industry 2. Entrepreneur			
<b>Skills that will be inculcated</b>			
1. Precision 3. Manipulation 3. Creativity 4. Communication 5. Motor Skills		6. Entrepreneurship 7. Imitation 8. Observation	
<b>Interdisciplinary concepts that may be integrated</b>			
1. Well-being and healthiness 2. Measurement 3. Communication 4. Rati and Proportions 5. Volume		6. Basic Mathematics 7. Profit and Loss 8. Conversions 9. Money 10. Eco-friendly (using earthen or reusable glasses)	
<b>Learning Outcomes</b>			
1. Connects the knowledge of volume while making the solution of buttermilk/Raagi malt. 2. Apply the concept of ratio and proportions while making the buttermilk/Raagi malt. 3. Develops interpersonal skills while working in team. 4. Students develop communication skills while selling their product. 5. Students are initiated to entrepreneurship.			
<b>Tools/Material Needed</b>			
1. Drinking water 2. Salt 3. Vessels (curd churner, spoons, containers)		4. Curd/Raagi powder 5. Extra ingredients for different flavors like mint leaves, green chilies, cumin powder etc. 6. Steel or earthen or glass glasses	

## Steps

1. **Pre-Activity:** Teacher provides instructional paper of recipe and required ingredients.
2. Teacher shows a video tutorial on making buttermilk/raagi jawa malt

### Buttermilk recipe

<https://www.youtube.com/watch?v=dXxiHmHce44>

### Raagi malt recipe

<https://www.youtube.com/watch?v=RqdDuUFXEEc>

3. Teacher divides students into groups. Students keep the ingredients ready to make the buttermilk/Raagi.



4. Students estimate the price spent to make buttermilk or Raagi Malt

### (Concept of Volume/Money/Profit and Loss/Basic Mathematics/Conversions)

Amount spent on ingredients (drinking water, curd, salt, extra ingredients) = Rs 500

Selling price of 1 glass of buttermilk = Rs. 10

Quantity of buttermilk prepared = 5 litres =  $5 \times 1000\text{ml} = 5000\text{ml}$

Number of 20ml glasses required to sell 5000ml buttermilk =  $5000/20 = 250$

If Rs 10 is fixed to sell one glass of buttermilk, amount received on selling 250 glasses =  $250 \times 10$

= Rs 2500

**(Estimations)**

Amount spent to make 250 glasses of buttermilk = Rs 500

Amount spent on 1 glass =  $500/250 = \text{Rs}2$

Total amount collected = Rs5000

Profit earned = Rs5000 – Rs500 = Rs4500

5. **Process:** One group of students purchase the ingredients with negotiation, searching the wholesale market, buy things with minimum capital.  
Another group make the buttermilk following the recipe.

**Culinary Art****Setting****Culinary Art****Setting up the Stall**

6. **Post-Activity:** Students fix a selling price so as to gain suitable profit.

Organise and arrange the stall.

7. Selling price of one glass of buttermilk = Rs. 10  
After selling 200 glasses, received amount =  $250 \times 10 = \text{Rs.}2500$   
Amount spent = Rs 500
8. Profit = Selling price of 250 glasses – Cost price of 250 glasses =  $2500 - 500 = \text{Rs. } 2000$
9. Divide the profit among themselves.
10. Each student share = Total profit/Number of students

**Precautions**

1. Every student should actively participate.
2. Teacher should monitor the team work.
3. Be careful while using quantity of ingredients
4. Students should do multiple estimations on their sales. If whole quantity is not sold, students should be aware of not effecting the sales with their cost of expenditure.
5. Students to take care of hygienic environment of their stall.

<b>Assessment</b>
<ol style="list-style-type: none"><li>1. Creative use of optimum materials.</li><li>2. Group participation.</li><li>3. Report writing will be assessed.</li><li>4. Application of concepts.</li></ol>



## Conclusion

The aim of this project is to provide an education that leads to the level where the pupil can have achieved acceptable vocational knowledge similar to an authentic work environment. This project evidently shows us the power of mathematics in understanding the concepts as well as understanding mathematics as a tool for modelling reality. It is required for the mathematics teachers to analyze the progression and extension of curriculum from 'to solve concrete problems in their immediate environment' to 'solve problems that occur regularly in the home and society which is needed for further education'.

The lesson plans are written in such a way that the pupil's understanding of the mathematics content strengthens the competence of the individual to function efficiently in their future profession. Students will work individually as well as in groups collaboratively and can enhance their skill set. This is going to provide them with various opportunities, post schooling, not only in self-sustenance but also to become entrepreneurs. The content analysis of 9<sup>th</sup> and 10<sup>th</sup> SCERT mathematics textbooks provided a focused learning through guided activity. The lessons are planned where the students are closely directed by the teacher, helps the students to shift their perspective of mathematics as more relevant, meaningful and coherent subject. The multidisciplinary approach of teaching mathematics is catered through the connections it has to different knowledge fields of the vocation it is related to.

## Acknowledgment

On the very outset of this report, the mathematics team and I would like to extend my sincere & heartfelt obligation towards all the personages who have helped us in this endeavor. Without their active guidance, help, cooperation & encouragement, we would not have made headway in the Project.

We thank **Dr W G Prasanna Kumar , Chairman MGNCRE** for assigning this project to us.

We owe special debt of gratitude to our Project Coordinator **Ms. J Padma**, National VENTEL Coordinator and Resource Person, Mentoring Faculty and MRP Project Coordinator, MGNCRE for her constant support and guidance throughout the course of the Project.

Our deepest thanks to **Senior Prof. T. Mrunalini**, Director, EMMRC, OU; **Senior Prof. A. Ramakrishna**, Head Department of Education, OU, **Dr. Ravindranath K Murthy**, Principal, UCE, OU and **Dr. D. Sunitha**, Chairperson, BOS in Education, OU and all the faculty members of University College of Education, Osmania University for providing us this platform.

Our sincere gratitude and thanks to all the Principals of Colleges of Education for deputing their faculty members to successfully complete this project. Also, special thanks to subject expert teachers who gave their valuable inputs of expertise in writing the lesson plans.

We take this opportunity to acknowledge the contribution of the team leader **Dr Padala Laxman** for his leadership, team members **Dr. Sabreena Bobby, Dr. B. Deevena Pauleen, Ms. M. Anitha and Ms. B. Dhanalaxmi** for their kind assistance, cooperation during the development and making this Project a success.

Last but not the least, gratitude goes to all our friends and family members who directly or indirectly helped us in the completion of this Project.

## **Annexure : Project Team Members' Profile**

**Project Head:- Dr.Padala Laxman** Ph.D. (Education), UGC (JRF), MA (Psy), M.Sc. (Maths).

Working as Assistant Professor (C), Department of Education, Dr. B. R. Ambedkar Open University. Published articles in national and international journals and worked for three research projects. Attended/Participated and presented papers in Seminars/ Workshops/ Conferences at State, National and International level. Presented Radio lessons and contributed to develop e-modules on Self Development/School Internship Programme/ ICT mediation in teaching and learning/ Drama & Art in Education at University College of Education, department of Education, Osmania University. Translated Chapters, Dr. B. R. Ambedkar Open University B.A Psychology (I & III years). Contributed four e-modules on B.Ed. course for Pedagogy Teaching of Mathematics for school of Education, University College of Education Osmania University.

**Project Member: - Dr. B. Deevena Pauleen** Ph.D. (Education), UGC (JRF), M.Sc. (Maths).

Working as Assistant Professor in Pedagogy of Mathematics, Ghulam Ahmed College of Education, Hyderabad since 2017. Published articles in International journals. Attended/Participated and presented papers in Seminars/ Workshops/ Conferences at State, National and International level. Co-authored book 'ICT for Enriching Teaching and Learning'. Live TV Presenter TSAT NIPUNA SCERT (TTP). Contributed to develop e-module 'ICT mediation in teaching and Learning', Dept. of Education, Osmania University. Resource person NIOS program organized by NCERT. Resource person to various orientation programs as well as Faculty Development Programs.

**Project Member :- Dr. Sabreena Bobby** Ph.D, M.Phil, M.Sc (Maths), M.A (Psy), Principal, Anwar-ul-Uloom College of Education. Having more than 30 years of experience. Published articles in national and international journals. Attended/Participated and presented papers in Seminars/ Workshops/ Conferences at State, National and International level. Resource person to various orientation programs as well as Faculty Development Programs.

**Project Member: Ms. M. Anitha** M.Sc( Mathematics), M.A ( Psychology), M.Ed. (NET& SET)

Working as Assistant professor in Pasha College of Education, Pursuing PhD in Education from University college of education, Osmania University. Published articles, Attended/Participated and presented papers in Seminars/ Workshops/ Conferences at State, National and International level. Resource person to various orientation programs as well as Faculty Development Programs.

**Project Member:- Ms. B.Dhanalaxmi** M.Sc, M.Ed

Working as a lecturer in Anwar-ul-Uloom College of Education with 15 years of experience. Published papers, Attended/Participated and presented papers in Seminars/ Workshops/ Conferences at State, National and International level.

## **Self -Declaration**

**TITLE OF THE MINOR RESEARCH PROJECT: Integrating Vocational Education in two classes i.e.,9-10 classes in Subject Methodology – Mathematics**

**NAME of LEAD RESEARCHER: Dr.Padala Laxman**

**NAMES of CO-RESEARCHERS: Dr. Sabreena Bobby, Ms. B. Dhana Laxmi, Dr. B.D. Pauleen and Ms. Anitha**

1. I/We confirm that I/We have read, understood and agreed to the submission guidelines, policies and this submission declaration as per the MGNCRE Work Order.
2. I/We confirm that the Research Report is the authors' original work and the Research Report has not received prior publication and is not under consideration for publication elsewhere.
3. I/We confirm that the lead researcher and the co-researchers listed on the title page and in this form have contributed significantly to the work, have read the Research Report, attest to the validity and legitimacy of the content, and agree to its submission.
4. I/We confirm that the Research Report contents now submitted are not copied or plagiarized version of some other published work.
5. I/We declare that I/We have/shall not submit the material for publication in any other Journal or Magazine.
6. On behalf of all Co-Authors, I bear full responsibility for this submission.

Date: 13/03/2013



**Signature of Lead Researcher**  
(Signed on behalf of all co-researchers)

**Minor Research Project Report on**  
**Integration of Vocational Education in School Education by Subject**  
**Methodology**

**SCIENCE**

**Submitted By**

**Dr. Busi Sujatha**

*Assistant Professor, Department of Education, University College of Education, Osmania University.*

**&**

*Co Researchers, Dr. D. Sunitha, Ms. Reshma Hasan, Ms. Swapna, Dr. Veena Latha, Dr. Sarah Thomas,  
Smt I. Srilakshmi and Smt P. Sunitha.*

Osmania University, Hyderabad

Telangana State

Overall Project Coordinator from Osmania University : Dr D Sunitha, Assistant Professor, UCE, OU

**Submitted To**

**Mahatma Gandhi National Council of Rural Education (MGNCRE)**

**Ministry of Education, Govt. of India, Hyderabad**



**Joint Project**

*February, 2023*

## FOREWORD

More than half a century ago, Mahatma Gandhi said these words – “India is not Calcutta and Bombay; India lives in her seven hundred thousand villages”. This holds true even during the present times. According to India’s 2011 Census, nearly 70% of the country’s population lives in rural areas. With majority of the people residing in what we call as ‘Rural India’, development in this part of the country is indispensable.

Mahatma Gandhi National Council of Rural Education (MGNCRE) strives to develop and thereby build a resilient rural India through interventions in Higher Education. By formulating relevant curriculum and by promoting research, MGNCRE works with a pursuit to improve the lives, livelihood and critical infrastructure of rural India. It seeks to usher in rural change and inclusive growth.

This Minor Research Project work titled “**Integration of Vocational Education in Teacher Education by Science Methodology**” aims to integrate vocational education and experiential learning through normal science methodology. Its objective is to transition a student’s learning from theoretical text books to practical exposure and finally transform the student into an entrepreneur. Through this pedagogy, students can learn various concepts, skills, activities including in cash flows and cost analysis. The overall idea is to expand the learning horizon of the student and enable him/ her to become a job creator (employer) rather than a job seeker (employee). In this project, content analysis has been done for selected topics taken from 9<sup>th</sup> and 10<sup>th</sup> standard Science Text Books and from them, 20 lesson plans have been prepared.

For example, one of the lesson plans is ‘Organic Farming’. This lesson plan outlines the importance, processes and advantages of using organic farming which is free from chemical pesticides and synthetic fertilizers. Not stopping there, the lesson further describes an occupation that can be taken up through organic farming i.e., selling organic fruit juice. Thus, the student is not just taught about scientific methods w.r.t organic farming, but also the necessary entrepreneurial skills needed for a better and improved livelihood.

Blending our cultural and traditional knowledge with present day’s modern scientific techniques is important for an enhanced social and economic society. This is more so relevant in rural India where traditional practices continue to be prevalent at a larger scale. This project is a small yet concrete effort to achieve the milestone of improved socio-economic canvas of rural India which could potentially transform the lives of coming generations.

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## INTRODUCTION

The purpose of education is all-round development of the student. For this we should have a joyful rigorous and responsive curriculum. All round development includes physical, psychological, social and economic also.

"Vocational education and training, **allows students to gain practical experience in their chosen career path before they even graduate.**" Students who finish those rigorous programs, have the credentials and training they need to get started right away in their chosen career path.

The National Education Policy (NEP) 2020 has also given special emphasis on vocational education through integration and mainstreaming of vocational education with general education which will help students in acquiring various skills to meet the needs of the industries and to improve the quality of education.

The National Education Policy (NEP) 2020 suggests the integration of vocational education into mainstream education in all educational institutions in a phased manner over the next decade. The NEP 2020 stated that there will be 'no hard separation' between the 'vocational and academic streams. Universal access to all children of the country to quality holistic education - including vocational education - from preschool to Grade XII will be ensured, while allowing for flexibility and choice of subjects. School students will have 10 bagless days in a year, during which they are to be exposed to a vocation of choice.

Mahatma Gandhi National Council of Rural Education (MGNCRE) strives to develop and thereby build a resilient rural India through interventions in Higher Education. By formulating relevant curriculum and by promoting research, MGNCRE works with a pursuit to improve the lives, livelihood and critical infrastructure of rural India.

Mahatma Gandhi National Council of Rural Education works with a pursuit to improve the lives, livelihood and critical infrastructure of rural India.

Vocational learning opportunities play a critical role in skill development and employability. The importance of vocational development can largely be summed up as the difference between theoretical knowledge vs. practical skills. .

The Experiential Learning Programme aims for promoting professional skills and knowledge through hands on experience, building confidence and ability to work in project mode and acquire enterprise management capabilities.

Science is the Systematic Classification of Experience

— Jorge Henry Lewes

This project work titled, Integration of Vocational Education in Teacher Education by Science Methodology. The main aim of this project is to integrate vocational Education and experiential learning through normal science methodology. As part of this project 20 vocational lesson plans have been prepared with concepts, vocations/occupations that can be connected to the concerned lesson, skills that



can be inculcated, interdisciplinary concepts also covered, content analysis, along with the cost analysis also given.

Its main objective is to transition a candidate learning from theoretical text books to practical exposure and finally transform the candidate into an entrepreneur.

## CONTENT ANALYSIS




**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Dept of Higher Education, Ministry of Education, Government of India**  
**Content Analysis Format**



**Name of the Faculty: B. Sujatha**

**Subject: Biological Science**

**Mobile Number: 9490682440**

S No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	IX	Diversity in Living Organisms	Variation in Plants- Cultivation of Ornamental Plants- Marigold	Agricultural Farmers Flower Sellers Gardeners
				 Signature

**Name of the Faculty: Dr . D . Sunitha**

**Subject: Biological Science**

**Mobile Number: 9908347778**

S No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	X	Natural Resources	Fossil Fuels- Cultivation of Jatropa Plants	Biofuel Engineer Biofuel Production Manager Agricultural Farmers

**Name of the Faculty: Reshma Hasan Subject: Biological Science Mobile Number: 9866438952**

S No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can beconnected to this lesson
1.	IX	Challenges in Improving Agriculture	Panchgavya	Organic Farmers Agronomist Agriculturist
2.	IX	Challenges in Improving Agriculture	Organic-Farming Organic-Fruits	Organic Fruit Juice Sellers Organic Farmers

**Name of Faculty: Swapna.C Subject: Biological Sciences Mobile Number: 8330962026**

S.No	Class	Topic	Sub- Topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	9	Adaptations in Different Ecosystems	Activity with AloeVera	1. Cosmetologist 2. Research Scientist 3. Herbalist
2.	9	Animal Behaviour	Activity with Quill	1. Costume Designing 2. Interior Designer

**Name of the Faculty:** I . Srilakshmi

**Subject :** Physical Science

**Mobile number:** 9951931779

S.No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	X	Electro magnetism	Electric motor	--> Students will learn to <b>repair various electric motors</b> . -->Students can <b>setup a motor repair centre</b> in their future. --> Students can work in any sector related to <b>electronics and electricals</b> .
2.	X	Reflection of light at curved surfaces.	Image formed by convex and concave lenses	--> Students can choose <b>photography</b> as their profession like wild life photographer, etc. --> They can also work as <b>camera technician</b> . -->Students develop teaching aids like <b>simple telescope</b> .
3.	X	Human eye and colorful world	Common defects in human eye.	-->Students may become an <b>optical technician</b> . --> Students can work in various <b>vision related hospitals</b> . --> Students can setup a <b>spectacles shop</b> . --> Students can arrange an <b>eye checkup camp in the school</b> .
4.	X	Electric current	Use of multi meter	-->Students can setup an <b>electrical and electronic goods shop</b> . -->Students can also setup an <b>electrical repair shop</b> . -->Students can become an <b>electrical engineer</b> or an electrician in their future.
5.	X	Principals of Metallurgy	Prevention of corrosion	-->Students will learn <b>spray painting technic</b> From a professional technician. -->Students use the <b>skill of spray painting</b> on vehicles, grills, gates, holdings, buildings, and other metals. -->Students can work in various manufacturing units related to <b>paint and coating and iron and steel industry</b> .

Name of the Faculty: Dr.K.Veena Latha Subject: Biological Science

Mobile Number: 9866682930

S.No	Class	Topic	Sub-Topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	Class 10	Unit-3 <b>Transportation: The Circulatory System</b>	Blood Pressure	Checking the vitals – Checking the blood pressure of individuals
2.	Class 10	Unit - 6 <b>Reproduction : The generating system</b>	Reproduction in organisms (Formation of bacterial colony in milk)	Preparation of curd

Name of the Faculty: Dr. Sarah Thomas Subject: Biology

Mobile Number: 9949466463

S.No.	Class	Topic	Sub-Topic	Vocation(s) or Occupation(s) that can be connected To this lesson
1.	Class 10th	<b>Unit 2 Respiration</b>	Fermentation- usage of yeast	Bakery start-ups--Preparation and sale of bakery items-In this lesson plan, we'll integrate preparation and sale of bakery item (buns) as a vocation.
2.	Class 10th	<b>Unit 10 - Natural Resources</b>	Conservation- the concept of 4R's Reduce Reuse, Recycle and Recover	Start up-Eco green bags –Preparation and sale of paper bags

Name of the Faculty: P.Sunitha

Subject: Physical science

Mobile Number: 9701541233

S.No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can be covered to this lesson
1.	9 th class	<b>Is Matter Pure</b>	Solution preparation, oxidation process.	<ul style="list-style-type: none"> <li>Children able to know about different type of solutions and mixtures, how oxidation reaction takes place.</li> <li>Based on this they able to prepare natural dye for fabrics with natural materials.</li> <li>So that they can create avocation and income generation in the field textile sector.</li> </ul>
2.	9. th class	<b>Work And Energy</b>	Solar energy	<ul style="list-style-type: none"> <li>Solar energy is renewable and main source of energy. So the children able to apply this knowledge as how to prepare solar panel and how convert this solar energy into power.</li> <li>They will get an idea to store in battery it may be useful in many fields.</li> <li>it will provide huge vocation in field of power generation and domestic purpose also.</li> </ul>
3.	10 th class	<b>Carbon and its compounds</b>	Chemical properties of carbon compounds	<ul style="list-style-type: none"> <li>Students are able to understand the how carbon and its compounds are participating in combustion reactions. Carbon and its compounds are good fuels and involve in combustion.</li> <li>Based on this concept the children are able to make cow dung dhoop cups.</li> <li>It will give an opportunity to income generation with low cost and it will provide vocation in a wide range</li> </ul>
4.	9 th class	<b>Sound</b>	Reverberation of sound	<ul style="list-style-type: none"> <li>Children are able to understand which materials are absorbing the sound and reverberation</li> </ul>

S.No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can be covered to this lesson
				<p>they will prepare sound acoustic panels with natural materials which are available locally.</p> <ul style="list-style-type: none"> <li>• So they can mould it as income generation as well as vocation.</li> </ul>
5.	8th class	<b>Electrical Conductivity of liquids</b>	Electro plating, chemical reactions	<ul style="list-style-type: none"> <li>• Children are able to understand why the metals are good conductors of electricity.</li> <li>• How they act in sublimation reactions and in oxidation</li> <li>• So that they can create a vocation through</li> <li>• electroplating system.</li> </ul>

## LESSON PLANS




**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Dept. of Higher Education, Ministry of Education, Government of India**



**Name of Faculty: B. Sujatha**

**Lesson Plan 1**

Class	9	Subject	Biological Science
Lesson Name	Diversity in Living Organisms	Duration of the Lesson	3 periods
Concept(s) Covered		Variations in plants – Cultivation of ornamental plants –  <b>Marigold:</b>  Marigold is one of the most important commercially grown loose flower crops in India. It is used as loose flower or to make garlands, which are extensively used in the religious and social functions.	
			
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. Agricultural Farmer: The one who grows crops in the agricultural fields.			
2. Flower seller			



### 3. Gardener

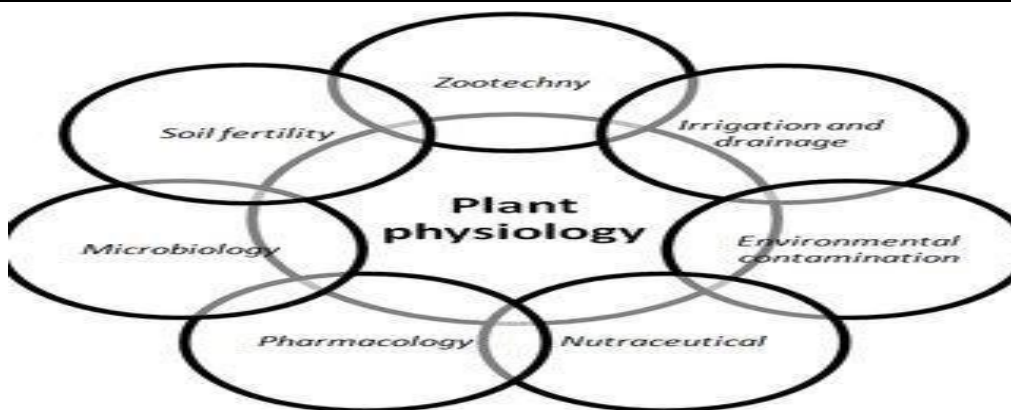


#### **Skills that will be inculcated**

1. Critical thinking
2. Observing
3. Predicting
4. Using space/time relationship
5. Analyzing
6. Creativity
7. Interpreting
8. Measuring
9. Communicating
10. Quantifying
11. Information Literacy
12. Problem Solving Skill

#### **Interdisciplinary concepts that may be integrated**

1. Agriculture
2. Land Management
3. Biodiversity
4. Germination
5. Plant Biology
6. Measurement in Mathematics
7. Soil Nutrients



### Learning Outcomes

1. Students will learn the steps to grow marigold plants.
2. Students will collect detail information of the marigold plants.
3. Students will learn to work out the expected profits by selling the products.
4. Students will learn the different precautions to be taken when growing the plants.
5. They will also learn, how to create portfolios, report etc. about the activity done.

### Tools/Material Needed

- |                                 |                        |
|---------------------------------|------------------------|
| 1. Good quality marigold seeds. | 4. Watering can        |
| 2. Spade                        | 5. Loppers             |
| 3. Pruning shears               | 6. Transparent packets |
|                                 | 7. Weighing Machine    |



### Steps

#### Pre-Activity

1. Students will collect information About the cultivation of marigold plants through a field visit.
2. Students will choose an area at the school campus, which gets 4-5 hours of sunlight, and then sow the seeds in the soil.
3. The students form small teams and perform maintenance operations like weeding, irrigation, fertilization etc.
4. Students work towards production of high quality flowers, for getting higher returns.
5. They work out the profitability of the activity.

### Post-Activity

6. The sell the produce to local flower vendors/ neighborhood/ community.
7. They create videos/ photo documentation.
8. They write case studies and action research reports of the activity.
9. And the students produce portfolios to be assessed.



Stage 1



Stage 2



Stage 3



Stage 4



### Precautions

1. Marigold plants do not grow well in waterlogged soil.
2. Weeding operations must be carried off as required.

3. Use spray of di-methoate @ 2ml/1L of water, to avoid the growth of mold on the plant parts.
4. Make sure not to over water marigold plants as they can be damaged.
5. Take precautions to protect your marigold plants from slugs and snails.

#### **Assessment of Student Activity**






1. Students are assessed on the creation of Portfolio and photo documentation.
2. Students are assessed based on the Action research report they have produced.
3. Students are allotted marks for correctly weighing and packing the products.
4. They are also allotted marks by the teacher for the methods of advertising and selling the product.
5. Whether they achieved the required profit.

#### **Reference Links**


1. [www.agrifarming.in/tilapia-fish-farming](http://www.agrifarming.in/tilapia-fish-farming)
2. <http://www.thegardenerhelper.com/marigold.html>
3. <http://www.planetnatural.com/growing-marigold>
4. Biology textbook class 9 (Telangana state)

## Lesson Plan 2

**Name of Faculty: Dr. D. Sunitha**

<b>Class</b>	<b>10 ( Telangana State Textbook)</b>	<b>Subject</b>	Biological Science
<b>Lesson Name</b>	<b>Natural Resources</b>	<b>Duration of the Lesson</b>	2 periods
<b>Concept(s) Covered</b>		<p>Fossil fuels ---cultivation of Jatropha Curcas plants for seeds as biodiesel.</p> <p>Jatropha Curcas is low-cost biodiesel feedstock with good fuel properties and more oil than other species. It is a non-edible oilseed feedstock.</p> <p>Jatropha Curcas emits fewer pollutants than diesel and may be used in diesel engines with equivalent performance.</p> <p>Jatropha Curcas also makes a substantial contribution to the betterment of rural life.</p>	
		<div><div></div><div></div></div>	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Bio-fuel engineer: They design plant equipment and establish various processes and protocols for manufacturing biofuels.			



2. Agricultural Farmer:one who grows crops in the agricultural fields.		
3. Biofuel Production Manager: manages biofuels production and plant operations.		
		
<b>Skills that will be inculcated</b>		
1. Analyzing skill	6. Skill of Handling Agricultural Tools	
2. Productivity	7. Information Skill	
3. Initiative	8. Cooperation	
4. Critical Thinking	9. Tolerance	
5. Logical Thinking	10. Perseverance	
<b>Interdisciplinary concepts that may be integrated</b>		
1.Environment		
2.Ecosystem and forest		
3.Plant biology		
4.Soil nutrients and minerals		
5.Manures		
6.Measurement from Mathematics		
<b>Learning Outcomes</b>		
1. Students will learn methods and tips to grow Jatropha Curcas.		
2. Students will get the knowledge of the importance of Jatropha plants.		
3. Students will collect detail information about these plants.		
4. They work out the profitability of selling the different parts of the plant.		
5. They will learn how to create Portfolios, Report etc. about the activity.		



### Tools/Material Needed

1.good quality seeds	4.Pruning shears
2.Hand trowel	5.Spade
3.Loppers	6.watering can
	7. weighing machine
	8.ziplock packets 100 no.(50gms and 100 gms)

### Steps

#### Pre-activity:

1. As Jatropha is an evergreen shrub or small tree with stunning flowers, can be grown in gardens.
2. Students will learn the steps of cultivation of Jatropha plants through a field visit by a professional of this field and collect information on the importance of Jatropha plants.
3. They form small teams and grow Jatropha plants in an area allotted to them on the campus.
4. They perform maintenance operations such as pruning,weeding, irrigation, fertilization, controlling pests and diseases etc.
5. Students work towards the harvesting and post-harvesting management for getting higher returns.
6. All the parts of these plants can be used :
 

Seeds – used to produce insecticides, as a medicine for constipation and mainly for producing biodiesel.

Leaves – Young leaves of Jatropha can be eaten by steaming them or cooking.

-- Leaves are used as a brewed tea to combat malaria.

-- Leaves of *Jatropha* are used as a massage material for strained muscles.

7. Each team of students will pack the seeds and leaves in zip lock packets.

½ kg Seeds----- ₹50

1 kg Seeds----- ₹100

Each packet of ½ kg cost is ₹50    selling price is

₹70 Each packet of 1 kg cost is ₹100    selling

price is ₹120 50gms of leaves cost ₹15

selling price is

₹30 100 grams of leaves cost ₹30    selling

price is ₹50

#### **Post-activity:**

8. They will sell the produce to the medical herbalist / supermarkets / neighborhood/community/oil-seed companies /on e-commerce sites.

9. They write the Action Research report / Case-studies.

10. They will create video and photos documentation.

Create Portfolios that will be assessed



#### **Precautions**

1. *Jatropha* plants needs well-drained soil and not waterlogged areas or soil.
2. The plants can grow well in shady and low-light conditions.
3. Be careful when cutting the stem as it produces a milky sap, which is irritating to sensitive skin

#### **Assessment of Student Activity**

1. Students will be assessed on the report they have written on the activity.
2. Students are assessed based on photo documentation and video.
3. Students are also assessed, whether they have achieved the expected profit by selling the product.
4. They are also allotted marks for weighing correctly and packing the product.
5. Were the students successful in advertising the product and convincing the customers.

#### **References**

1. [www.frontiers.in.org](http://www.frontiers.in.org)



### Lesson Plan 3

Name of Faculty: RESHMA HASAN

<b>Class</b>	<b>9</b>	<b>Subject</b>	Biological Sciences
<b>Lesson Name</b>	<b>Challenges in Improving Agriculture</b>	<b>Duration of the Lesson</b>	2 periods

#### Concept(s) Covered

**Panchgavya** : It is a natural manure that is helpful to grow crops with higher yield; It can also be used as food for hens and fish in ponds.



<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>
<p>1. Organic Farmer : Organic farmer uses cultural, biological and mechanical practices that <b>foster cycling of resources, promote ecological balance and conserve biodiversity</b>. Synthetic fertilizers, sewage sludge, irradiation and genetic engineering may not be used.</p> <p>2. Agronomist : a scientist who studies the relationship between the plants that farmers grow and the environment</p> <p>3. Agriculturist: <b>a person who cultivates the land and grows crops on it</b> agriculturists who adhere to the organization's standards of organic farming.</p>
<b>Skills that will be inculcated</b>
<ol style="list-style-type: none"> <li>1. Observation</li> <li>2. Measuring Skill</li> <li>3. Analyzing skill</li> <li>4. Interpersonal Skill</li> <li>5. Critical Thinking Skill</li> <li>6. Co-Operation Skill</li> <li>7. Decision Making Skill</li> <li>8. Skill Of Co-Ordination</li> <li>9. Time Management Skill</li> <li>10. Vermicomposting</li> <li>11. Communication skills</li> <li>12. Collaboration</li> </ol>

13. Productivity  14. Leadership skills  15. Information Literacy  16. Media Literacy  17. Technology Literacy  18. Flexibility
<b>Interdisciplinary concepts that may be integrated</b>
1. Animal Husbandary  2. Vermicompost  3. Manures  4. Biological Management  5. Biofertilizers  6. Biological Management  7. Vermicomposting  8. Measurement of the subject physics/mathematics  9. Reactions in chemistry  10. Profit/loss of the subject mathematics.



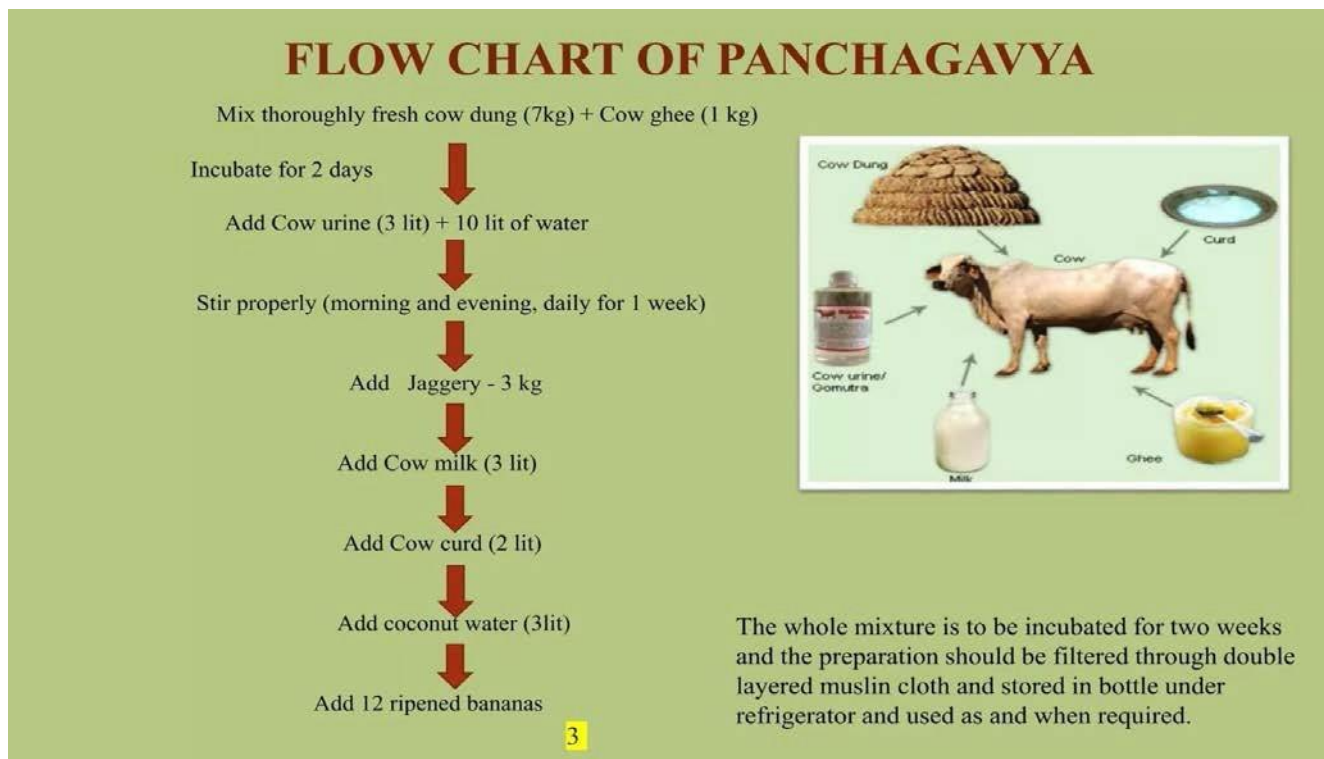
## Learning Outcomes

1. Students will know the importance of natural manures.
2. Students will know the importance of environment.
3. Students will come to know about the benefits of organic manure like Panchgavya and the harmful nature of chemical fertilizer.
4. Students will learn the preparation of panchgavya.
5. Students will understand the importance of natural biological processes.
6. Students will build a healthy relation with nature.
7. Students will understand that it is one of the best way of recycling biological waste.

## Tools/Material Needed

- |                       |   |
|-----------------------|---|
| 1. Cow Milk – 1 Liter | 7. Tender Coconut Water – 1 ½ Liters    |
| 2. Cow curd – 1 liter | 8. Banana Ripe – 6 No's                 |
| 3. Cow Ghee – ¼ Kg    | 9. Small Plastic Bottles – 50 ( 250ml ) |
| 4. Cow Dung – 2 ½ Kgs | 10. Funnel – 1                          |

5. Sugarcane Juice – 1 ½ Kgs	11. Big Vessel – 1
6. Cow Urine – 1 ½ Liters	



## Steps

1. Teacher gives the knowledge of the importance of panchgavya and make them aware.
2. Teacher asks the children to bring all the ingredients.
3. Then she asks the children to mix the cow dung and cow ghee and keep it for 3 days, mixing both in the morning and evening.
4. Then after 3 days the children are asked to mix water and urine and keep it for 15 days by mixing daily both in the morning and evening.
5. After 15 days mix the cow milk, curd, tender coconut water, jaggery paste of bananas.

6. It will be ready in 30 days.

7.Children are asked to fill the liquid fertilizer in the bottles and write the details such as the name of the product and quantity and price on them with a marker.

8. By advertising and convincing the customers of its value,they can sell it selling to the local vendors/supermarkets/community/neighbourhood.



Cost price of 10 liters	RS	Cost of one bottle	RS
Cow milk	100	10 Liters	600
Cow curd	100	1 Liters	60
Cow Urine	Free	250 Ml	15
Cow ghee	80	<b>Cost price</b>	15
Cow dung	Free	<b>Selling Price</b>	30
Sugarcane Juice	100		

Coconut Water	100
Banana Ripe	20
Packets	100
<b>Total</b>	<b>600</b>

### **Precautions**

1. The container should be kept open under the shade.
2. The content should be stirred twice a day both in morning and evening.
3. Care should be taken not to mix buffalo products.
4. Products of local breeds of cow must be used.
5. It should be kept and covered with a wire mesh or plastic mosquito net to prevent houseflies from laying eggs and the formation of maggots in the solution.

### **Assessment of Student Activity**

1. Whether the students have prepared the usual end-product.
2. Marks are allotted by the teacher. [ 25M ]
  - 5M – For relevant data collected by the student.
  - 5M – For preparation
  - 5M –Equally measuring and packing the materials
  - 5M – Selling and getting profits.
  - 5M – Observation of effectiveness of the products.
3. Whether the student have achieved the expected profits.
- 4.The methods/ways of advertising and the product selling to the local vendors/supermarkets/community/neighbourhood.

## Reference Links

1. [https://familydoctor.org/wp-content/uploads/2016/11/52141462\\_1-scaled.jpg](https://familydoctor.org/wp-content/uploads/2016/11/52141462_1-scaled.jpg)
2. <https://ars.els-cdn.com/content/image/1-s2.0-S0975947621001947-ga1.jpg>
3. [https://static.vikaspedia.in/media/images\\_en/agriculture/agri-inputs/panchagavya-i](https://static.vikaspedia.in/media/images_en/agriculture/agri-inputs/panchagavya-i)
4. <https://new-img.patrika.com/upload/2019/05/02/pcbg.png>
5. <https://www.farmers.gov> › your-business › organic

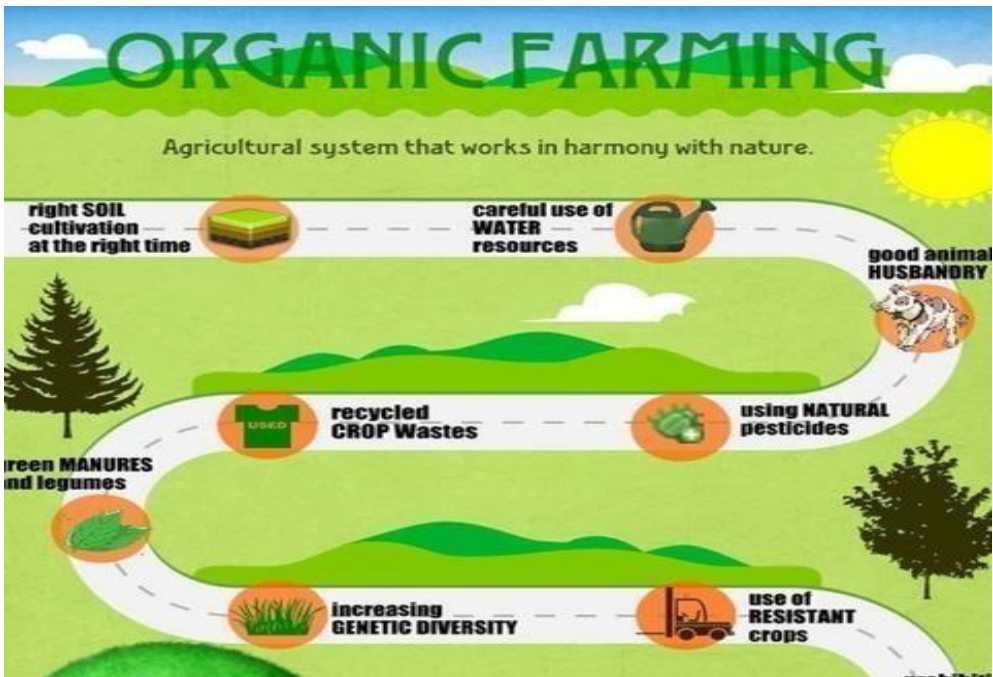



## Lesson Plan 4

**Name of Faculty: Reshma Hasan**

Class	9	Subject	Biological science
Lesson Name	Challenges for improving agriculture	Duration of the Lesson	2 periods
Concept(s) Covered		<b>Organic farming</b> :Organic farming can be defined as <b>an agricultural process that uses biological fertilizers and pest control acquired from animal or plant waste</b> . Organic farming was actually initiated as an answer to the environmental sufferings caused by the use of chemical pesticides and synthetic fertilizers.  Sub concept : <b>Preparation of organic orange juice</b>	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. <b>Organic fruits juice seller</b> : is the person who sells juice, Organic juice is nothing like the boxed apple juices from your school days. Every sip is packed full of organically grown fresh produce and all the essential vitamins and nutrients from the fruit.			
Skills that will be inculcated			
1.Observing skill			

<p>2.Critical thinking</p> <p>3.Interpersonal relationship skill</p> <p>4.Time management skill</p> <p>5.Creativity</p> <p>6.Decision making skill</p> <p>7. Skill of coordination</p> <p>8. Measuring skill</p> <p>9.Skill of using agricultural tools</p> <p>10.Team spirit</p>
<p><b>Interdisciplinary concepts that may be integrated:</b></p>
<p>1. Organic farming concept can be related to the concept of Biodiversity.</p> <p>2. It can be integrated with Mathematics.</p> <p>3. It can be integrated with the other concepts like plant and soil nutrients of the same lesson.</p> <p>4. It can be taught with the interdisciplinary concept “Balanced diet” of the unit Nutrition.</p> <p>5.Soil management</p> <p>6.Green manures</p>

	 <p><b>ORGANIC FARMING</b></p> <p>Agricultural system that works in harmony with nature.</p> <ul style="list-style-type: none"> <li>right SOIL cultivation at the right time</li> <li>careful use of WATER resources</li> <li>good animal HUSBANDRY</li> <li>recycled CROP Wastes</li> <li>using NATURAL pesticides</li> <li>green MANURES and legumes</li> <li>increasing GENETIC DIVERSITY</li> <li>use of RESISTANT crops</li> </ul>	
	 <p><i>Organic Fruits</i></p>	
<p><b>Learning Outcomes</b></p> <ol style="list-style-type: none"> <li>1. Students will collect the information about the importance of Organic fruits and vegetables.</li> <li>2. Students will learn to calculate the cost price of each glass of orange juice and the expected selling price.</li> <li>3. Students will understand the concept “Organic fruits”.</li> <li>4. Students will analyze the information about the nutritive values of organic oranges.</li> </ol>		

5. Students will learn the steps involved in the preparation of orange juice.

### Tools/Material Needed

1.filtered water

2.organic oranges

3.sugar / honey

4.grinder

5.glasses (medium sized)

6.ice cubes



### Steps :

1. Students are divided into groups for assigning the tasks.
2. Few groups are assigned to bring organic oranges.
3. One group is assigned to bring sugar/honey.
4. The remaining groups are given the task of bringing ice cubes and glasses.
5. The teacher brings the juicer and with the help of the students she prepares the orange juice.
6. It is estimated by the students that 10 liters of juice is sufficient for 50 glasses.

1 glass = 200 ml.

5 glasses = 1 liter

50 glasses = 10 liters

For each liter the cost price is Rs.100

The selling price is kept Rs. 150

Each glass cost is Rs. 20 and selling price is Rs. 30 Therefore the profit will be Rs.10 on each glass i.e. overall profit will be

50 glasses \*10 = 500Rs.

7. They work out the profitability of the activity.

8. They write Case studies / Action Research reports / Create video and photo documentation / create portfolios which will be assessed.

### **Precautions**

1. Students must bring only fresh organic oranges.
2. Oranges must be sweet to taste.
3. Wash your hands for at least 20 seconds with soap and warm water before and after preparation.
4. Cut away any damaged or bruised areas on fresh fruits and vegetables. Throw away any produce that looks rotten.
5. Wash all produce thoroughly under running water before cutting

### **Assessment of Student Activity**

1. Whether the students have achieved the expected profit.
2. Students will gather information about the nutritious value of organic fruits and vegetables.
3. The teacher allot marks for the activity --- {25 marks }

5 marks----- For bringing the fresh organic oranges

5 marks----- Measuring and serving equally and hygienically

5 marks----- Advertising

5 marks----- Selling

5 marks----- For writing the report and documentation

4. They are assessed for the videos /photos/portfolio etc.

### **Reference Links**

1. Biology textbook class 9

2. <https://byjus.com › Commerce › List of Commerce Articles>

3. <https://www.fda.gov/food/buy-store-serve-safe-food/what-you-need-know-about-juice-safety>

## Lesson Plan 5

Name of Faculty: Swapna. C

<b>Class: 9</b>	<b>Subject: Biological Sciences</b>
<b>Lesson Name: Adaptations in Different Ecosystems</b>	<b>Duration of the Lesson: 50-60 Minutes</b>
<b>Concept(s) Covered: Activity -2 with Aloe Vera</b>	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>	
1. Cosmetologist 2. Research Scientist 3. Herbalist	
<b>Skills that will be inculcated</b>	
1. Observation Skills 2. Innovative Skills 3. Creative learning Skills 4. Experimental Skills 5. Aesthetic Skills 6. Marketing Skills 7. Communicative Skills	
<b>Interdisciplinary concepts that may be integrated</b>	
1. Physical Sciences- Quantity estimation. 2. History: Usage of the product in olden days. 3. Mathematics: Ratio & Proportion, time management. 4. Psychology: Students learn patience, hand eye coordination will be seen. 5. Biology: Herbal usages, Health benefits.	

6. Geography: Demographic knowledge of where the plant is available.

### Learning Outcomes

1. Students prepare Aloe Vera Gel (for face).
2. Students learn mathematical proportions of raw material usage and its ratio.
3. Students learn patience and confidence while observation of preparing process.
4. Students develop communication skills with marketing.

### Tools/Material Needed

- |                                      |                          |
|--------------------------------------|--------------------------|
| 1. Aloe Vera plant                   | 5. Lemon                 |
| 2. Knife                             | 6. Turmeric              |
| 3. Spoon, steel plate (Medium/large) | 7. Water                 |
| 4. Mixer Grinder (small jar)         | 8. Packing box (plastic) |
| 9. Vitamin E capsules                | 10. Small Bowl           |
| 11. Small Cloth                      |                          |

### Steps

1. Take aloe vera plant and carefully cut the leaf with the help of the knife. Clean the leaves with water and later wipe with cloth.
2. Place the leaf upright in the bowl to let any white or yellow resin to drain off (This can cause irritation to the skin).
3. Place the leaf in the plate. Cut the edges of the leaf (as it has thorns) and next slit the leaf. After slitting the leaf, gently scrape the aloe vera gel in mixer jar.
4. Now, add pinch of turmeric, 2-3 vitamin-E capsules and lemon juice (10 drops) into the mixer jar and grind well.
5. We can observe liquid like/gel substance is formed.
6. Take packing box and fill it with spoon and close the lid tightly.
7. Take little quantity of gel in to hands and apply on hands and face. By the regular usage of this home-made gel, our skin becomes smooth and it moisturizes the dry skin.

**Cost Estimation:** Lemon- Rs.5

Plastic Box- Rs. 25

Vitamin E capsules-Rs.20

Turmeric -Rs.5

**Selling Prize:** Rs. 30 (25 gm)

Rs. 50 (50 gm)



<p>Can make upto 250-300 gm of aloe vera gel (Rs.250-300)</p> <p><b>Shelf life:</b> Shelf life will be 7 days if kept in refrigerator it will be 6 months.</p> <ul style="list-style-type: none"> <li>• Suitable for all skin types.</li> <li>• Can be used for face and hands.</li> </ul>
<p><b>Precautions</b></p> <ol style="list-style-type: none"> <li>1. Students should be careful while holding aloe vera plant.</li> <li>2. Students should be careful while holding the leaf and cutting the thorns.</li> <li>3. Students should be careful while holding the knife and slicing the leaf.</li> <li>4. Students should be careful while scraping the aloe vera gel in to the dish. This gel may slip from hands and so keep the leaf in the plate and scrape the gel.</li> <li>5. Students should be careful while filling aloe vera gel in to the boxes(container).</li> </ol>
<p><b>Assessment of Student Activity</b></p> <ol style="list-style-type: none"> <li>1. What are steps involved in aloe vera gel preparation? (10 Marks)</li> <li>2. What are the various uses of aloe vera? (5 Marks)</li> <li>3. What is the time duration of making the whole process? (2 Marks)</li> <li>4. Estimate the cost estimation of preparing aloe vera gel? (3 Marks)</li> </ol>
<p><b>Reference Links</b></p> <ol style="list-style-type: none"> <li>1. <a href="https://in.video.search.yahoo.com/search/video?fr=mcafee&amp;ei=UTF8&amp;p=aloe+vera+gel+preparation&amp;vm=r&amp;type=E211IN714G0#id=1&amp;vid=7a479a4e69fd0e6e4d6a13ca10f10582&amp;action=view">https://in.video.search.yahoo.com/search/video?fr=mcafee&amp;ei=UTF8&amp;p=aloe+vera+gel+preparation&amp;vm=r&amp;type=E211IN714G0#id=1&amp;vid=7a479a4e69fd0e6e4d6a13ca10f10582&amp;action=view</a></li> <li>2. <a href="https://www.wikihow.com/Make-Aloe-Vera-Gel">https://www.wikihow.com/Make-Aloe-Vera-Gel</a></li> </ol>

## Lesson Plan 6

Name of Faculty: Swapna. C

<b>Class: 9</b>	<b>Subject: Biological Sciences</b>
<b>Lesson Name: Animal Behaviour</b>	<b>Duration of the lesson: 50 to 120 Minutes</b>
<b>Concept(s) Covered: Activity with Quill (Peacock, colourful quills)</b>	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>	
1. Costume Designing	
2. Interior Designer	
<b>Skills that will be inculcated</b>	
1. Observation Skills	
2. Innovative Skills	
3. Creative learning Skills	
4. Experimental Skills	
5. Aesthetic Skills	
6. Marketing Skills	
7. Communicative Skills	
<b>Interdisciplinary concepts that may be integrated</b>	
1. Physical Sciences- Weight and height estimation.	
2. History: Usage of the product.	
3. Mathematics: Time management and length measurement.	
4. Psychology: Students learn patience and observe things carefully around them(nature).	
5. Geography: Demographic knowledge of where the quills of animals are available.	

6. Biology: Observe different kinds of birds.

### **Learning Outcomes**

1. Students prepare Jewellery items like tops, necklace, bracelets, ankle-lets, chains, photo frames or art piece.
2. Students Learn patience and confidence while observation of preparing process.
3. Students develop communication skills with marketing.

### **Tools/Material Needed**

- |  |   |
|--|---|
| 1. Colourful quills                            | 4. Candle, Match box  |
| 2. Blade                                       | 5. Plate  |
| 3. Iron or bronze or metallic strings 3cm long | 6. Fevicol/Glue (if needed)                                   |
| 7. Colourful beads                             | 8. Packing box (plastic)/Small size Plastic cover for packing |
| 11. White Paper & Pencil                       | 10. Waste cloth   |
| 12. Safety pin to pierce                       | 14. Sand paper  |
| 13. Cutting player                             |   |

### **Steps**

1. Take white paper and pencil and draw design of earring.
2. Take the candle, light it with matchbox, and heat the tip of the safety pin.
3. Take two small sized peacock quill (any quills) and make a hole near the tip region (Calamus/Shaft) of quill.
3. Be careful while piercing the shaft of the quill while making hole.
4. Take the iron or bronze string and insert in the hole and make two three whorls near the hole.
5. Take any coloured bead and insert it to the string.
6. Now we observe another end will be present which should be bent in arc manner using cutting player.
7. Now, while making arc like curvature/bent, be careful with size of both earrings.
8. Observe the structure you made and both earrings should be of same size.
9. Rub the edge of string on sand paper such that it should not be blunt while wearing the earring.
9. Pack in plastic box or plastic cover.

**Cost Estimation:** Iron String- Rs.20

Candle- Rs.10

Match box- Rs.5

Beads- Rs.10

Plastic Box/Plastic cover- Rs.10

**Selling Prize:** Rs. 30-50 Each Pair (depends on the ornament and type of quill used)A

child can make almost 10 pairs in 60-100 minutes.

### **Precautions**

1. Students should be careful while holding quill/feather.
2. Students should be careful while piercing the shaft of the quill while making hole.
3. Students should be careful while making whorls of the ring with the string.
4. Students should be careful while packing the earrings.
5. Students should be careful while lighting the matchbox.
6. Students should be careful while using cutting player while bending the string to make shape of the arc.
- &. Student should be careful while using sand paper.

### **Assessment of Student Activity**

1. What are steps involved in making earrings? (10 Marks)
2. What are the various types of feathers used for making earrings? (5 Marks)
3. What is the time duration of doing the above activity? (2 Marks)
4. Estimate the cost of making this ornament? (3 Marks)
5. What are the various types of ornaments we can make using feathers? Who will use these feathers? (5 Marks)

### **Reference Links**

1. <https://in.search.yahoo.com/search?fr=mcafee&type=E211IN714G0&p=feather+ornaments>
2. <https://in.search.yahoo.com/search?fr=mcafee&type=E211IN714G0&p=feather+jewellery>
3. <https://in.images.search.yahoo.com/search/images?p=feather+jewellery+kinds&fr=mcafee&type=E211IN714G0&imgurl=https%3A%2F%2Fi.pinimg.com%2Foriginals%2F67%2Fbd%2Fb1%2F67bdb1add18e69fdace7682843828553.jpg#id=20&iurl=https%3A%2F%2Fi.pinimg.com%2Foriginals%2Fa3%2Fd1%2Fec%2Fa3d1ec7a776690dd0ad44f9b6f08244e.jpg&action=click>

## Lesson Plan 7

**Name of Faculty: I. Srilakshmi**

Class	10 <sup>th</sup>	Subject	Physical Sciences
Lesson Name	Electromagnetism	Duration of the Lesson	6 Periods
Concept(s) Covered		Electromagnetic induction and Electric motor	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. Students will <b>learn to repair</b> various electric motors.			
2. Students can <b>setup a motor repair centre</b> in the nearby community.			
3. Students can work in any sector <b>related to electronics and electrical</b> .			
Skills that will be inculcated			
1. Students will develop <b>technical skills</b> in repairing electric motors.			
2. Students develop <b>entrepreneurship skills</b> by setting up a motor repair unit.			
3. Students develop <b>information skills</b> by collecting related information about different electric motors and how they work.			
4. Students will <b>apply the knowledge</b> of electric motor repair in their day to day life.			
Interdisciplinary concepts that may be integrated			
1. Students will integrate various branches of Physical sciences like electronic and mechanics.			
Learning Outcomes			
1. Children will <b>conceptualize</b> about electric motor repair.			
2. Children do <b>experiments</b> in repairing different types of electric motors.			
3. Students <b>appreciate</b> scientist for their innovations.			
4. Children <b>value</b> the importance of science in our day to day life.			
Tools/Material Needed			
1. A Professional technician		4. Motor	
2. Switch		5. Testing tool	
3. Wires		6. Electricity	

<b>Steps</b>
<ol style="list-style-type: none"> <li>1. Students should be encouraged to be participate in the work shop and make them realize theimportance of vocational education.</li> <li>2. Once the dates for the workshop finalized the student should be intimated about the training program.</li> <li>3. A training for one week will be provided further students.</li> <li>4. During the training program the trainer and the students work together in repairing the electric motor.</li> <li>5. The children learn about the common issues or repairs occur in an electric motor and repair them. And also they learn about the different spare parts, tools used for repair.</li> <li>6. Children will have hand on experience in repairing, assembling and checking the connections in an electric motor.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. Students who are really interested in the activity should be given the chance to participate in the workshop.</li> <li>2. A professional and experience mechanic should be arranged for the workshop.</li> <li>3. Students should have a hand on experience in the workshop and the output of the workshop should be aimed for meaningful learning.</li> <li>4. Due arrangement for the workshop should be monitored by an in-charge who can be a physical science teacher or any technician.</li> <li>5. Students should be cautioned while handling the electrical gadgets.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. Monitoring the student's progress in doing the activity.</li> <li>2. Feedback from the technician can be taken for the assessment of the student.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. Telangana State Physical sciences text book.</li> <li>2. CBSE 9<sup>th</sup> and 10<sup>th</sup> Physical sciences text book.</li> <li>3. byjus.com</li> <li>4. Wikipedia.org energyeducation.ca</li> </ol>

## Lesson Plan 8

**Name of Faculty: I. Srilakshmi**

<b>Class</b>	10 <sup>th</sup>	<b>Subject</b>	Physical Sciences
<b>Lesson Name</b>	Reflection of light at curved surfaces	<b>Duration of the Lesson</b>	4 Periods
<b>Concept(s) Covered</b>		Image formed by convex and concave mirrors.	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Children will get conceptual understanding of image formation by different mirrors.			
2. Children can learn <b>photography</b> and choose it as a profession.			
3. Children may become <b>wild life photographer, camera technician</b> , etc.			
4. Children developed teaching aids like <b>simple telescope</b> .			
5. Whenever any school related, community related, activities are performed			
<b>Skills that will be inculcated</b>			
1. Students will developed technical skills in operating a camera.			
2. Students will developed understanding & do experiments using different mirrors in their daily life.			
3. Children will developed drawing skills while drawing the ray diagram of different images formed by different types of mirrors.			
<b>Interdisciplinary concepts that may be integrated</b>			
1. While calculating the focal length of different mirrors they use the inductive approach in <b>Maths</b> .			
2. Children will know how the lenses are used in microscope which is widely used in <b>Biological Sciences</b> .			
3. Children will link the use of telescope in observing the celestial objects which comes in <b>Social Studies</b> .			
<b>Learning Outcomes</b>			
1. Children will develop critical observation.			
2. Children will develop reasoning (logical, divergent, and creative).			
3. Children will develop entrepreneurship skills when they established their own business in the field of photography.			

<b>Tools/Material Needed</b>	
1. A Technician / Professional photographer 2. Camera 3. Lights 7. Photo Frames	4. Camera stand 5. Computer 6. Printer
<b>Steps</b>	
1. Finalization of students list who are interested in participating in the workshop. 2. A Professional photographer should be called to the school on the planned day for the workshop. 3. The photographer should train the student in handling the camera and the technical issues which may arise in photography. 4. The children will have hand-on experience in operating the camera. 5. The children are also given training to get the print out using the computer and printer. 6. Children are also train in framing the photograph.	
<b>Precautions</b>	
1. The training should be provided to the students who are really interested. 2. Student should be cautious while handing the camera. 3. While framing the photograph student should carefully handle the tools like nails, wooden strips, glass, cutter etc.	
<b>Assessment of Student Activity</b>	
1. Students can be assessed by the quality of photographs, photo frames. 2. Feedback from the peers, teachers and school management can be consider for the assessing the students activity.	
<b>Reference Links</b>	
1. Telangana State Physical sciences text book. 2. CBSE 9 <sup>th</sup> and 10 <sup>th</sup> Physical sciences text book. 3. <a href="http://www.vedanta.com">www.vedanta.com</a> 4. byjus.com	



## Lesson Plan 9

**Name of Faculty: I. Srilakshmi**

<b>Class</b>	10 <sup>th</sup>	<b>Subject</b>	Physical Sciences
<b>Lesson Name</b>	Human eye and colorful world	<b>Duration of the Lesson</b>	1 week
<b>Concept(s) Covered</b>		Common defects in vision	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Students will conceptualize about the various common defects in vision.			
2. Students may become as an optical technicians.			
3. Students can arrange an eye checkup in the school.			
<b>Skills that will be inculcated</b>			
1. Children will develop information skills about the defects and the remedial measures to be taken to minimize these defects.			
2. Children will develop crowd management skills.			
<b>Interdisciplinary concepts that may be integrated</b>			
1. The topic can be connected <b>Biology</b> in knowing the structure of eye.			
2. Inductive approach of <b>Mathematics</b> is used in calculating the minimum and maximum focal length of human eye.			
3. Students will develop <b>communication skills</b> while interacting with the peers, parents and school management in the eye checkup camp.			
<b>Learning Outcomes</b>			
1. Children will develop collaborative skills while participating in the camp.			
2. Children can integrate the topic of common defects in vision with Biological Sciences, Mathematics and Languages.			
3. They develop soft skills and interpersonal skills in participating the eye camp.			
<b>Tools/Material Needed</b>			
1. A Professional Ophthalmologist			
2. Eye test poster			
3. Students as Volunteers			
4. Manual eye site examination tool			

<b>Steps</b>
<ol style="list-style-type: none"> <li>1. Finalization of the date and venue for the eye checkup camp.</li> <li>2. Making sure of the availability of the ophthalmologist on the day of the camp.</li> <li>3. Informing the school children, parents and nearby community for eye checkup.</li> <li>4. Identify the student volunteers which their role in conducting the camp.</li> <li>5. Finalizing the fee to be collected for the eye checkup.</li> <li>6. Conducting the eye camp on the planned day.</li> <li>7. Taking the feedback on the eye camp from the visitor.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. Availability of ophthalmologist on the day of checkup.</li> <li>2. Prior information about the eye camp to be canvassed to students, patents and nearby community.</li> <li>3. Clear instructions to be given for the student volunteers about their role and responsibilities.</li> <li>4. Location of the eye camp is very essential with one entry point and one exit point so that crowd management will become easy.</li> <li>5. Make sure feedback is collected from all the participants.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. Planning and executing the eye camp on the day of checkup.</li> <li>2. Observing the coordination and collaboration work of the students.</li> <li>3. Feedback from the students, parents and community.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. Telangana State Physical sciences text book.</li> <li>2. CBSE 9<sup>th</sup> and 10<sup>th</sup> Physical sciences text book.</li> <li>3. byjus.com</li> <li>4. <a href="http://www.toppr.com">www.toppr.com</a></li> <li>5. eyecarebd.org</li> </ol>

## Lesson Plan 10

Name of Faculty: **I Srilakshmi**

Class	10 <sup>th</sup>	Subject	Physical Sciences
Lesson Name	Electric Current	Duration of the Lesson	4 Periods
Concept(s) Covered		Electric current, potential difference, resistance and use of Multimeter	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. Children will <b>conceptualize</b> about electric current, potential difference, resistance and use of multimeter			
2. Children can become an <b>electrical engineer or electrician</b> in future.			
3. Children learn the <b>use of multimeter</b> in checking the current, potential difference and resistance.			
4. Children will <b>prepare</b> simple decorative items using simple electric circuits like electrical diyas etc.			
Skills that will be inculcated			
1. Children <b>technical skills</b> in connecting the circuits and checking the connections.			
2. Children will develop <b>entrepreneurship</b> by setting up an electrical item shops with service provider.			
3. Children can setup a <b>manufacturing unit</b> related to items needed for connecting different electrical circuits.			
Interdisciplinary concepts that may be integrated			
1. Children will apply the knowledge of electric current in checking the current flowing in a circuit.			
2. Children will learn to operate the multimeter.			
Tools/Material Needed			
1. An expert electrician		4. Bulb	
2. Wires		5. Multimeter	
3. Switches		6. Plastic diyas	
7. Decorative items			

<b>Learning Outcomes</b>
<ol style="list-style-type: none"> <li>1. In calculating the electric current and potential difference we use <b>Mathematic formula.</b></li> <li>2. Different branches of physical science are integrated like <b>electricity, electronics, &amp; chemistry</b></li> </ol>
<b>Steps</b>
<ol style="list-style-type: none"> <li>1. An electrician needs to be called to the school on the workshop days.</li> <li>2. Dividing the children into groups as per the different activities identified.</li> <li>3. On the first day the electrician will demonstrate about the electrical connections and shows the children the usage of multimeter to check the current, potential difference, and resistance.</li> <li>4. Next day onwards the electrician is monitor the students while they are connecting simple electric connections.</li> <li>5. The electrician will also help students in using the multimeter.</li> <li>6. Children will independently work on simple electric circuit to make decorative items like diyas etc.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. Make sure that the electrician is an expertise in his work.</li> <li>2. The electrician should always monitor the children while they are connecting the circuits.</li> <li>3. Some teachers should assist the expert while children are performing the activity.</li> <li>4. All the required material should be ready for the workshop.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. Children will connect simple circuit.</li> <li>2. Children will learn the usage of multimeter.</li> <li>3. Children will prepare simple toys and decorative items using simple electric circuits.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. Telangana State Physical sciences text book.</li> <li>2. CBSE 9<sup>th</sup> and 10<sup>th</sup> Physical sciences text book.</li> <li>3. Byjus.com</li> <li>4. Britannica.com</li> </ol>

## Lesson Plan 11

**Name of Faculty: I. Srilakshmi**

<b>Class</b>	10 <sup>th</sup>	<b>Subject</b>	Physical Sciences
<b>Lesson Name</b>	Principles of Metallurgy	<b>Duration of the Lesson</b>	4 Periods
<b>Concept(s) Covered</b>		Prevention of	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Students will learn <b>spray painting technique</b> from a professional painter to prevent rusting. 2. Students use the skill of <b>spray paint on vehicles, grills, gates, holdings, school buildings and other metals</b> to prevent corrosion 3. Students can work in various <b>manufacturing unit</b> relating to paint and <b>coating industry, iron and steel industry</b> .			
<b>Skills that will be inculcated</b>			
1. Students will learn the <b>skill of painting</b> . 2. Students will develop <b>creative abilities</b> in painting. 3. Students will develop <b>entrepreneur skill</b> when they start their own business.			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Students use ratio and proportion in <b>Mathematics</b> subject in mixing the colors. 2. Students will paint various models of historical importance and geographical figures related to <b>Social sciences</b> .			
<b>Learning Outcomes</b>			
1. Students will get <b>conceptual understanding</b> of causes of corrosion and prevention. 2. Students will do <b>experiment</b> in mixing the colors. 3. Students develop <b>interest</b> in painting works. 4. Students can establish their own <b>manufacturing unit</b> for preparation of paints, marketing and distributions.			
<b>Tools/Material Needed</b>			

1. A Professional painter	4. Spray	
2. Paints	5. Painters tape	
3. Brushes	6. Old cloths	
7. Disposable gloves	8. Safety glasses	
9. Primer	10. Newspaper	
11. Tarpaulin sheet		
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<b>Steps</b>
<ol style="list-style-type: none"> <li>1. Getting a professional painter to the school for giving training to the students.</li> <li>2. School along with parents should provide the required material needed to the students.</li> <li>3. During the training program students will use the tools and learn a techniques of painting,</li> <li>4. The students will practice the skill of painting on various walls, doors and grills.</li> <li>5. Students can generate income whenever there is any need in school or in nearby community.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. Choose a professional painter who has through knowledge and experience in painting.</li> <li>2. Students should use gloves, glass and mask while mixing the colors.</li> <li>3. Students should thoroughly wash their hand after painting work is over.</li> <li>4. Use old cloths while doing painting work.</li> <li>5. After usage keep the paint brushes in water for cleaning and reusing.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. Students work can be assessed by their proficiency in work, time limit and usage of paints.</li> <li>2. Feedback from the stack holder can be use for assessment.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. Telangana State Physical sciences text book.</li> <li>2. CBSE 9<sup>th</sup> and 10<sup>th</sup> Physical sciences text book.</li> <li>3. byjus.com</li> <li>4. nevadamining.org</li> </ol>

## Lesson Plan 12

**Name of Faculty: Dr. K Veena Latha**

<b>Class</b>	X	<b>Subject</b>	Biological Science
<b>Lesson Name</b>	Transportation : The Circulatory System	<b>Duration of the Lesson</b>	3 Periods
<b>Concept(s)Covered</b>		Blood Pressure	
<b>Vocation(s)or Occupation(s)that can be connected to this lesson</b>			
1. Checking the vitals – Checking the blood pressure of individuals			
<b>Skills that will be inculcated</b>			
1. Observation skills related to changes in blood pressure when a person engages in resting, walking and running			
2. Classifying skills related to the different types of blood pressure – Low blood pressure and high blood pressure (Systolic and Diastolic pressure)			
3. Interpreting skills : Interpreting the results of blood pressure accurately			
4. Data collection , Data recording & Data reporting skills			
5. Money Management skills : Material Management skills			
6. Time Management Skills			
7. Communication Skills: Communicating the values of blood pressure correctly to the individuals.			
8. Appreciation Skills: The movement of blood in the human body and its importance in the functioning of various organs.			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Chemistry – Composition of blood and clotting of blood.			
2. Physics - Pressure and force through which blood flows.			
3. Math –Calculation of			
• Haemoglobin content in blood			
• Profit & loss of the vocation undertaken			
4. English –Communication of report on blood pressure			
5. Bio-Chemistry – Analyzing the composition of blood.			



## Learning Outcomes

1. The students will be able to determine the blood pressure of an individual.
2. The students will distinguish between low blood pressure and high blood pressure.
3. The students will give reason as to why the blood pressure in a person changes when he/she walks, runs or rests
4. The students will determine why stress leads to increase in blood pressure.
5. The students will identify the causes for hypertension.
6. The students will design a diet plan to control blood pressure.
7. The students will create awareness on the consequences of blood pressure.

## Tools/Material Needed- Develop Marketing

1. Automatic blood pressure measuring instrument (Sphygmomanometer)

## Steps

### Pre-activity–

1. Giving instructions to students about how blood pressure will be tested and instruments required for checking the blood pressure.
2. Informing students to invite their parents for testing their blood pressure as a part of a camp to be organized in school.
3. **Activity** – Informing students that the activity will be done in the school.
4. Ask the person to be relaxed before checking the blood pressure.
5. Position the arm straight, with the palm facing up on a leveled surface like a table.
6. Place the cuff on the bicep.



7. Press start button of the automatic sphygmomanometer.
8. The cuff inflates and slowly deflates.
9. When the reading is complete the monitor displays the reading.

### Post activity –

Cost of automatic sphygmomanometer is Rs 800/-

Once the instrument is purchased it can be used many times. Charge for testing blood pressure = Rs 20 per person

If around 40 people are testing their blood pressure then the investment can be got back.

### **Precautions**

1. Make sure the blood pressure cuff is tightly put.
2. Feet should not be crossed while checking blood pressure.
3. The person should be asked to relax before checking his blood pressure.
4. The person should sit with his/her back straight and feet on the floor.
5. Check the blood pressure twice for accurate results.
6. Assure them of the back up plans /any problem they envisage during the course of the check.

### **Assessment**

1. Data analysis of the number of participants who tested their blood pressure.
2. Documenting the photos & conducting a viva –voce of the students.
3. Taking feedback from the participants.
4. Ask the students to prepare a report & present the activity with results.
5. Rubric for the report:

Placing the cuff - 2 marks

Setting the instrument -2 marks

Recording the blood pressure -2 marks Reporting the result of blood pressure correctly -2 marks Interpreting the result -2 marks These 10 marks will be added to their formative assessment.

### **Reference Links**

1. Biology Class X Textbook, Published by the Government of Telangana.
2. <https://www.heart.org/en/health-topics/high-blood-pressure/understanding-blood-pressure-readings/monitoring-your-blood-pressure-at-home>
3. <https://www.healthline.com/health/how-to-check-blood-pressure-by-hand>
4. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3639494/>

## Lesson Plan 13

**Name of Faculty: Dr. K Veena Latha**

<b>Class</b>	X	<b>Subject</b>	Biological Science
<b>Lesson Name</b>	Reproduction : The Generating System	<b>Duration of the Lesson</b>	2 Periods
<b>Concept(s)Covered</b>		Reproduction in organisms (Formation of bacterial colony in milk)	
<b>Vocation(s)or Occupation(s)that can be connected to this lesson</b>			
1. Preparation of Curd			
<b>Skills that will be inculcated</b>			
<p>9. Observation skills related to changes in the physical state of milk in the process of curdling.</p> <p>10. Classifying skills related to the different types of milks available in the market.</p> <p>11. Interpreting skills: Interpreting how curd is formed by lactic acid bacilli through the process of fermentation.</p> <p>12. Data collection , Data recording &amp; Data reporting skills</p> <p>13. Money Management skills : Material Management skills</p> <p>14. Time Management Skills</p> <p>15. Communication Skills: Communicating the digestive values of curds to the individuals.</p> <p>16. Appreciation Skills: The beauty of lactic acid bacteria in the preparation of curd.</p>			
<b>Interdisciplinary concepts that may be integrated</b>			
<p>1 Chemistry – Conversion of lactose to lactic acid in milk. pH, acids and bases in milk.</p> <p>2 Physics - Coagulation of milk proteins with acid . Irreversible changes (Curd to Milk)</p> <p>3 Math –Calculation of</p> <ul style="list-style-type: none"> <li>• Percentage of protein, fat, carbohydrates, vitamins, and minerals in milk</li> </ul> <p>Profit &amp; loss of the vocation undertaken</p> <p>4 English –Communicating while marketing the curd prepared to the customers.</p> <p>5.Bio-Chemistry – Analyzing the composition of protein, fat, carbohydrates, vitamins, and minerals in milk</p>			

## Learning Outcomes

3. The students will be able to determine that curdling of milk occurs by the process of fermentation.
4. The students will distinguish between whole milk and toned milk and its usage for preparation of curds..
3. The students will give reason as to why the temperature of milk plays a vital role in the curdling process.
6. The students will determine why the curd tastes sour sometimes.
7. The students will identify the causes for change in colour and taste of curds formed.
8. The students will create awareness on the importance of intake of curds in our meals regularly.

## Tools/Material Needed- Develop Marketing

- |                            |                          |
|----------------------------|--------------------------|
| 1. Milk<br>3. Steel vessel | 2. A tablespoon of curds |
|----------------------------|--------------------------|

## Steps

### 1. Pre-activity–

1. Giving instructions to students about the process and material required for preparation of curds.
2. Informing students that the process of curd formation will be done at home and curd will be brought to school the next day in small sachets for sale.

### Activity –

1. Heat the milk to a very lukewarm temperature.
2. Switch off the flame.
3. Add one tablespoon of curd to the milk, and mix well.
4. Cover the milk container with a lid and wait for it overnight.
5. The Curd will be ready the next morning.





### Post Activity :

One litre of milk will produce 900 gms of curds.

The prepared curd will be packed in small sachets of 100 gms.

Cost of one litre of milk = Rs 55/-

Each sachet of 100gms curd will be sold for Rs.10/-

So, 9 sachets can be prepared. From one litre of curds 9 sachets i.e.  $10 \times 9 =$  Rs 90/- will be generated

### Precautions

1. Make sure to add one tablespoon of curd to **warm** milk only.
2. Take correct proportion of curd and add to milk.
3. Keep the container in a hot case in winter as humidity also plays an important role in curdling of milk
4. Do not disturb the vessel.
5. Use good quality milk for better result.
6. Assure them of the back up plans /any problem they envisage during the course of the check

### Assessment of Student Activity

1. Data analysis of the number of participants who purchased the curd.
2. Documenting the photos & conducting a viva –voce of the students.
3. Taking feedback from the participants.
4. Ask the students to prepare a report & present the activity with results.

#### 5. Rubric for the report:

Setting of the curd	- 2 marks
Palatability	-2 marks
Colour and taste of the curd	-2 marks
Packing	-2 marks
Neatness / Hygiene	-2 marks

These 10 marks will be added to their formative assessment

### Reference Links

1. Biology Class X Textbook, Published by the Government of Telangana.
2. <https://www.vegrecipesofindia.com/how-to-make-curd-dahi-homemade-curd-dahi/>
3. <https://hebbarskitchen.com/homemade-thick-curd-dahi-recipe/>
4. <https://foodsafetyhelpline.com/fssai-notifies-revised-general-standards-milk-milk-products/>

### Lesson Plan 14

**Name of Faculty: Dr.Sarah Thomas**

<b>Class</b>	<b>Class X</b>	<b>Subject</b>	Bio Science
<b>Lesson Name</b>	<b>Unit 2 Respiration -</b>	<b>Duration of the Lesson</b>	90 minutes 2 classes
<b>Concept(s) Covered</b>	<b>Fermentatio</b>		
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1.Bakery start-ups--Preparation and sale of bakery items-In this lesson plan, we'll integrate preparation and sale of bakery item (buns) as a vocation..			
<b>Skills that will be inculcated</b>			
<p><b>1. subject specific skills</b>-Comprehension skills, critical thinking, communication, collaboration, and creativity. Students understand the role of yeast in the fermentation process.</p> <p><b>2. Life skills</b>-Flexibility, Initiative, Social skills, making healthy choices ,Healthy eating Productivity, Leadership, Teamwork and Time management skills.</p> <p><b>3. Technical work skills/entrepreneurship skills related to the vocation</b>- Observation/handling tools, Negotiation/ Marketing skills/ Money management skills/ Time management skills.</p>			
<b>Interdisciplinary concepts that may be integrated</b>			
<p>1.Biochemistry- single-celled micro organism-yeast which helps in the conversion of cereal-derived sugars into ethanol and CO<sub>2</sub></p> <p>2.Maths -students learn the mathematical concepts of Counting, Units of measure and Fractions regarding the quantity of ingredients</p> <p>3. Physics: Optimum temperature required for fermentation using yeast</p> <p>4. Marketing/ Management/ Economics- Cost Price analysis</p> <p>5. English/ Communication: ability to communicate and propagate the sale/ Market and sell the product</p>			

<b>Learning Outcomes</b>	
<b>1.content related</b> Students understand the concept of Fermentation Students evaluate the nutritive value of the baked product. Students analyze the conditions required for fermentation. Students apply the principle of fermentation in the baking process. Students create /bake buns  <b>2. life skills related</b> Students understand the importance of team work Students evaluate the cost of the homemade product and the one available in the market.  <b>3. technical skills/entrepreneurship skills related</b> Students estimate the Price of the product/ nutritive content  Students design a recipe book with recipes involving fermentation using yeast in preparing baked products  .	
<b>Tools/Material Needed</b>	
1. flour 2. sugar 3. butter 4. milk 5.yeast	6.large bowl 7.eggs. 8. Oven 9.mixer 10. bakingtrays
<b>Steps</b>	
<b>Pre-activity steps</b>  1. Teacher orients the students on the baking process and cautions students on the importance of cleanliness and maintenance of hygiene while baking the buns.  2. Teacher can assist students to do the baking in the school itself(Students can use food science laboratory in schools where home science is offered as a course or can make use of the canteen run in the school which has a baking unit or can have a tie-up with a bakery closeby where the baking unit can be made use of.)	

3. Teacher motivates students to work collaboratively in teams such as the Procurement team who would buy the required ingredients, Design Team who would design and label the product, the Marketing Team who would market it through advertisement flyers and, send the information through email for the staff members and parents, the Production Team who would be at the actual scene of producing the baked buns and the Sale and Delivery Team who would sell the product.

### Activity steps

- a. Measure all the ingredients

accurately and keep aside

Ingredients include

- i. 4 cups all-purpose white flour
  - ii.  $\frac{3}{4}$  cups granulated sugar
  - iii. 3 eggs (at room temperature)
  - iv. 1 tsp salt
  - v.  $\frac{1}{2}$  cup melted butter
  - vi. 1 cup warm milk
  - vii. 2 tsp yeast
  - viii. 1 tsp granulated sugar
  - ix.  $\frac{1}{2}$  cup warm water
- b. Combine 2 tsp yeast, 1 tsp sugar to  $\frac{1}{2}$  cup warm water. Let the yeast mixture sit while preparing the dough.
- c. Using a mixer combine flour, sugar, eggs, salt, melted butter and warm milk.
- d. Add yeast mixture to dough mixture and continue mixing until well blended, approximately for 10 minutes.
- e. Remove dough from the mixing bowl and place on a floured surface.
- f. Knead by hand for 3 minutes. The longer you mix, the better the dough will turn out. The dough will have a slightly sticky feel so continue to add flour to your hands and the surface as you knead.
- g. Place dough in a large greased bowl and cover with a damp towel / cloth.
- Leave the dough to rise to double its size, approximately 1 to 1.5 hours.
- h. Remove the dough and equally divide into buns, placing them in a greased tray.
- i. Cover and let the dough rise for another  $\frac{1}{2}$  hour. In the meantime, preheat the oven to 350F.



- j. Bake buns for 15-18 minutes. Check with a toothpick before removing to ensure buns cooked through.



### Post activity steps

- a. Pack the baked buns neatly.
- b. Fix the price based on the cost and arrange the sale on the campus
- c. Cost of one bun can be Rs 5
- d. Profit will work out to be 50%

### Precautions

1. Use hot pads when you handle the hot trays to be kept inside and taken out from the oven.
2. Walk carefully when carrying hot baked buns and do not run or hurry.
3. Practice thorough cleanup and disposal after baking.
4. Shelf life of baked buns is to be kept in mind
5. To be a part of the **production team**. Students must engage in a lesson on kitchen safety and pass a health and safety test.

6. All students on the production team would wear hair nets, gloves, masks (during COVID-19), and aprons.
7. Rotate the students on the teams each month. Don't let them settle into one role they may be really good at. Students need exposure to all roles in a business!
8. Activating or "blooming" the yeast is the first step in baking. Instructions will tell you that you should add dry yeast to lukewarm water. If your water is too hot, you can kill the yeast. If it's too cold, your yeast won't activate. So one should use lukewarm water at the right temperature.
9. When preparing dough for the buns, one should pay attention to the dough size, temperature, humidity, and baking time.
10. Adjust the required baking time and temperature properly according to the types and quantity of bakery products to ensure they are baked thoroughly.

pack the buns after proper cooling (and use qualified food packaging materials)

### **Assessment of Student Activity**

whether the product was sold out Feedback from the consumers.  
Portfolio presentation of what they have done Present documentation  
(can be assessed on a Rubric with the following criteria

- 1 Preparation
2. Baking
3. Safety /sanitation
4. Teamwork
- 5 Finished Product

Indicators	Poor	Fair	Good	Excellent
	Lack of effort, improper behavior or use of equipment, wandered out of assigned group, or didn't do assigned kitchen duties 2 pts	Participated with only minimal effort, tendency to wander, minimal cleanup effort, skill level needs improvement 3 pts	Practiced good teamwork skills, completed all personal, pre-prep, and prep skills, completed kitchen duties, shows professionalism, good attitude, shows creativity, practices good techniques 4 pts	Shows leadership skills within group and class, shows professionalism, mastered techniques, shows creativity, completes assigned jobs and kitchen duties. 5 pts

Preparation	Poor Did not complete preparation, such as hand washing, wearing apron, gathering tools, ingredients and setting up equipment.	Fair Student completed most of tasks, but missed one or more of steps	Good Student completed all the steps but did not use time management	Excellent Student practiced excellent time management in completing each preparation task successfully.
Baking	Poor Student did not focus on task at hand or did not follow instructions.	Fair Student attempted tasks but got distracted or did not complete assigned task, followed only part of the instructions.	Good Student showed proper baking methods and techniques, but did not practice good time management.	Excellent Student demonstrated proper baking technique, completed all instructions successfully, and finished on time.
Safety/Sanitation	Poor Students did not demonstrate safety and sanitation (using equipment in the appropriate manner, hand washing, cleaning up and dish washing)	Fair Student only demonstrated some safety and sanitation practices.	Good Student demonstrated proper safety and sanitation practices most of the time.	Excellent Student demonstrated safety and sanitation practices and ensured they were practiced by others in the group.
Team Work	Poor Student did not work within his group, wandered away from group or showed little group participation.	Fair Student helped but with minimal effort, partially helped other team members or needed a lot of prodding to stay focused in the group.	Good Student worked within group, did all assigned tasks some prodding.	Excellent Student worked within group and demonstrated exceptional teamwork by taking initiative by working together with other members.
Finished Product	Poor Baking product was not satisfactory. Recipe was not followed according to specifications.	Fair Baking product was acceptable but presentation and taste were lacking.	Good Baking product was good and presentation and taste were good. Food was made according to the recipe	Excellent Baking product was made to recipe specifications. The food was presented well and was an excellent product.

## References

2. [Market Day in School \(Lesson Plan on Pricing Products\) \(moneyprodigy.com\)](http://moneyprodigy.com)

3. [iRubric: BREAD AND PASTRY PRODUCTION I rubric - BX6XWW6 \(rcampus.com\)](http://rcampus.com)

### Lesson Plan 15

Name of Faculty: Dr. Sarah Thomas

Class	Class X	Subject	Bio Science
Lesson Name	Unit 10 -Natural Resources	Duration of the Lesson	90 minutes 2 classes
Concept(s) Covered		Conservation- the concept of 4R's  Reduce Reuse, Recycle and Recover	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1.Start up-Eco green bags-Preparation and sale of paper bags			
Skills that will be inculcated			
<p><b>1. Subject specific skills</b>-Comprehension skills, critical thinking, communication, collaboration, creativity, thinking skills, problem-solving. Students understand the significance of the concept of conservation and its role in Sustainable development.</p> <p><b>2. Life skills</b> -Flexibility, Initiative, Social &amp; Emotional Skills, making eco-friendly choices, Productivity, Leadership, Environmental conscientiousness</p> <p><b>3. Technical work skills/entrepreneurship skills related to the vocation–</b></p> <p>Researching the environmental impact of paper bags and the benefits of using reusable bags.</p> <p>Designing paper bags that are aesthetically pleasing and functional.</p> <p>Learning how to make paper bags using various techniques such as folding, cutting, and gluing.</p> <p>Developing a marketing plan to promote the sale of paper bags and encourage their use.</p> <p>Business: Developing a business plan to sell Paper bags</p>			

<b>Interdisciplinary concepts that may be integrated</b>
<p>1. Maths-teaching geometry, shapes and fractions while folding the paper</p> <p>2. Business Planning: Students will learn how to develop a business plan, including researching the market and setting goals</p> <p>3. Financial Management: Students will learn how to manage their finances, including budgeting, tracking expenses, and understanding profit and loss.</p> <p>4. Marketing: Students will learn how to market their paper bag business, including creating a brand, developing a website, and using social media.</p>
<b>Learning Outcomes</b>
<p><b>1.Content related</b></p> <p>Students understand the concept of conservation</p> <p>Students evaluate the effect of using paper bags in place of plastic ones</p> <p>Students analyze the impact of plastic usage.</p> <p>Students exhibit creativity in designing models using eco-friendly resources,</p> <p>Students appreciate the role of conservation in sustainable development</p> <p><b>2.Life Skill related</b></p> <p>Students develop creative thinking skills</p> <p>Students identify and solve problems related to making paper bags.</p> <p>Students work together as a team to complete the task</p> <p><b>3. Technical skills/entrepreneurship skills related</b></p>

Students develop entrepreneurial skills such as problem-solving, decision-making, and resource management.

### Tools/Material Needed

- |                       |                        |
|-----------------------|------------------------|
| 1. Old newspaper      | 4. thin ropes/ ribbons |
| 2. A pair of scissors | 5. a punching machine  |
| 3. Adhesive glue      | 6.                     |

### Steps

#### Pre activity

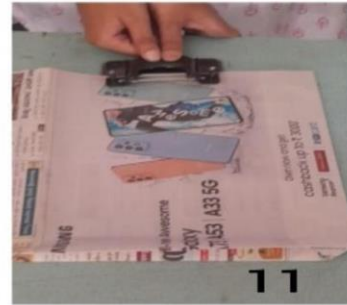
1. The teacher introduces the concept of conservation of resources to the students and explains why it is important
2. Explain how the use of paper bags can help conserve resources.
3. Show the students examples of paper bags and explain the process of making them.

#### Activity

4. Provide the students with the necessary materials and tools to make paper bags.
5. Demonstrate the process of making paper bags step-by-step.
6. Divide the students into groups and allow them to work collaboratively.



6. Spread the newspaper out on the work table and take out one entire sheet (i.e., two attached pages).
7. Pour glue generously on one side of the fold and stick the pages together.



8. Fold the sheet horizontally from both sides and glue the edges together.
9. For the base, fold the corners in triangles and seal the paper edges shut. Seal the base.
10. Make accordion folds on both sides. Press the edges on both sides of the bag and make a fold in the middle. This fold is known as the accordion fold and helps open the bag with minimal resistance.
11. Using a punching machine, pierce two holes at the open end of the bag. These are for attaching the handles.
12. Cut two pieces of ribbon/rope (approximately 15 cm each). Insert one ribbon/rope through the holes and knot both ends several times. Repeat the same on the other side. Make sure your knots are firm, and the handles are not sliding out through the holes.



**Post activity steps**

13. Create a marketing plan: Before selling paper bags, it is important to create a marketing plan.

This plan should include the target market, pricing strategy, promotional activities, and distribution channels.

14. Sell the product

Selling price -Rs.2/per piece

Profit 50%

**Precautions**

1. Be attentive while measuring the lengths of the parts to be cut and to be pasted with gums .
2. Use scissors to cut and take precautions while doing so. Don't cut your fingers
3. Observing the lengths and using a scale and pencil to mark is important in making paper bags so that the lengths does not go uneven

**Assessment of Student Activity**

1. whether the product was sold out
2. Feedback from the consumers.
3. Portfolio presentation of what they have done
4. Present documentation

(can be assessed on a Rubric with the following criteria

1. Follow the teacher's directions for the Eco-friendly Paper bag making Project
2. use of creativity
3. Behaviour in class/teamwork
4. Effort put into the project

Name:

Grade-Teacher:

Project:

	<b>Excellent (4)</b>	<b>Good (3)</b>	<b>Satisfactory (2)</b>	<b>Needs Improvement (1)</b>
<b>Following Project Directions</b>	All directions were followed.	You followed most directions.	You followed some directions.	None of the directions were followed.
<b>Use of Creativity</b>	You used your own ideas and imagination.	You used your own ideas most of the time.	You used some imagination.	You did not use your own ideas or imagination.
<b>Behavior in Class</b>	You were respectful and well-behaved.	You behaved well for most of the class.	You misbehaved during most of class.	You were not respectful and behaved poorly.
<b>Effort put into project</b>	You took your time and worked hard on the project.	You worked hard for most of the time.	You put a small effort into the project.	You rushed through and did not work hard.

Circle the box for each category that you believe describes your quality of work for this project.

Comments: \_\_\_\_\_

## Reference Links

1. Biology class 10 Text book
2. [How To Make a Paper Bag From Old Newspaper in 5 Minutes \(thebetterindia.com\)](http://thebetterindia.com)

## Lesson Plan 16

**Name of Faculty: P. Sunitha**

<b>Class</b>	<b>9th</b>	<b>Subject</b>	Physical Science
<b>Lesson Name</b>	<b>Is Matter Pure</b>	<b>Duration of the Lesson</b>	2-3 Periods
<b>Concept(s) Covered</b>			chemical bonding,
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<ol style="list-style-type: none"> <li>1. Children able to gain knowledge through their experience of how to prepare natural dye.</li> <li>2. They able to prepare natural dye based on their experience and they might be create as vocation.</li> <li>3. This vocation comes into Textile sector skill council.</li> </ol>			
<b>Skills that will be inculcated</b>			
<ol style="list-style-type: none"> <li>1. They learn scientific process and productive skills, scientific attitude skills, knowledge, and experimentation understanding skills.</li> <li>2. Life skills related – Children learn career skills, aesthetic sense skills, innovative and creative skills.</li> <li>3. Technological skills, related management skills.</li> </ol>			
<b>Interdisciplinary concepts that may be integrated</b>			
<ol style="list-style-type: none"> <li>1. Mathematics: Measurements, ratios, profit and loss, shapes, and geometry concepts are interrelated.</li> <li>2. Physical science: Integrated concept of physical science are heat, temperature, volume, reaction, oxidation, fabrics, solutions, evaporation, Combustion - flame.</li> <li>3. Bio-science: Eco system, pollution, plants.</li> </ol>			

4. Social: Consumer values, production, marketing, publicity, profit and loss.
5. Language: Communicative skills and Vocabulary skills related concepts.

### Learning Outcomes

1. Children are able to identify different natural indicators.
2. Children will be able to know the process of preparing natural dyes and indicators.
3. Children will know how to prepare the natural dyes using different materials.

### Tools/Material Needed

- |                  |                                     |
|------------------|-------------------------------------|
| 1. Beetroots – 4 | 4. Alum powder( aluminum sulphate ) |
| 2. Water         | 5. White color                      |
| 3.Vessel         | 6.Cloth – 2m                        |

### Steps

#### Pre-Activity :

1. The teacher will explain different types of mixtures and solutions, how to react with other substances.
2. The teacher will explain how to prepare solution with natural material which are used for preparing dye with examples like turmeric powder.



#### Post-Activity:

1. Take a big vessel and pour 2-litres of water.
2. Put this vessel on LPG stove to heat.
3. Take 4 beetroots and cut it into small pieces.
4. When water is boiling add alum powder and beetroot pieces.



5. Boil the beetroot solution up to 10-35 minutes and remove it from the flame and take the beetroot from water.
6. Dip the wet fabric in the solution for 3-4 hours.



7. Take away the fabric from the solution and keep it dry.



8. Finally we get peach color fabric.

### **Income generating:**

Through this process, they generate income by dyeing fabrics, which may be sold to small stitching shops for making tablecloths, curtains, and other fabric-related materials. This process is very low-cost and within budget. It's so easy to generate income.

Example:

Cost of 2m cloth = 120

Cost of 4 beetroots = 20

Cost of alum powder = 5

Cost for heating = 5

Total Cost = 150

Selling price of the cloth material for 1m is 150

Selling price of the cloth material for 2m is 300

Profit =  $300 - 150(\text{SP} - \text{CP}) = 150$  which is 50% profit.

### **Precautions**

1. While heating the water and dipping the fabric into the boiling water, we should follow the safety rules.
2. Time management should be followed until the natural dying of fabric process is

completed.

### **Assessment of Student Activity**

1. Assess the child based on collecting materials.
2. An assessment should be done based on how they are preparing the solution for the dye.
3. It should be done based on whether they have completed the dyeing process perfectly or not.

### **Reference Links**

1. <https://images.app.goo.gl/rQ7BjQxVBnugxYLSA>
2. <https://images.app.goo.gl/CBfEgTAoAtZENy9o7>
3. <https://images.app.goo.gl/coDUpC6URRjCLzCs5>
4. <https://youtu.be/0xfSA0FbJ9U>

## Lesson Plan 17

Name of Faculty: P.Sunitha

<b>Class</b>	<b>9<sup>th</sup></b>	<b>Subject</b>	Physical science
<b>Lesson Name</b>	<b>Work and Energy</b>	<b>Duration of the Lesson</b>	3-4 periods
<b>Concept(s) Covered</b>		Solar energy, reflection of light on surfaces, focal length, renewable resources, heat transmission, electricity, AC & DC.	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<div><div>1.</div><div>The solar energy is renewable energy and main source of energy. The children will gain knowledge about different types of energies and how we get energy from the sun.</div></div> <div><div>2.</div><div>The children will learn the processing skill regarding how to make a solar cell which will generate power by the hands on experience demonstrated by teacher.</div></div> <div><div>3.</div><div>The teacher will provide information about how to work this solar cell, solar panel which converts solar energy into electric power, and how this power we can use in different purposes.</div></div> <div><div>4.</div><div>The children will get an idea about how the solar energy is stored in a battery that can be used for street vendors like juice points, tea sellers or any other activities used in day to day life.</div></div> <div><div>5.</div><div>If we make a huge panel that can also be used for agricultural purpose. So the students create as a vocation through applying this concept of producing solar energy power.</div></div> <div><div>6.</div><div>This vocation comes under power sector skill council and domestic skill council.</div></div>			



<b>Skills that will be inculcated</b>	
<p>4. Subject specific skills-- The children will learn the science processing skills through how to make a solar cell and panel. They learn scientific and creative skills, innovative skills, productive skills, scientific attitude skills, utilitarian skills, experimentation and critical thinking skills.</p> <p>5. Life skills related – Children provides the alternative solution for electrical power production. So they will learn and develop problem solving skills, career skills, self-awareness skills about natural resources, cooperation skills towards societal development etc.</p> <p>6. Technological skills related – Customer relationship management skills, communication skill, inter-active, analytical skill. Digital marketing skills are improved when they entered with new product in the society.</p>	
<b>Interdisciplinary concepts that may be integrated</b>	
<p>6. Mathematics: Measurements, profit and loss, shapes, areas, volumes, surfaces and geometry concepts are interrelated.</p> <p>7. Bio science : eco system</p> <p>8. Social: Consumer values, production, marketing, publicity, profit and loss, resources.</p> <p>9. Language: Communicative skills and interpersonal skills, interactive skills related concepts.</p>	
<b>Learning Outcomes</b>	
<p>1. Children will be able to understand the importance of solar energy.</p> <p>2. Children will understand how electricity produced through solar energy.</p> <p>3. Children are able to learn how to prepare solar cell and solar panel which is used for making solar power generator.</p>	
<b>Tools/Material Needed</b>	
<p>1. Solar panel</p> <p>2. Battery</p> <p>3. Transistors - 2</p>	<p>4. wires, cardboard &amp; Plug socket</p> <p>5. Bulb</p> <p>6. Resistors -2</p>

## Steps

### Pre-activity:

3. The teacher will explain types of solar energy and its uses
4. The teacher will explain how to convert solar energy to electrical energy and also uses of components.
5. The teacher will explain the demonstrated process of how solar energy is converted into energy by using small solar panel to glow the bulb.

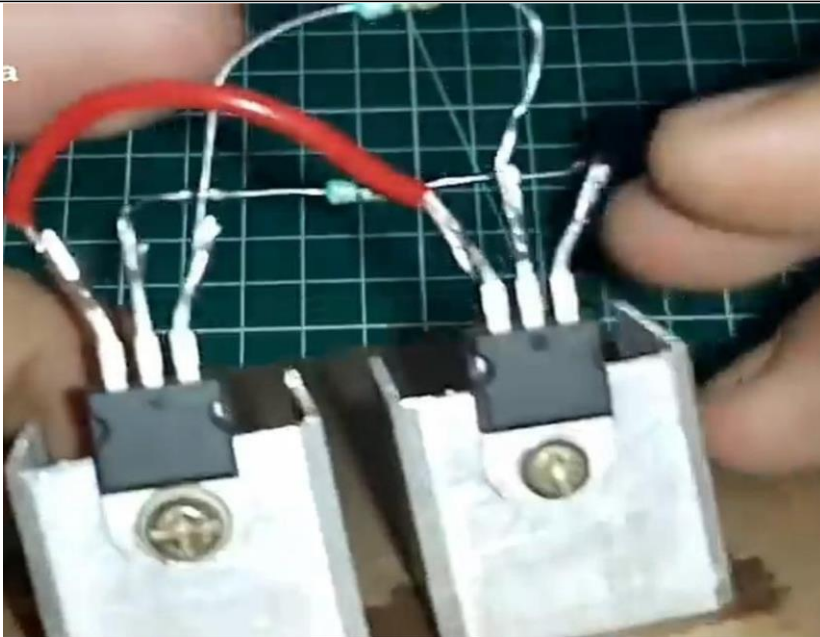
### Post – activity:

After the teacher's explanation and demonstration about the project, students understood the concept of how solar energy is converted to electrical energy and started the connections for lighting up the bulb. Based on this experiences students are able to prepare own solar panel and solar power generator. These are the following steps for preparing solar power generator:

1. Take 6 MDF(medium density fireboard) boards of different sizes(2 boards of same sizes)
2. Take 2 transistors (13007). When load applies to the transistor it becomes hot. So keeping it cool we join transistor with heat sink and after that paste it to the cardboard with gum.



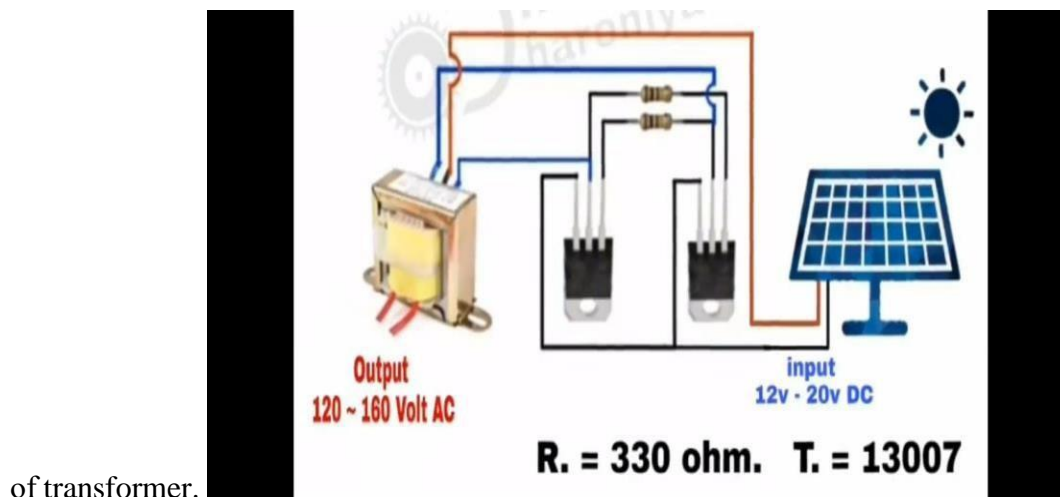
3. Take 2 resistors (330 ohms each) and join the each resistor of one end to first leg of transistor and other end to middle leg and other resistors in reverse order. Remaining legs make it short by a wire.



4. Take a transformer of 12-0-12v. Connect 12v & 12v wires of transformer to middle legs of transistors.
5. Take a wire having red (+ve) & black (-ve). Connect the black wire to shorter part of transistor and red wire to the middle wire of transformer.
6. For connecting output take a socket/plug point and join the remaining wires which are at other side of transformer to plug point. After connections cover the remaining MDF boards to look it as a box and color it.



7. Connect the red wire of solar panel to red wire of transformer and black wire to black wire



8. Connect the plug into socket and then bulb will get on or put the mobile charger then  
Mobile gets charged.

### Income Generating:

Through this process, they generate income by making solar power inverters, which may be sold to small scale businesslike tea stalls, juice points, etc. This process is very low-cost and within budget. It's so easy to generate income.

Cost of resistors = 2

Cost of transistors = 30

Cost of transformer = 100

Cost of plug socket = 20

Cost of battery = 300-500

Cost of solar panel = 1000-1500

Extra costs = 48

Total cost = 1500-2000

Cost price of complete material = 1500-2000

Selling price of complete material = 2000-2500

Profit = 500 (40%) [Battery is optional]

### Precautions

1. Be careful while using with wires and any other electrical parts as we may get shock.

2. Proper connections should be done for better results.

**Assessment of Student Activity**

4. Assess the child based on collecting materials.
5. An assessment should be done based on how they are connecting all the wire connections.
6. It should be done based on whether they have completed the process perfectly or not.

**Reference Links**

1. <https://www.youtube.com/watch?v=GeQhRr8VFGw>

## Lesson Plan 18

**Name of Faculty: P. Sunitha**

<b>Class</b>	<b>9<sup>th</sup></b>	<b>Subject</b>	Physical science
<b>Lesson Name</b>	Carbon and its compounds	<b>Duration of the Lesson</b>	3-4 periods
<b>Concept(s) Covered</b>		Chemical properties of carbon compounds, combustion reactions, fuels, heat, diffusion.	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
Making of cow dung dhoop cups.  <div><div></div><div>1. They able to understand how carbon compounds are showing different properties.</div><div>2. The able to understand how carbon compounds takes place for combustion reactions or fuels.</div><div>3. Through this experiential learning they able to create a vocation or income generation.</div><div>4. Ancient Indians are giving more importance for traditional aspects. They give more importance for cow and its value for harvest and excreta.</div><div>5. Now a days this products are exported to different countries from India. So the children using this opportunity to create as income generation or full-fledged vocation.</div><div>6. This vocation will comes under logistics sector and domestic skill sector.</div></div>			
<b>Skills that will be inculcated</b>			
<div><div></div><div>1. Subject specific skills are: processing skills, productivity skills, utilitarian skill, innovative skills, observations skills will be develop</div><div>2. Life skills related: career skills, creative and innovative skills, aesthetic skills will be develop.</div><div>3. The skills related to technology: selling and management skills, marketing skills will be develop</div></div>			
<b>Interdisciplinary concepts that may be integrated</b>			
<div><div></div><div>1. Mathematics - The concepts that will be covered in mathematics are, different types of shapes, length, breadth, ratio, proportion, profits, lose, quantities, etc.</div></div>			

2. Physical science –The concepts interrelated within disciplinary are combustion concepts, evaporation, reactions, properties of gaseous, solids, volume natural resources.
3. Biology - The concepts will be integrate in biological science are manure, animals husbandry
4. Social - product making, exporting.
5. Language – importance of traditional area, our village and our resources

### **Learning Outcomes**

1. Children are able to learn carbons and it compounds, properties of carbon and it compounds
2. Children will able to learn about how combustion reactions takes place based on this process they will learn how we use the natural resources in different purpose
3. Children will able to analyse this combustion process and learn how to prepare the cow dungs dhoop cups and other products

### **Tools/Material Needed**

- |                           |                  |
|---------------------------|------------------|
| 1. Cow Dung (300gm)       | 4. Camphor (50g) |
| 2. One vessel             | 5. molders       |
| 3. Ghee (2-3 table spoon) |                  |

### **Steps**

#### **Pre-Activity:**

1. Teacher explained the compounds of carbons and it properties. The teacher demonstrate what are combustion materials, and reactions
2. Teacher explained how fuels are burn and in ancient time what kind of fuels are using for combustion with examples
3. Teacher explained using this natural resources and how we will prepare different domestic purpose material with cow dungs now a days and create as a source of income generation as well as vocation.

#### **Post-Activity:**

After the teacher's explanation and demonstration about the process of making natural homemade cow dung dhoop cups or sticks.

Based on these experiences students are able to prepare cow dung dhoop cups which very easy and low cost and in local areas or vin villages it will be available easily at the low cost. The students using this idea they will start to making cow dungdhoop cups as small businesses. For preparing these cops they will follow the steps as.

1. Take cow dung and separate all the grass and waste particles from it and mix it well.



2. Take camphor and smash it into powder.



3. Mix the powder of camphor to cow dung and also add 2-3 table spoons of ghee and mix it well.



4. After mixing take small quantity and make them into convenient shapes like the cup.





5. After making the shapes dry then under the sun for 2-3 days. Then the dhoop cups will be formed.
6. While using the dhoop cups if we apply some ghee/camphor to it then it will burn easy.
7. We can add neem powder also for better results.

### Income Generation:

Through this process, they generate income by making dhoop cups, which may be sold to surrounding houses or in pooja stores, retail and wholesale super markets, temples, etc. This process is very low-cost and within budget. It's so easy to generate income.

Quantity of cow dung = 500g=20₹

For 500gm will prepare 30 cow dung

Cost of camphor for making 30 cow dungs=10 ₹

Cost of ghee =10 ₹

Total cost for preparing 30 cow dung cups = 40 ₹

For packing of each contain 10 cups = 30 ₹

so for 4 packing =4 × 30 =120 ₹

Profit =120 ₹ -40 ₹ = 80₹

### Precautions

1. While preparing dhoop sticks make sure all the ingredients are mixed in correct quantity.
2. Keep it dry properly.

### Assessment of Student Activity

1. Assess the children based on collecting materials and how they are mixing the ingredients.
2. It should be done based on whether they have completed the process perfectly or not.

### Reference Links

1. <https://youtu.be/m0inbTPnfEg>

<https://youtu.be/PG9ILt-yhiQ>

### Lesson Plan 19

Name of Faculty: P. Sunitha

<b>Class</b>	<b>9th</b>	<b>Subject</b>	Physical Science
<b>Lesson Name</b>	<b>Sound</b>	<b>Duration of the Lesson</b>	3-4 Periods
<b>Concept(s) Covered</b>			ural fibers,
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<ol style="list-style-type: none"><li>1. Children are able to understand the processes of sound and reverberation.</li><li>2. Children are able to analyze the reverberation process and prepare sound absorption panels with natural materials.</li><li>3. This type of vocation will fall under the infrastructure equipment skill council.</li></ol>			
<b>Skills that will be inculcated</b>			
<ol style="list-style-type: none"><li>1. They learn scientific processing skills, productive skills, scientific attitude skills, problem solving skills, scientific inquiry skills, aesthetic and appreciation skills.</li><li>2. Life skills related – Children learn career skills, aesthetic sense skills, innovative, creative skills, communications skills, and interpersonal skills.</li><li>3. Technological skills are related like management skills, business skills will be improved.</li></ol>			
<b>Interdisciplinary concepts that may be integrated</b>			
<ol style="list-style-type: none"><li>1. Mathematics: Measurements, shapes, geometry, profit and loss concepts are interrelated.</li><li>2. Physical science: natural resources, natural fibres, force, work and energy, matter around us, properties of solids.</li><li>3. Biology: noise pollution, plants</li><li>4. Social studies: small scale industries, Consumer values, production, marketing, publicity, profit and loss, economy.</li><li>5. Language: Communicative skills and Vocabulary skills related concepts.</li></ol>			

<b>Learning Outcomes</b>	
<ol style="list-style-type: none"> <li>1. Children are able to identify different types of materials which are absorbing sound.</li> <li>2. Children are able to understand the reverberation process.</li> <li>3. Children will be able to understand the process of absorbing noise frequencies.</li> </ol>	
<b>Tools/Material Needed</b>	
<ol style="list-style-type: none"> <li>1. Coconut Fiber</li> <li>2. Cotton Or Sheep Wool</li> <li>3. Cloth</li> <li>4. Wood Frame</li> </ol>	<ol style="list-style-type: none"> <li>5. Bolts</li> <li>6. Tape</li> <li>7. Glue</li> </ol>
<b>Steps</b>	
<b>Pre-Activity</b>	
<ul style="list-style-type: none"> <li>❖ The teacher will discuss sound propagation, reflection, echo, and reverberation, as well as what materials to use to block out undesired noises in crowded areas and what kind of equipment is best for reducing sound.</li> <li>❖ The teacher will show how to make acoustic panels out of natural materials that can reduce the chaos or noise that results during foam preparation.</li> </ul>	
<b>Post- activity</b>	
<ul style="list-style-type: none"> <li>❖ Through the pre-activity, the children will acquire a conceptual understanding of sound reflection and reverberation. Based on this understanding, they will prepare foam for acoustic panels, which are used to lessen reverberate sound in any space, particularly malls, restaurants, theatres, industrial halls, and even roofs.</li> <li>❖ These sound-absorbing panels are made to prevent out the numerous sound waves that are moving around the space and absorb noise frequencies.</li> <li>❖ The children will construct these panels out of materials that are readily available in nature, like coconut fibres, cotton, and sheep's wool.</li> </ul>	
<b><u>Steps of preparing the sound absorbing panels :</u></b>	
<b>Here are the steps to make an acoustic foam out of natural fibers:</b>	
<ol style="list-style-type: none"> <li>1. Gather Materials: You'll need natural fiber material such as wool or cotton, a binder such as cornstarch or flour, a blender or food processor, a mold, and a baking sheet.</li> <li>2. Prepare the Natural Fiber Material: Cut the natural fiber material into small pieces and soak</li> </ol>	

them in water overnight.

3. Drain the Water: Drain the water from the soaked fiber material.
4. Blend the Fiber Material: Place the fiber material into a blender or food processor and blend until it becomes a smooth pulp.
5. Add Binder: Add a binder such as cornstarch or flour to the fiber pulp and mix until it becomes a dough-like consistency.
6. Place in Mold: Place the fiber and binder mixture into a mold of your desired shape and size. You can use a muffin tin or a silicone mold.
7. Bake: Place the mold on a baking sheet and bake in the oven at 200°F (93°C) for 30-40 minutes, or until the mixture has dried out and hardened.
8. Remove from Mold: Carefully remove the acoustic foam from the mold and let it cool.
9. Repeat: Repeat the above steps to create as many acoustic foam pieces as you need.

**Note:** It's important to note that natural fiber acoustic foam may not be as effective as synthetic foam or mineral wool, but it can still provide some sound absorption benefits.

#### **Here are the steps to make an acoustic panel:**

1. Gather Materials: You'll need a wooden frame, acoustic insulation material made of natural fibres and a staple gun.
2. Measure and Cut the Frame: Cut the wooden frame to the desired size. A standard size for acoustic panels is 2' x 4', but you can make them any size you want.
3. Cut the Insulation Material: Cut the insulation material to the size of the frame. Make sure the insulation is slightly larger than the frame to create a snug fit.
4. Insert the Insulation Material: Place the insulation material (acoustic foam that you made earlier with natural fibres) into the wooden frame. Make sure it's pushed tightly into the corners.
5. Cover the Frame with Acoustic Fabric: Cover the frame with the acoustic fabric, making sure to pull it tightly and staple it to the back of the frame. Cut off any excess fabric.
6. Optional: Add a Hanger: If you want to hang the acoustic panel on the wall, you can add a hanger to the back of the frame. This can be a simple saw tooth hanger or a French cleat.
7. Repeat: Repeat the above steps to create as many acoustic panels as you need.



In this way, children can make acoustic panels with natural fibres at home and make this as their vocation.

### Precautions

- (a) Students should exercise caution when gluing foam to a wooden board and covering the board with fabric.
- (b) Precautions should be taken to close the corners with tape.

### Assessment of Student Activity

1. Assessment should be based on the collection of materials that will absorb the sound.
2. Assessment should be based on the preparation of foam with natural materials.
3. Assessment should be based on the student's preparation of acoustic panels that will reduce sound reverberation.

**Reference Links**

1. <https://www.fullenglish.co/blog/2016/8/13/sound-absorber>
2. <https://www.blackghostaudio.com/blog/how-to-build-your-own-diy-acoustic-panels>
3. <https://acousticsfreq.com/how-to-build-your-own-acoustic-panels/>

## Lesson Plan 20

**Name of Faculty: P. Sunitha**

<b>Class</b>	<b>8th</b>	<b>Subject</b>	Physical Science
<b>Lesson Name</b>	<b>Electrical Conductivity of Liquids</b>	<b>Duration of the Lesson</b>	2-3 Periods
<b>Concept(s) Covered</b>		States of matter, Electrical circuits, Chemical reactions, Metals, Power distribution, Chemical combination	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<div>1. Children are able to gain knowledge through their experience of performing electroplating.</div> <div>2. They are able to do electroplating based on their experience and they might be create as vocation.</div> <div>3. This vocation comes into painting and coating skill council.</div>			
<b>Skills that will be inculcated</b>			
<div>4. They learn scientific process and productive skills, scientific attitude skills, knowledge, and experimentation understanding skills.</div> <div>5. Life skills related – Children learn career skills, aesthetic sense skills, innovative and creative skills.</div> <div>6. Technological skills, related management skills.</div>			
<b>Interdisciplinary concepts that may be integrated</b>			
<div>6. Mathematics: Measurements, ratios, profit and loss concepts are interrelated.</div> <div>7. Physical science: Integrated concept of physical science is chemical reactions, metals, electrical circuits.</div> <div>8. Social: Consumer values, production, marketing, publicity, profit and loss.</div> <div>9. Language: Communicative skills and Vocabulary skills related concepts.</div>			

## Learning Outcomes

1. Children are able to identify different metals.
2. Children are able to understand the concept of chemical reactions.
3. Children will be able to know the process of conducting electroplating.

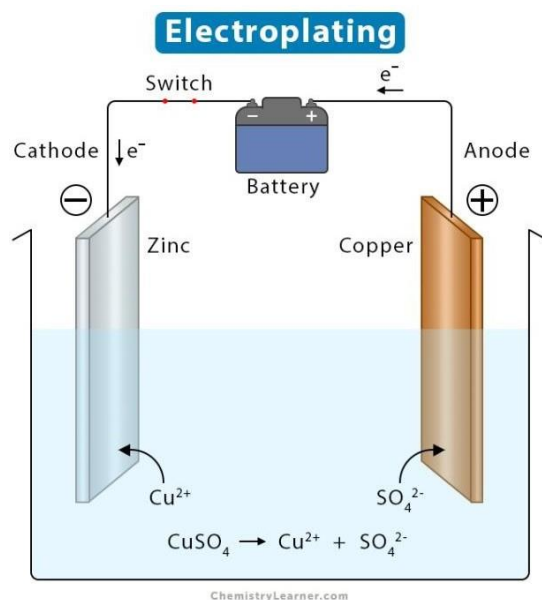
## Tools/Material Needed

- |   |                                 |
|---|---------------------------------|
| 1. Copper plate of size 2 cm x 5 cm,          | 5. Water                        |
| 2. Crystals of copper sulphate (blue vitriol) | 6. Sulphuric acid               |
| 3. A key made by iron                         | 7. Battery and                  |
| 4. Glass beaker                               | 8. Some connecting copper wires |

## Steps

### Pre-Activity :

1. The teacher will explain different types of chemicals and metals used in the experiment.
2. The teacher will explain how to perform electroplating technique on different objects.

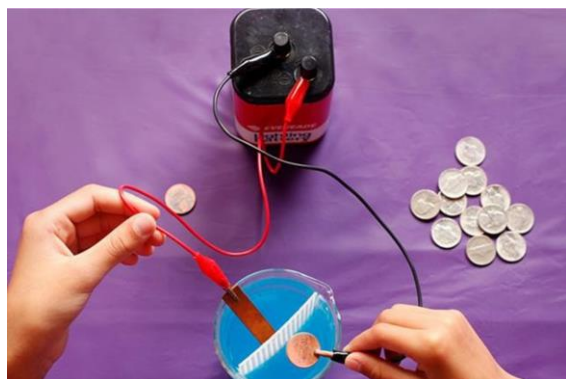


### Post-Activity:

1. Dissolve crystals of copper sulphate in pure water to prepare concentrated



- solution.
2. Pour the solution in a beaker and add a few drops of dilute sulphuric acid to it. (Acid helps in increasing the conductivity of electrolyte.)
  3. Tie one end of a connecting copper wire to the iron object (key) to be coated with copper.
  4. Connect its other end to the negative terminal of a battery.
  5. Suspend the tied iron object into the copper sulphate solution.
  6. Suspend the copper plate into copper sulphate from positive end of the battery through a switch.
  7. Care should be taken that the coin and plate do not touch each other and are a little away from one another.
  8. Put the switch on for about 10 minutes.
  9. After 10 minutes, switch off the circuit and take the coin out.
  10. Finally, we can observe that the coin was coated by copper. This is due to the process of electroplating.



### **Income generating:**

In industry, electroplating is the process whereby a cheap base metal, is coated with a much more expensive metal, in order to make it visually attractive and aesthetically pleasing (gold and silver plating are examples).

Electroplating is usually a decorative process and the aim is to increase the visual appeal of cheaper jewellery. It also serves to provide the surface, with a level of protection against corrosion.

Some everyday products including bathroom taps, have been electroplated with chrome for decoration as well as corrosion resistance. Electroplating is also used to apply a conductive surface to metals that are of low conductivity.

#### SAMPLE PRODUCTS - ELECTROPLATING



Through this process, they generate income by electroplating different products. This process is very low-cost and within budget. It's so easy to generate income.

#### Example:

##### Profit on 1 copper coated plate through electroplating.

Cost of Copper sulphate crystals (200g) = Rs. 40

Cost of 1 battery (9V) = Rs. 30

Cost of connecting wires (2m) = Rs. 10

Cost of Copper sheet (60g) = Rs. 30

Cost of 1 steel plate = Rs.100

Cost of copper coated plate (C.P) =  $100+40+30+10$   
= Rs. 180

Time required to make 1 electroplated copper plate = 5 minutes

Selling price of Copper coated plate (S.P) = Rs. 350

$$\begin{aligned}\text{Profit} &= \text{S.P} - \text{C.P} \\ &= \text{Rs. 350} - \text{Rs. 180} \\ &= \text{Rs.170/plate}\end{aligned}$$

#### Precautions

- The object to be electroplated should be free from greasy matter.
- The surface of the article should be rough so that the metal deposited sticks permanently.
- The concentration of the electrolyte should be so adjusted as to get smooth coating.
- Current must be the same throughout.

**Assessment of Student Activity**

1. Assess the child based on collecting materials.
2. An assessment should be done based on how they are conducting the electroplating.
3. It should be done based on whether they have completed the process of electroplating or not.

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## Conclusion

Vocational learning opportunities play a critical role in skill development and employability. The importance of vocational development can largely be summed up as the difference between theoretical knowledge vs. practical skills.

Engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills and clarify values. Facilitated and guided practice, reflection and evaluation are all essential components of this transformative method of learning.

This project found that integration of vocational education in teacher education by science methodology is very relevant and useful. These vocational educational lesson plans from 9<sup>th</sup> and 10<sup>th</sup> class science textbooks of Telangana state syllabus. These lesson plans covered relevant concepts, multidisciplinary concepts, occupations, skills, activities and learning outcomes. Along with these cost analysis will also be given. The student is not just taught about scientific methods, but also given necessary entrepreneur skills.

This project is a small yet concrete effort to achieve the milestones of improved socio-economic canvas of rural India which could potentially transforms the lives of coming generations. Entrepreneurs play a pivotal role in the growth of the economy. They spur industry innovations, create new market opportunities, and support the development of communities.

## **ACKNOWLEDGEMENTS**

I, Dr. B. Sujatha, lead researcher/ subject coordinator for the science project, MGNCRE, titled, 'Integration of Vocational Education in Teacher Education by Science Methodology' would like to thank Dr. W. G. Prasanna Kumar, Chariman, MGNCRE for his support.

I would like to express my sincere gratitude to Smt. Padma Juluri, Co-ordinator, National Vocational Education (VENTEL), Nai Talim, MGNCRE for her crucial role and her constant support for the project. I would like to convey my sincere thanks to Dr. T. Janaki for her guidance.

I would also like to extend my special thanks to Dr. Ravindranath K Murthy, Principal, Prof. A. Ramakrishna, Head of the Department, Prof. T. Mrunalini, Senior professor and Dr. D. Sunitha, Asst. Professor & co-ordinator for the whole project and all the other faculty members of University College of Education for their extensive support, encouragement and providing timely inputs required for the project. I thank all the co researchers constant support for the completion of the project.

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## **ANNEXURES**

### **Profile**

#### **Dr. B. Sujatha**

Dr. B. Sujatha is working as an Assistant Professor in University College of Education, Osmania University, Hyderabad, Telangana state. She has 15 years of experience in the field of Psychology and Education.

She has worked in the Department of Psychology, Osmania University College for Women, Koti, Hyderabad. Her specialization is Guidance and Counseling.

She has published articles in Osmania University Journals and other national and international journals. She is a Writer for Telugu Academi books and Dr.B.R.Ambedkar Open University, Hyderabad and a Co-coordinator for SSA projects, Telangana, Hyderabad. She is also a resource person for SCERT and IGNOU. She is a member of BOS in Andhra Mahila Sabha (AMS) and a subject expert selection committee member of Osmania University, Palmuru University and Satavahana University. She guides Ph.d students in the Department of Education, Osmania University.

### **Profile**

#### **Dr. D. Sunitha**

Dr. D. Sunitha is working as an Assistant Professor and BOS in the Department of Education, Osmania University, Hyderabad, Telangana state.

She has been working in the field of education for more than 15 years. She has a rich experience in the field of early childhood education, special education, adolescent education, guidance and counseling. Her areas of interests are Early Childhood Education, Adolescent Education, Special Education, Curriculum Development and Woman Studies.

She is the curriculum writer for B.Ed and M.Ed course in Osmania University and SCERT, state of Telangana. She is a course writer for Telugu Akademi, Centre, for Distance Education, Acharya Nagarjuna University, Guntur and NAARM. She is also a resource person for Orientation on new B.Ed curriculum to various Universities in Telangana state. She has presented many papers at various state, national and international seminars and has also published articles in various National journals.

## **Profile**

### **Reshma Hasan**

Assistant Professor, princess Durru Shehvar College of Education for Women, holds M.Sc. in Zoology, M.A. in English and M.Ed. She has qualified TS-SET exam in the field of Education. She has 9 years of experience as a teacher educator also 12 years of experience as a schoolteacher. She is a passionate learner and an inspiring teacher. She has gained the experience of teaching Pedagogy of Biological Sciences, School Management and administration, Environmental Education and Information and Communication Technology, in the college. She got the opportunity to present e-modules of B.Ed. course under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching [PMMMNTT].

## **Profile**

### **C. Swapna**

C. Swapna is working as lecturer in Panineeya Mahavidyalaya College of Education since 2016 till date. She did her Master's Degree in Philosophy from University college of Arts & Social Sciences College, Osmania University, Master's degree in Education (with 14th rank) from University college of Education (IASE), Osmania University, Master's degree in English from Acharya Nagarjuna University, Guntur and Master's degree in Human Resource Management from Bharathidasan University, Tiruchirapalli, Tamilnadu and has been qualified in UGC-NET in Education. She has written chapters in few books, published articles and journals. She has been a resource person for B.Ed, PGRR-CDE, Osmania University and has developed content for e-modules and video content related to B.Ed Curriculum from MHRD, GOI, PMMMNTT in Biological Sciences in the year 2019-20.

## **Profile**

### **Srilakshmi.I**

Srilakshmi.I is a senior faculty in Shadan College of Education, Khairatabad, Hyderabad and has been working there from the past 21 years. She is also the Head of Science Department.

## **Profile:**

### **Dr. K. Veena Latha**

Associate Professor & Controller of Examinations, St. Ann's College of Education, holds a Ph.D in Education, M.Sc in Microbiology, MA in English and M.Ed. She has qualified the UGC-NET exam in the field of education. She has 19 years of teaching experience as a teacher educator. Her experience is vast and varied in the field of higher education. She is an enthusiastic, pro-active learner who adapts herself to any new environment of learning. She has acquired experiences in this college, teaching Educational Philosophy, Pedagogy of teaching English, Research Methodology and Curriculum Development.

Her research interests include evaluation and assessment, English as a second Language, curriculum development and philosophy of education, having published research papers and articles in these areas. She has completed a Minor Research Project from ICSSR .She is a member of various College statutory bodies and lends herself to issues of quality assurance. In addition to her workload, she is also involved in the functioning of Alumni Association of the college as a treasurer.

## **Profile**

### **Dr.Sarah Thomas**

Dr. Sarah Thomas presently working as an Assistant Professor, St. Ann's College of Education, Secunderabad has been holding multifarious responsibilities as a Teacher, Counsellor and Teacher Educator for the last two decades. Having her Post graduation and Doctoral degree in Child Development, she takes immense interest in catering to the holistic development of the learner. She conducts orientation programmes for teachers empowering them to be conscientious members of the teaching fraternity. She has rendered orientation programmes for members of teaching community across the country.

She has co- authored a book on Inclusive Education which is her maiden attempt to equip the teacher trainees accept special children with their inequities. She has completed a Minor Research Project funded by ICSSR on "Enhancing Emotional Intelligence of Dyslexic Learners in collaboration with their parents" She has presented papers in both National and International conferences and also published research articles in both National and International journals. She has also been mentoring and providing academic guidance for M.Ed students in their dissertation work.

## **Profile**

### **P.Sunitha**

P.Sunitha, M.Sc (Phy), M.Sc (Psy), M.Ed. is a lecturer in Pedagogy of Physical Science in St. Alphonsas College of Education, Hyderabad.

## SELF -DECLARATION

TITLE OF THE MINOR RESEARCH PROJECT: Integration of Vocational Education In Teacher Education By Science Methodology

**NAME of LEAD RESEARCHER: Dr. B. Sujatha**

NAMES of CO-RESEARCHERS : Dr. D. Sunitha, Ms. Reshma Hasan, Ms. Swapna, Ms. I. Sri Lakshmi, Dr.. Veena Latha, Dr. Sarah Thomas & Ms. P. Sunitha

- 1.I/We confirm that I/We have read, understood and agreed to the submission guidelines, policies and this submission declaration as per the MGNCRE Work Order.
- 2.I/We confirm that the Research Report is the authors' original work and the Research Report has not received prior publication and is not under consideration for publication elsewhere.
- 3.I/We confirm that the lead researcher and the co-researchers listed on the title page and in this form have contributed significantly to the work, have read the Research Report, attest to the validity and legitimacy of the content, and agree to its submission.
- 4.I/We confirm that the Research Report contents now submitted are not copied or plagiarized version of some other published work.
- 5.I/We declare that I/We have/shall not submit the material for publication in any other Journal or Magazine.
6. On behalf of all Co-Authors, I bear full responsibility for this submission.

**Date: 07/03/2023**



---

**Signature of Lead Researcher**

Signed on behalf of all co researchers)

**Minor Research Project Report on**  
**Integration of Vocational Education in Teacher Education by**  
**Subject Methodology**  
**Social Science**

**Submitted By**

***Dr. B. Bhagyamma***  
Asst. Professor, MANUU, Hyderabad  
&

***Co-Researchers***  
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Don Bosco College of Teacher Education,  
M.G. University, Nalgonda

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***Mrs. Subha Venugopal,***  
College of Teachers Education - Andhra Mahila Sabha, Hyderabad

Overall Project Coordinator from Osmania University : Dr D Sunitha, Assistant  
Professor, UCE, OU

**Submitted To**  
**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Ministry of Education, Govt. of India, Hyderabad**



**Joint Project**  
***March, 2023***

## FOREWORD

India is a Subcontinent with diverse Cultural Milieu. Each state having its own distinct native culture. Each state his rich in local resources to take up gainful employment.

NEP 2020The single overarching umbrella body for the promotion of the higher education sector including teacher education, Exposure to vocational education in school and higher education system;



NEP 2020 recognizes that vocational education is perceived to be inferior to mainstream education. Hence, this policy aims to overcome the social status hierarchy associated with vocational education and requires the integration of vocational education programmes into mainstream education in all educational institutions in a phased manner. Towards this, secondary schools will also collaborate with ITIs, polytechnics, local industry, etc. Skill labs will also be set up and created in the schools in a hub and spoke model which will allow other schools to use the facility.

MGNCRE has taken up the herculean task to undertake Nationally Co-ordinated projects, Regionally Co-ordinate Projects, the works initiated by MGNCRE. Projects by Network partners and Fellowship based study Projects that could supplement the works initiated by MGNCRE.

Mahatma Gandhi National Council of Rural Education under the Ministry of Human Resource Development, in Government of India strives to promote resilient rural India through Higher Education interventions.

Its objective is to study rural society and rural economy through higher educational institutions in order to address the development, needs and challenges through participatory mechanisms and appropriate technological responses basing on local resource.

Basic Education postulates that the study of the curriculum content should be intelligently related to three main centres of correlation: craft work, the natural environment and the social environment. Dimensions of Rural University. The concept of Rural University was thus an attempt to discover the 'higher educational version' of the idea of Basic Education proposed by Mahatma Gandhi around 1935.

I deem it a Pleasure to have been appointed as Co-ordinator for methods of teaching social studies and submit my heartfelt thanks to MGNCRE for conducting the two-day workshop on the need and importance of identification of vocation for content under the four sub divisions of social studies History, Geography, Civics and Economics.

I am thankful to the Architects of NEP 2020 who redefined education through the 2020 Policy. In this context I am full of appreciation to Dr. Padmajawho conducted the two day workshop on the identification of appropriate Vocation for Content in social Studies.

In this context I extend my deep-seated thanks to my team members Dr. Lakshmi Latha Padala, Principal Don Bosco college of Education, Nalgonda; Smt. C. Subha Venugopal, Dr. N. Anuradha, AMS College of Education and Ms.Huda Faculty Ghulam Ahmed College of Education Hyderabad for the support and Co-Operation extended to me in the completion of the Mini Research project successfully.

*Dr. B Bhagyamma, Assistant Professor, MANUU.*

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## INTRODUCTION

Education is a fundamental requirement for the development of an egalitarian society. Education needs to focus on all-round development and it is best obtained through experience.

Education can and is effective, only when it is transacted through work and craft and not only through books and abstraction. For true character-building and education, the focus needs to be on values, ethics and ideal educational planning needs to be undertaken with rural Indian masses in mind. Community is a part of every school and the community's engagement in terms of owning and managing of schools needs to be focused and promoted.

To encourage holistic development and 21st century skills such as critical thinking, creativity, scientific temper, communication, collaboration, multilingualism, problem solving, ethics, social responsibility, digital literacy, to bridge the gap in achievement of learning outcomes, classroom transactions will shift towards competency-based learning and education

Broadly speaking a social science perspective could be described as understanding the interactions that go on within and between communities. To understand social problems, identify their causes and devise solutions.

Among the various challenges faced by a nation Poverty and Unemployment are the worst problems. It is the duty of every Government to offer education that is vocational in nature.

Gandhi, in his basic education policy, strongly recommended vocation-based education According to Gandhi, literacy in itself is no education. It is one of the means whereby man and woman can be educated. education means an all – round development of an individual. In the words of Gandhi, “By education I mean all round drawing out of the best in child and man – body, mind and spirit.”

Gandhi Ji had two fold aims :immediate aims and ultimate aim.

**Immediate aims of education.** These are concerned with our day-to-day life :

**Bread and butter aim.** Education must aim at enabling every individual to earn his livelihood. It must enable him to stand on his own feet. Education should be a kind of insurance against unemployment

**Ultimate aim of education.** Self – realization is ultimate aim of life as well as of education. Spiritual freedom provides knowledge of God and self – realization. Hence, education should provide spiritual freedom.

**Basic craft.** He asserted that education should be craft centered. Basic craft which may be agriculture, spinning, weaving, woodwork etc. should be included in accordance with the local

conditions of life and society.... social studies. It includes subjects like history, civics geography and current events for promoting individual and social virtues.

**Education through craft.** Gandhi Ji emphasized that education should be given through the medium of some craft or production work.

**Emphasis on activity method and learning by self – experience.**

He emphasized activity method in the field of teaching. He asserted that learning by doing and learning by self – experience is very effective. NEP 2020 has strongly gone back to Gandhiji's Nai Talim

**Reimagining Vocational Education and Skill Building-** NEP 2020 aims to overcome the perception of lower social status associated with vocational education and requires integration of vocational education programme into mainstream education in a phased manner. Beginning with vocational exposure in early ages in middle school, quality vocational education will be integrated smoothly into secondary and higher education.

It will ensure that every child learns at least one vocation from class 9 onwards and is exposed to many more professions. It will emphasize the importance of skill building, dignity of labour and various professions associated with Indian art and craftsmanship.

The education system must address all of the above, especially material concept of life for a happy and peaceful community life.

## CONTENT ANALYSIS

**Name of the Faculty: Dr. B. Bhagyamma**

**Subject: Social Science**

**Mobile Number: 7780214948**

S.No	Class	Topic	Subtopic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.		Unit 2: Ideas of Development	What Development Promises - Different People, Different Goals	MEDICINAL PLANT SUPPLY
2.	X		Development as progress over time	Setting up a beauty parlor
3.			Income and Other Goals	Used rubber tiers used in making cement mixture and concrete mixture
4.		Unit 8: Rampur: A village Economy	Farming in Rampur	MICROGREEN PREPARATION
5.			Land and other natural resources	making of mats by the leftover fabric
6.			Land Distribution in Rampur	Making jewelry by using local material
7.			Capital: Arranging physical and working capital	Profitable Organic Fertilizer Manufacturing Business
8.			Surplus or Loss for the farmer	Making pickles or any preservative item to conserve food material when surplus
9.		Unit 21: The Movement for the Formation of Telangana State	In the process of achieving Telangana	COOKIING TELANGANA SPECIAL - TEA TIME SNACKS
10.	Telangana Rashtra Samithi		Making of Batukamma by using flowers	
11.	Withdrawal of the Announcement		Basket weaving	
12.				Raggi Coconut Ladoo by using jaggery
13.		Unit 6: Agriculture in India	Types of Farming	Sprout making and selling
14.	IX		Cropping Seasons	Seasonal juice making
15.			Major Crops	Making Paddy starch sweet

S.No	Class	Topic	Subtopic	Vocation(s) or Occupation(s) that can be connected to this lesson
16.			Food Crops other than Grains	Extraction of coconut oil
17.			Non – Food Crop	Making of Jute bag and mats
18.			Importance of Agriculture	Cultivating of saplings
19.			Indian farmers are mostly small landholders	Hydroponic cultivation of saffron
20.			Agricultural production depends on natural factors	Indoor planting
21.			The First Phase (1950-1965) - Increasing Irrigation and Building Dams	Making seed bombs
22.			Dryland Agriculture	Aloe vera farming and selling products made out of it
23.			Accident Related	Cardiopulmonary resuscitation (CPR) -
24.		Unit 21: Disaster Management	Rail Accidents	Making and selling of portable first aid kit
25.			Fire Accidents	Making and selling mesh for pollution control for cars

S.No	Class	Topic	Subtopic	Vocation(s) or Occupation(s) that can be connected to this lesson
26.		Unit 2: Ideas of Development	What Development Promises - Different People, Different Goals	MEDICINAL PLANT SUPPLY
27.	X		Development as progress over time	Setting up a beauty parlor
28.			Income and Other Goals	Used rubber tiers used in making cement mixture and concrete mixture
29.		Unit 8: Rampur: A village Economy	Farming in Rampur	MICROGREEN PREPARATION
30.			Land and other natural resources	making of mats by the leftover fabric
31.			Land Distribution in Rampur	Making jewelry by using local material
32.			Capital: Arranging physical and working capital	Profitable Organic Fertilizer Manufacturing Business
33.			Surplus or Loss for the farmer	Making pickels or any preservative item to conserve food material when surplus
34.	Unit 21: The Movement for the Formation of Telangana State	In the process of achieving Telangana	COOKIING TELANGANA SPECIAL - TEA TIME SNACKS	
35.		Telangana Rashtra Samithi	Making of Batukama by using flowers	
36.		Withdrawal of the Announcement	Basket weaving	
37.				Raggi Coconut Ladoo by using jaggery
38.		Unit 6: Agriculture in India	Types of Farming	Sprout making and selling
39.	IX		Cropping Seasons	Seasonal juice making
40.			Major Crops	Making Paddy starch sweet
41.			Food Crops other than Grains	Extraction of coconut oil
42.			Non – Food Crop	Making of Jute bag and mats
43.			Importance of Agriculture	Cultivating of saplings

44.			Indian farmers are mostly small landholders	Hydroponic cultivation of saffron
45.			Agricultural production depends on natural factors	Indoor planting
46.			The First Phase (1950-1965) - Increasing Irrigation and Building Dams	Making seed bombs
47.			Dryland Agriculture	Aloe vera farming and selling products made out of it
48.		Unit 21: Disaster Management	Accident Related	Cardiopulmonary resuscitation (CPR) -
49.			Rail Accidents	Making and selling of portable first aid kit
50.			Fire Accidents	Making and selling mesh for pollution control for cars

**Name of the Faculty:**  
**Dr. P. Lakshmi Latha**

**Subject:**  
**SOCIAL STUDIES**

**Mobile Number:**  
**9440777202**

S. No	Class	Topic	Sub - Topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	9 <sup>TH</sup>	UNIT 3: Service activities in India	Payments and Receipts	All Entrepreneurial activities that lead to income generation E.g.: Payments and receipts are involved in organic farming - Growing and selling green leafy vegetables.
2.	9 <sup>TH</sup>	Unit 11: The Government Budget & Taxation	Government Budget	<div>Subsidy, Budget, Expenditure and Income</div> <div>Subsidy - It is a transfer of money by the Govt. to an entity so that it leads to fall in the price of that product. E.g.: Ration provided through public distribution system</div> <div>Budget - It is a statement of expected income and expenditure on various heads for the coming financial year.</div> <div>Budget - It is a statement of expected income and expenditure on various heads for the coming financial year.</div> <div>Income: Money received from various source</div>

S. No	Class	Topic	Sub - Topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	X	UNIT 3: Production and Employment	1. Sectors of the economy	Basket Weaving
2.			2. Gross Domestic Product	Idli making
3.			3. How do we estimate GDP?	Service provision of Calculating GDP by using tally
4.			4. Changes in the importance of sectors • value of goods and services produced and employment of people	Establishing an NGO in the school
5.			5. Employment – the working life in India	Snacks making
6.			6. Organized and unorganized sector employment in India	Making greeting cards
7.			7. How to create more and better conditions of employment?	Pickle making
8.	X	Unit 4: Climate of India	1. Climographs of a few places in India	Wind shim making/ dream trapper making
9.			2. Factors influencing climate and weather - Latitude or distance from the equator • Land-water relationship • Altitude • Upper atmospheric circulation	Making of humidity and temperature making
10.			3. Seasons: Winter • Summer • Advancing monsoon • Retreating Monsoon	Crochet, woolen craft, cotton shirt making
11.			4. Global Warming and Climate Change	Harita haran programme
12.			5. AGW and climate change	Janata fridge
13.			6. Impact of climate change on India	Making life jacket by using plastic bottles
14.	X	Unit 9: Globalization	1. Production across Countries	Selling products by using Facebook and Instagram
15.			2. Interlinking Production Across Countries	Building an app in which the handicraft of India can be sold
16.			3. Foreign Trade and Integration of Market	Developing online business by selling foreign products in India



S. No	Class	Topic	Sub - Topic	Vocation(s) or Occupation(s) that can be connected to this lesson
17.			4. MNCs and Globalization - Technology	ENGAGING AND INFORMATIVE DIGITAL POSTERS
18.			5. Liberalization of foreign trade and foreign investment policy	Making toys out of clay and selling them online
19.			6. Impact of Globalization in India	Making a website by using Google, WordPress
20.			7. Small producers: Compete or perish	Selling hand-made embroidery products – the unique design will survive in the market
21.			8. The Struggle for Fair Globalization	Establishing a counseling center on international law or WTO laws for fair import and export rules
22.	X	Unit 11: Sustainable Development with Equity	1. Looking at development again	Recycle cardboard by making gift boxes
23.			2. The Environment and Development	Using plastic bottles to make a flower box
24.			3. People's Rights over The Environment	Developing seed bombs
25.			4. Chipko Movement	Making and selling of bonsai
26.			5. Towards Sustainable Development with Equity	Purifying water and selling
27.	IX	Unit 7: Industries In India	1. Basic necessities for setting up factories	Taking the leftover material from the tailor and making huge fabric out of those point pieces by the applique work and using it like to make bags and other accessories
28.			2. Industrial Location	Doing zardozi embroidery and selling the products
29.			3. Agro-Based Industries <ul style="list-style-type: none"> <li>Textile Industry</li> <li>Cotton Textiles</li> <li>Jute Textiles</li> <li>Sugar Industry</li> </ul>	stretching petticoats and selling, making cushion covers, making jute door mats, making laddus
30.			4. Mineral-based Industries <ul style="list-style-type: none"> <li>Iron and Steel Industry</li> <li>Aluminium Smelting</li> <li>Chemical Industries</li> <li>Fertilizer Industry</li> <li>Cement Industry</li> </ul>	Making face masks, making decorative items by using copper wire, making detergents, making a flower vase by using cement, making fertilizers by using kitchen waste
31.			5. Automobile Industry	Making drone
32.			6. Information Technology and Electronics Industry	Making a machine that can detect the moisture of soil

S. No	Class	Topic	Sub - Topic	Vocation(s) or Occupation(s) that can be connected to this lesson
33.			7. Government and Industrial Development – The Early Years	Burning the books making them into Diaries and selling them
34.			8. Emerging Problems	Tooth cleaning powder by using coal
35.			9. Impact of Industrialization Policies	Mehndi making and selling it on Instagram
36.			10. Increase in environmental problems and pollution	Reduce reuse recycle of papers
37.	IX	Unit 10: Prices and Cost of Living	1. Family Budget - How do changes in prices affect the family budget?	Providing training program for tally package & advance MS Excel
38.				Trading in school – carpentry
39.			2 How inflation is measured?	Setting up a grain shop in school to learn wholesale index
			1. Price Index Numbers	Setting up fair price shops
			4. Role of government in regulating prices	Doing Digital Marketing

**Name of the Faculty:**  
**Dr. ANURADHA NAKKA**

**Subject:**  
**Social Science**

**Mobile Number:**  
**9391740665**

S.No	Class	Topic	Subtopic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	IX	Biosphere	Natural vegetation	Organic farming, Maintenance of nursery and school Garden.
2.				Decorative items prepared with softwood. Craft making.
3.			Human society and Environment	Feeding bowls preparation. Animal husbandry. Pet house maintenance.
4.	IX	Industrialization and social change	Cotton spinning and weaving	Spinning raw cotton into yarn or thread.
5.				Weaving the yarn into fabric.
6.				Marketing the finished fabric.
7.			Women, Children and Industrialization	Lace-making and Knitting works/ industries.
8.	X	Settlements and Migrations	Seasonal and Temporary migration	To avoid seasonal migration, engage in the collection of locally available resources or materials for start-up homemade products like pickle, Papad making.
9.			Rural to rural and Rural to Urban migration.	To reduce the percentage of migrant people they can start new start-ups like
10.				Paper plates, paper cups preparation.
11.				Paper bags and paper covers prepared with old newspapers at their home with a minimum budget.

S. No	Class	Topic	Sub topic	Vocation(s) or Occupation(s) that can be connected to this lesson
1.	IX	Our Earth	Sub Topic: POP Culture Storytellers explore the nature of our planet and possible Sub Topic: Books and their Revelations Sub Topic: Galaxies, Earth as a Planetary Body	1 Story tellers 2 Script Writers Vedanga Jyothishya, Surya siddhanta, Bhagavatha Purana 3 Painters 4 Start up on Installation of Solar Panels
2.	IX	Credit in the Financial System	Sub Topic: Bank Sub Topic: Essential features / Functions of the Bank Sub Topic: Modern Banking system.	1. Service Providers ( Charging a Nominal Fee ) 2. Start up Bank in the school to inculcate Savings lend loans on nominal interest. 3. HSBC recommends creating a bank project for school by setting up their own institution to help students best understand the working pieces of a financial services company. Working with a local bank, students can learn and perform the various duties and job functions of tellers, managers, auditors and marketers. In this capacity, students can help other students open basic accounts, answer questions and create advertising campaigns to promote the school branch. With the oversight of bank employees, this is a great way to learn real-world financial skills.
3.	IX	Why People require Credit?	Sub Topic : Credit Scenario Sub Topic: Debt Trap Sub Topic: Financial Literacy	1 Guidance and Counselling Services (Fee) 2. Start up on Banking Solutions 3 Tally solutions( Business accounts Managers) Offering Financial and Business Solutions
4.	Xth	Topic: Indian Rivers and Water Resources	Sub Topic: Water Shed: Sub Topic: Water shed Management Sub Topic: SHGS	1 Service Providers in the village 2. Build Local Partnerships (Watershed Mangers 2. Creating livelihood through SHGs ( Legal Advisors)

# LESSON PLANS

## Lesson Plan 1

Name of Faculty: Dr. B. Bhagyamma

Class	9 <sup>TH</sup>	Subject	SOCIAL STUDIES
Lesson Name	Agriculture in India	Duration of the Lesson	4 HOURS
Concept(s) Covered		Importance of Agriculture	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. IoT Based Soil Quality Monitoring system using ESP8266			
Skills that will be inculcated			
1. Computer Science - CODING			
2. Agriculture and Soil Science			
3. Electrical and Electronics Engineering – SOLDERING, TINKERING			
4. Data Science			
Interdisciplinary concepts that may be integrated			
1. Computer Science			
2. Agriculture and Soil Science			
3. Electrical and Electronics Engineering			
4. Data Science			
Learning Outcomes			
1. Understand the basic principles of IoT and its application in agriculture			
2. Understand the factors that affect soil quality and how it can be monitored using IoT			
3. Acquire technical skills in programming and circuit design using ESP8266			
4. Understand the importance of data collection and analysis for improving crop yields and soil health			
Tools/Material Needed			
1. ESP8266 microcontroller		13. Heat Shrink Tube	
2. PIR Soil moisture sensor		14. Glue Gun	
3. DHT 11 Temperature and humidity sensor		15. Glue Rods	
4. 5V Relay Module		16. Multimeter	
5. 16 x 2 LCD Display		17. DC Water Pump	
6. I2C LCD Driver		18. ON/OFF Button	
7. 5V Power Supply		19. Connecting Wires	
8. Zero PCB Board		20. Wi-Fi module	
9. Soldering Iron		21. Breadboard and jumper wires	
10. Soldering Flux		22. Computer/laptop with Arduino IDE and ESP8266 library installed	
11. Soldering Lead			
12. Wire Cutter / Wire Stripper			
Steps			
1. Set up the ESP8266 microcontroller and connect it to the Wi-Fi module.			
2. Connect the soil moisture sensor, temperature and humidity sensor, and other necessary components to the microcontroller using the breadboard and jumper wires.			
3. Write a program in Arduino IDE to read data from the sensors and send it to a web server.			
4. Analyze the data collected over time to monitor soil quality and make recommendations for improving crop yields and soil health.			

5. Connect Soil Moisture Sensor to the TTL converter using Female – Female Jumper cables.
6. From TTL output connect the Jumpers to the Node MCU / ESP8266 as per the circuit diagram.
7. Connect PIR Motion Sensor to the ESP8266 using jumpers.
8. Connect the Temperature sensor to the ESP8266 using jumpers.
9. Connect 5V Relay to the ESP8266 using jumpers.
10. Connect 16\*2 LCD Driver to the ESP8266 by using jumpers.
11. Connect LCD Driver to the LCD Display.
12. Connect water Pump across the 5V power Supply & Relay.
13. Add Push Switch in between +Ve of Power Supply & ESP8266

**SOFTWARE – WEBSITE – WWW.BLYNK.IO**

14. Create a New Account
15. LOG IN using Credentials
16. Create New Template
17. Add DataStream
18. Create Event
19. Create Web Dashboard
20. Add New Devices
21. Use Template
22. Create Smartphone Dashboard on Blynk IOT Application

**CODE:**

```
#include <LiquidCrystal_I2C.h>
#define BLYNK_PRINT Serial
#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>
#include <DHT.h>

//Initialize the LCD display
LiquidCrystal_I2C lcd(0x3F, 16, 2);

char auth[] = " "; //Enter your Blynk Auth token
char ssid[] = " "; //Enter your WIFI SSID
char pass[] = " "; //Enter your WIFI Password

DHT dht(D4, DHT11); //(DHT sensor pin,sensor type) D4 DHT11 Temperature Sensor
BlynkTimer timer;

//Define component pins
#define soil A0 //A0 Soil Moisture Sensor
#define PIR D5 //D5 PIR Motion Sensor
int PIR_ToggleValue;

void checkPhysicalButton();
int relay1State = LOW;
int pushButton1State = HIGH;
#define RELAY_PIN_1 D3 //D3 Relay
#define PUSH_BUTTON_1 D7 //D7 Button
#define VPIN_BUTTON_1 V12
```

```

//Create three variables for pressure
double T, P;
char status;

void setup() {
  Serial.begin(9600);
  lcd.begin();
  lcd.backlight();
  pinMode(PIR, INPUT);

  pinMode(RELAY_PIN_1, OUTPUT);
  digitalWrite(RELAY_PIN_1, LOW);
  pinMode(PUSH_BUTTON_1, INPUT_PULLUP);
  digitalWrite(RELAY_PIN_1, relay1State);

  Blynk.begin(auth, ssid, pass, "blynk.cloud", 80);
  dht.begin();

  lcd.setCursor(0, 0);
  lcd.print(" Initializing ");
  for (int a = 5; a <= 10; a++) {
    lcd.setCursor(a, 1);
    lcd.print(".");
    delay(500);
  }
  lcd.clear();
  lcd.setCursor(11, 1);
  lcd.print("W:OFF");
  //Call the function
  timer.setInterval(100L, soilMoistureSensor);
  timer.setInterval(100L, DHT11sensor);
  timer.setInterval(500L, checkPhysicalButton);
}
//Get the DHT11 sensor values
void DHT11sensor() {
  float h = dht.readHumidity();
  float t = dht.readTemperature();

  if (isnan(h) || isnan(t)) {
    Serial.println("Failed to read from DHT sensor!");
    return;
  }
  Blynk.virtualWrite(V0, t);
  Blynk.virtualWrite(V1, h);

  lcd.setCursor(0, 0);
  lcd.print("T:");

```

```

lcd.print(t);

lcd.setCursor(8, 0);
lcd.print("H:");
lcd.print(h);
}
//Get the soil moisture values
void soilMoistureSensor() {
int value = analogRead(soil);
value = map(value, 0, 1024, 0, 100);
value = (value - 100) * -1;
Blynk.virtualWrite(V3, value);
lcd.setCursor(0, 1);
lcd.print("S:");
lcd.print(value);
lcd.print(" ");
}
//Get the PIR sensor values
void PIRsensor() {
bool value = digitalRead(PIR);
if (value) {
Blynk.logEvent("pirmotion", "WARNNG! Motion Detected!"); //Enter your Event Name
WidgetLED LED(V5);
LED.on();
} else {
WidgetLED LED(V5);
LED.off();
}
}
BLYNK_WRITE(V6)
{
PIR_ToggleValue = param.asInt();
}
BLYNK_CONNECTED() {
// Request the latest state from the server
Blynk.syncVirtual(VPIN_BUTTON_1);
}
BLYNK_WRITE(VPIN_BUTTON_1) {
relay1State = param.asInt();
digitalWrite(RELAY_PIN_1, relay1State);
}
void checkPhysicalButton()
{
if (digitalRead(PUSH_BUTTON_1) == LOW) {
// pushButton1State is used to avoid sequential toggles
if (pushButton1State != LOW) {
// Toggle Relay state
relay1State = !relay1State;
digitalWrite(RELAY_PIN_1, relay1State);
}
}
}

```



```

// Update Button Widget
Blynk.virtualWrite(VPIN_BUTTON_1, relay1State);
}
pushButton1State = LOW;
} else {
pushButton1State = HIGH;
}
}
void loop() {
if (PIR_ToggleValue == 1)
{
lcd.setCursor(5, 1);
lcd.print("M:ON ");
PIRsensor();
}
else
{
lcd.setCursor(5, 1);
lcd.print("M:OFF");
WidgetLED LED(V5);
LED.off();
}
if (relay1State == HIGH)
{
lcd.setCursor(11, 1);
lcd.print("W:ON ");
}
else if (relay1State == LOW)
{
lcd.setCursor(11, 1);
lcd.print("W:OFF");
}
Blynk.run();//Run the Blynk library
timer.run();//Run the Blynk timer
}

```

The cost of materials for building the system would be around ₹3,000/-. This can be used to monitor soil quality to improve soil health and yield of crops in the local agricultural community

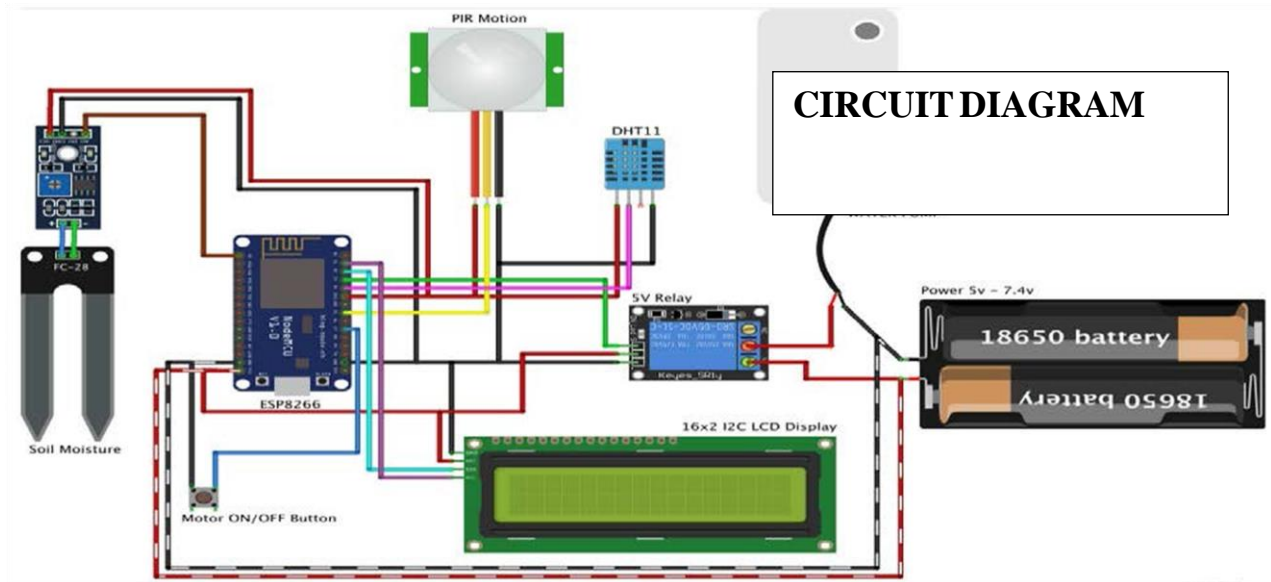
#### Precautions

1. Take appropriate precautions when working with electronics, including wearing proper protective gear and following electrical safety guidelines.
2. Use caution when working with soil and soil moisture sensors to avoid contamination.
3. Do not Short Circuit the Wires.
4. Check the connections before turning ON the Power Supply.
5. Verify the code before uploading it in the ESP8266.

#### Assessment of Student Activity – 15 MARKS

1. 5 marks for - Evaluation of the quality of the student's circuit design and programming skills
2. 5 marks for - Assessment of the accuracy and reliability of the sensor readings and the effectiveness of the monitoring system
3. 5 marks for - Analysis of the student's ability to interpret and analyse data and make recommendations for improving crop yields and soil health.

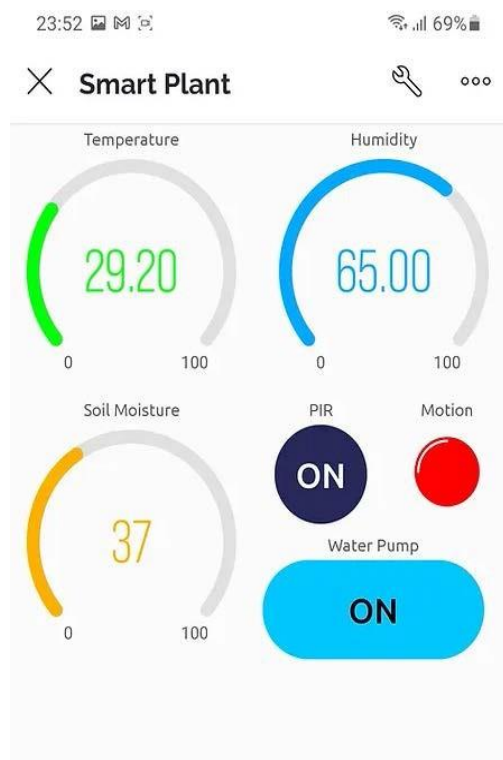
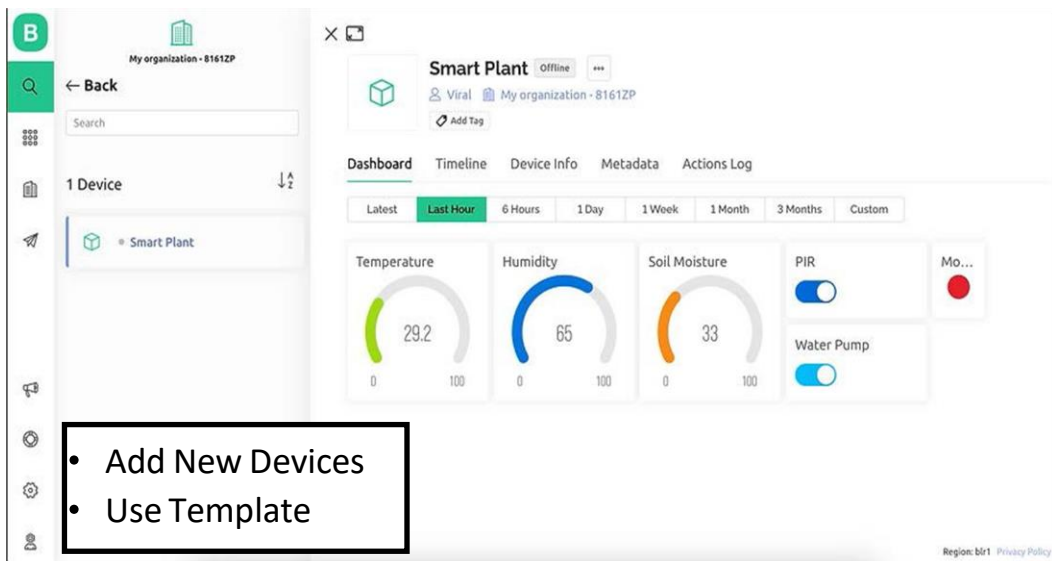
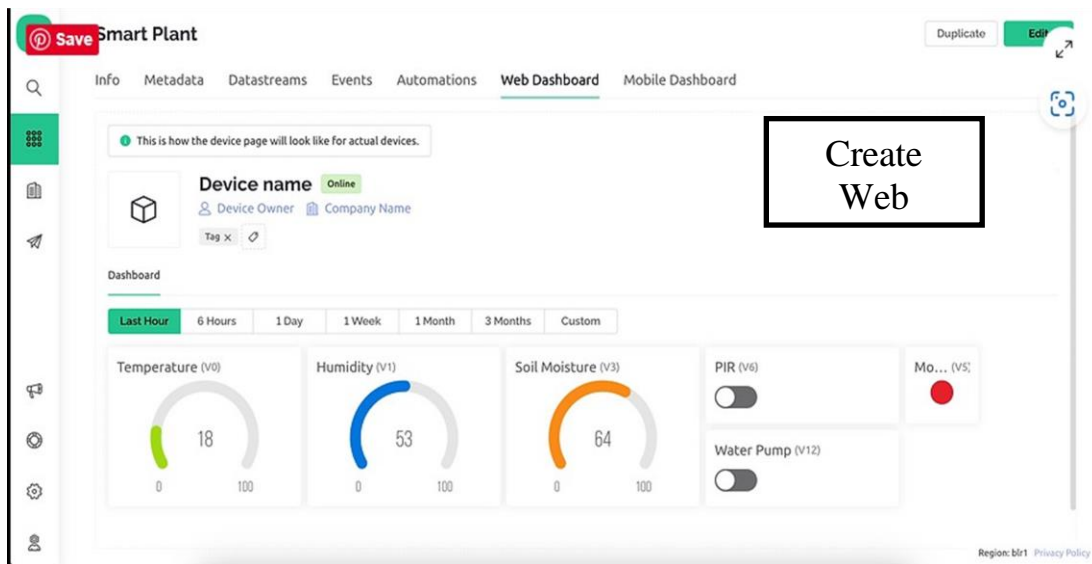
## CIRCUIT DIAGRAMS



## CODING PROCESS

Smart Plant												
Add Datastreams												
Info Metadata Datastreams Events Automations Web Dashboard Mobile Dashboard												
Search datastream												
Id	Name	Alias	Color	Pin	Data Type	Units	Is Raw	Min	Max	Decimals		
1	Temperature	Temperature	Orange	V0	Double		false	0	100	###		
2	Humidity	Humidity	Light Blue	V1	Double		false	0	100	###		
3	SoilMoisture	SoilMoisture	Brown	V3	Integer		false	0	100	--		
4	WaterPump	WaterPump	Dark Grey	V12	Integer		false	0	1	--		
5	PIR	PIR	Black	V6	Integer		false	0	1	--		
6	Motion	Motion	Light Green	V5	Integer		false	0	1	--		





- Create Smartphone Dashboard on Blynk IOT Application

## Lesson Plan 2

Name of Faculty: Dr. B. Bhagyamma

Class	9 <sup>TH</sup>	Subject	SOCIAL STUDIES
Lesson Name	Disaster Management	Duration of the Lesson	4 Hours
Concept(s) Covered		Accident-Related Disasters	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. Cardiopulmonary resuscitation (CPR) – FIRST AID SERVICES			
Skills that will be inculcated			
<div><div></div><div>1. Basic first aid skills</div><div>2. Ability to assess and respond to emergency situations</div><div>3. Teamwork and communication skills</div><div>4. Time management and decision-making skills</div></div>			
Interdisciplinary concepts that may be integrated			
<div><div></div><div>1. Basic first aid skills</div><div>2. Ability to assess and respond to emergency situations</div><div>3. Teamwork and communication skills</div><div>4. Time management and decision-making skills</div></div>			
Learning Outcomes			
<div><div></div><div>1. Demonstrate proficiency in administering CPR and first aid to individuals experiencing cardiac arrest, choking, bleeding, or other life-threatening emergencies</div><div>2. Understand and follow the basic principles and procedures of first aid and emergency response</div><div>3. Apply critical thinking skills to assess a situation and make quick decisions in emergency situations</div><div>4. Work effectively as part of a team to manage a crisis situation</div></div>			
Tools/Material Needed			
<div><div></div><div>1. Training materials (books, manuals, online courses)</div><div>2. CPR mannequins and AED trainers</div><div>3. First aid kits and supplies (bandages, gloves, masks, etc.)</div></div>		<div><div></div><div>4. Automated external defibrillators (AEDs)</div><div>5. Mobile apps for emergency response</div></div>	
Steps			
<div><div></div><div>1. Conduct research on first aid and CPR procedures and techniques.</div><div>2. Get trained and certified in CPR and first aid by attending a course or workshop.</div><div>3. Assemble a first aid kit with essential supplies and equipment.</div><div>4. Set up an emergency response plan for your workplace or community, including identifying potential hazards and assigning roles and responsibilities to team members.</div><div>5. Train team members on the emergency response plan and first aid procedures.</div><div>6. Test and refine the emergency response plan through drills and exercises.</div><div>7. Advertise the first aid and CPR services to the community, including schools, businesses, and events.</div></div>			

<ol style="list-style-type: none"> <li>Promote the importance of first aid and emergency preparedness through social media, public service announcements, and other outreach efforts.</li> <li>Cardiopulmonary resuscitation (CPR) training - the cost of training and certification can gain profit typically ranging from ₹1,500 to ₹5,000 per person.</li> </ol>
<b>Precautions</b> <ol style="list-style-type: none"> <li>Always follow proper safety precautions when administering CPR and first aid to prevent injury to yourself and the victim.</li> <li>Make sure to keep first aid kits and supplies up-to-date and easily accessible.</li> <li>Stay current with the latest first aid and CPR techniques and procedures by attending refresher courses or workshops.</li> <li>Adhere to any local laws or regulations regarding the provision of first aid and emergency services.</li> </ol>
<b>Assessment of Student Activity 20 MARKS</b> <ol style="list-style-type: none"> <li>5 marks to - Assess students' knowledge and understanding of first aid and CPR procedures through quizzes, exams, or practical demonstrations.</li> <li>5 marks to - Observe students' performance during simulated emergency scenarios and provide feedback on their technique, communication, and decision-making.</li> <li>5 marks to - Evaluate students' ability to work effectively as part of a team during emergency response exercises.</li> <li>5 marks to - Monitor the success of the first aid and CPR services by tracking response times, customer satisfaction, and number of lives saved.</li> </ol>
<b>Reference Links</b> <ol style="list-style-type: none"> <li><a href="https://my.clevelandclinic.org/health/articles/17680-cardiopulmonary-resuscitation-cpr">https://my.clevelandclinic.org/health/articles/17680-cardiopulmonary-resuscitation-cpr</a></li> <li><a href="https://www.medicalnewstoday.com/articles/324712#summary">https://www.medicalnewstoday.com/articles/324712#summary</a></li> <li><a href="https://pixabay.com/images/search/cpr/">https://pixabay.com/images/search/cpr/</a></li> <li><a href="https://unsplash.com/s/photos/cpr">https://unsplash.com/s/photos/cpr</a></li> </ol>

## IMAGES





### Lesson Plan 3

Name of Faculty: : Dr. B. Bhagyamma

<b>Class</b>	<b>10<sup>TH</sup></b>	<b>Subject</b>	<b>SOCIAL STUDIES</b>
<b>Lesson Name</b>	<b>Ideas of Development</b>	<b>Duration of the Lesson</b>	<b>ONGOING – 28 DAYS</b>
<b>Concept(s) Covered</b>	What Development Promises – Different People, Different Goals		
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<b>MEDICINAL PLANT SUPPLY</b>			
<b>Skills that will be inculcated</b>			
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some plants can cause skin irritation or allergic reactions.

2. Students should be aware of the potential toxicity of some medicinal plants and avoid ingestion or inhalation of the plant material.
3. Students should follow proper hygiene and sanitation practices when processing and packaging and selling medicinal plants to prevent contamination.

#### **FEW MEDICINAL PLANTS**

1. **Tulsi (Holy Basil):** An evergreen and aromatic plant that has been used for thousands of years in Ayurveda and in home treatments for different diseases and as an immunity booster. The extract of Tulsi has antibacterial, antifungal, antipyretic, antiseptic, antioxidant and anticancer properties. Regular use of Tulsi enhances the disease resistance of the body and saves from several infections. Tulsi requires well-drained and organically rich potting soil to grow, and it should be grown in a place with full sunlight. Water Tulsi only when the upper layer of soil of its pot starts drying. During winter, Tulsi plant should be kept at a warm and sheltered place, and minimal water and no fertilizer should be applied.
2. **Giloy (Guduchi):** An evergreen bel whose Sanskrit name is Amrita, meaning "which never dies." In Ayurveda, giloy has been used for thousands of years to cure several diseases. By regular use of giloy, all kinds of fever are cleared out, the immunity of the body increases rapidly and we are saved from many other diseases. Giloy is a climbing vine which can easily climb a wall, a fence, or big trees. It can grow in all kinds of soil, but if you are growing it in a pot, then use sandy soil to avoid waterlogging. Giloy grows well in shaded places and partial sunlight too. It has very low requirements for water, and watering once a week is sufficient.
3. **Lemon grass:** A bushy plant that contains an oil that smells like lemon. It is used in cosmetic, pharmaceutical and food industries at large scale. Besides using lemon grass to strengthen the nervous system and immune system, it is used to treat diabetes, obesity, cancer, insomnia and the diseases of the stomach etc. The leaves and stem of lemon grass can be used in tea, decoction and soup as well as in vegetables on a regular basis. Lemon grass is an evergreen tropical plant and can easily be grown in hot and humid climate. Sandy soil should be used to grow it so that there is no waterlogging in the pot. During hot days, lemon grass should be watered regularly and be kept at a place
4. **Aloe Vera or Ghrithkumari.** It's a low maintenance evergreen succulent plant which can easily be grown in pots. Inside its green and floppy leaves there is a white colored sticky and thick gel like substance which is used in cosmetic, pharmaceutical and food industries at large scale. Its sticky juice contains several types of vitamins, minerals, amino acids and antioxidants. Due to the active bio compounds found in Aloe Vera, it has antibacterial, antiviral and antiseptic properties. In Ayurveda too, Aloe Vera is used in several diseases as a renowned medicine. The juice of Aloe Vera pulp if used regularly with water then most of the stomach diseases are cured and the toxins of the body are removed which results in high immunity level. Aloe Vera needs a potting mix of cactus-like plants, i.e., a



quick draining soil that doesn't hold water at all. Repeat water only when the potting mix of its pot is fully dried. Aloe Vera grows well if kept at a place having partial sunlight. Harvesting the matured leaves of Aloe Vera from time-to-time results in the growth of new shoots quickly. These shoots, after taking out, can be planted at new places. However, Aloe Vera can be propagated from its cuttings too

5. **Curry plant:** In most of the homes of India and particularly in South Indian dishes, it won't be done without the use of curry leaves. Due to a characteristic smell and taste found in its leaves, it does increase the flavor of a meal. But apart from that, due to the several kinds of vitamins, minerals and bioactive plant compounds found in it, curry leaves has antibacterial, anti-inflammatory, antioxidant and mutagenic properties. Consuming either its 8 to 10 green leaves or dried leaves powder in an amount of half a spoonful in the morning on an empty stomach, obesity is reduced, the digestive system becomes stronger, eyesight is enhanced, anemia is cured, etc. Curry plant can easily be grown in pots or containers. It can be propagated either through seeds or stem cuttings easily. For a good growth of curry plant, at least 5 to 6 hours of sunlight is necessary. It's a tropical plant, therefore, in a hot and humid environment, it grows actively. It requires an organically rich and well-drained potting mix. During hot days, curry plant should be watered regularly. By continuous trimmings, curry plant grows rapidly and also becomes bushier. During winter, this plant may need protection if the cold is at a higher side. During winter, apply very little water and don't fertilize at all.
6. **Paan (Piper) plant:** Paan plant belonging to piperacea family is an evergreen perennial creeping vine. In Indian subcontinent, the tradition of using Paan leaves is very old. Whether it's poor or it's rich, even the emperors were fond of eating Paan leaves. But, the value of Paan is reduced when people take it with tobacco and stay out of its medicinal benefits. Actually, the Paan leaves contain several types of vitamins, minerals and bioactive plant compounds for which it has antibacterial, antifungal, antiseptic and analgesic properties. In many kinds of simple diseases as home treatments, the juice of its leaves is used to enhance digestive activities, remove bad smell of mouth, cure skin diseases, healing wounds, curing breathing difficulties and as an analgesic too.
7. Medicinal Plants - minimum cost of preparation would be around ₹200/-. Can be sold in the local market

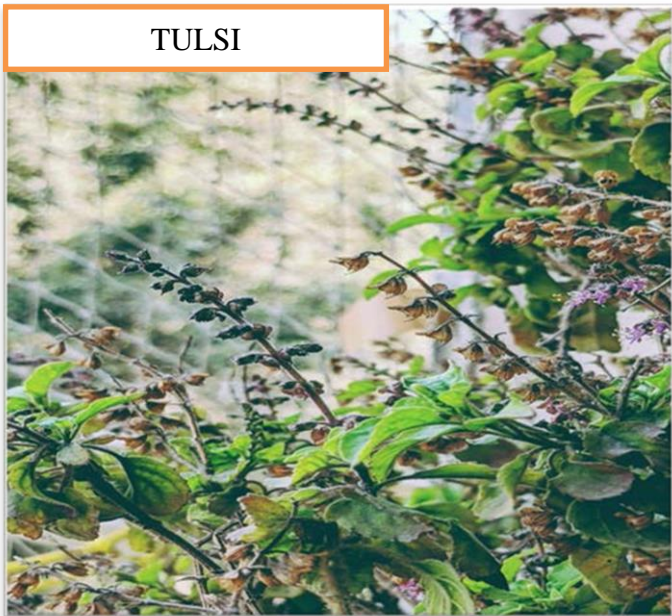
#### Precautions

1. Students should wear gloves and protective clothing when handling medicinal plants, as some plants can cause skin irritation or allergic reactions.
2. Students should be aware of the potential toxicity of some medicinal plants and avoid ingestion or inhalation of the plant material.
3. Students should follow proper hygiene and sanitation practices when processing and packaging medicinal plants to prevent contamination.

#### Assessment of Student Activity

1. Assess the planning and organizing skills by reviewing the medicinal plant garden plan and planting schedule.
2. Evaluate the communication and presentation skills by assessing the quality of the business plan and marketing strategies.
3. Assess the problem-solving skills by reviewing the solutions proposed for common problems related to growing and selling medicinal plants.
4. Evaluate the teamwork and collaboration skills by assessing the effectiveness of the team's work in designing and executing the medicinal plant supply project.
5. Assess the entrepreneurial skills by reviewing the business plan and sales forecasts.

**TULSI**



**ALOVERA**



**Giloy**



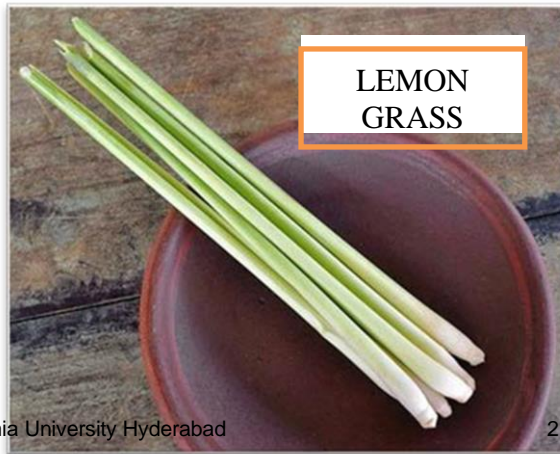
**PAN OR BETEL**



**CURRY  
LEAVES**



**LEMON  
GRASS**



## Lesson Plan 4

Name of Faculty: Dr. B. Bhagyamma

Class	10 <sup>TH</sup>	Subject	SOCIAL STUDIES
Lesson Name	Rampur: A village Economy	Duration of the Lesson	ONGOING – 7 DAYS
Concept(s) Covered		Farming in Rampur	
Vocation(s) or Occupation(s) that can be connected to this lesson			
MICROGREEN PREPARATION			
Skills that will be inculcated			
<div><div>1. Understanding of plant growth and development</div><div>2. Knowledge of plant nutrition and soil science</div><div>3. Ability to follow instructions and measure accurately</div><div>4. Time management and organization skills</div><div>5. Observation and data collection skills</div><div>6. Presentation skills</div></div>			
Interdisciplinary concepts that may be integrated			
<div><div>1. Science: plant biology, botany, nutrition, soil science</div><div>2. Math: measurement and calculation of ratios and proportions</div><div>3. Health and wellness: understanding of the benefits of microgreens for nutrition and health</div><div>4. Sustainability: understanding of the environmental and economic benefits of growing microgreens</div></div>			
Learning Outcomes			
<div><div>1. Understanding of the process of germination and plant growth</div><div>2. Knowledge of the nutritional value of microgreens</div><div>3. Ability to prepare soil and plant seeds for growing microgreens</div><div>4. Ability to care for and maintain plants throughout their growth cycle</div><div>5. Understanding of the benefits of sustainable growing practices</div><div>6. Ability to present findings and observations</div></div>			
<div>7. Students will develop skills in record-keeping, data analysis, and business management</div>			
Tools/Material Needed			
<div><div>1. Growing trays or containers</div><div>2. Labels for trays/containers</div><div>3. Seed starter mix</div><div>4. Microgreen seeds (e.g., broccoli, alfalfa, radish)</div></div>		<div><div>5. Water spray bottle</div><div>6. Natural light or grow light</div><div>7. Scissors</div></div>	
Steps			
<div>1. Choose the types of microgreens you want to grow and obtain seeds from a reputable source.</div>			



2. Take the tray and make some holes at the bottom for drainage
3. Fill your growing trays or containers with soil or growing medium.
4. Prepare the growing containers by filling them with seed starter mix and watering thoroughly.
5. Sprinkle the microgreen seeds evenly over the surface of the soil.
6. Lightly press the seeds into the soil using your fingers or a small tool.
7. Mist the seeds and soil with water using a spray bottle.
8. Cover the trays/containers with a lid or plastic wrap to create a humid environment for the seeds to germinate.
9. Place the containers in a location with natural light or under grow lights.
10. Water the microgreens daily, making sure not to oversaturate the soil.
11. Monitor the growth of the microgreens, noting any changes in size, color, or texture.
12. Recording data on their growth rates, appearance, and yield.
13. Once the microgreens have reached their desired size (usually 1-3 inches), use scissors to cut them just above the soil line.
14. Rinse the harvested microgreens and use them in recipes or as a garnish.
15. Present the findings and observations in the class or to the teacher.
16. Package the microgreens for sale. Minimum cost of preparation would be around ₹200/-.  
Can be sold in the local market or the parent community

#### **Precautions**

1. Be careful while making holes in the tray
2. Ensure that the growing trays/containers are clean and free from any contaminants that could harm the plants.
3. Be careful while spreading the seeds on the soil surface.
4. Keep the soil moist but not wet. Don't let the soil dry out
5. Be careful not to overwater the microgreens, as this can cause mold or other problems.
6. Be aware of any potential allergens or irritants associated with the types of microgreens being grown.
7. Follow good hygiene practices when handling the plants and packaging them for sale.

#### **Assessment of Student Activity**

1. Monitor the progress of the students throughout the process, providing feedback and guidance as needed.
2. Use rubrics or checklists to assess student performance in areas such as plant care, record-keeping, and selling.
3. 2 marks to - Evaluate the quality of the final product (i.e., the microgreens themselves) based on factors such as appearance, flavour, and nutritional content.
4. 2 marks for – Students' reflection on the experience and its potential applications in the real world, such as in food production or business management.

#### **Reference Links**

1. <https://youtu.be/sKJikZIOAVw>
2. <https://unsplash.com/s/photos/microgreens>
3. <https://pixabay.com/images/search/microgreens/>

## Rubric for Assessment

### Category: Plant Care Criteria:

- Plants are healthy and free of pests/disease
- Plants are watered appropriately
- Plants are given appropriate amounts of light and fertilizer
- Students are knowledgeable about the growth and care requirements of the plants they are growing

### Category: Record-Keeping Criteria:

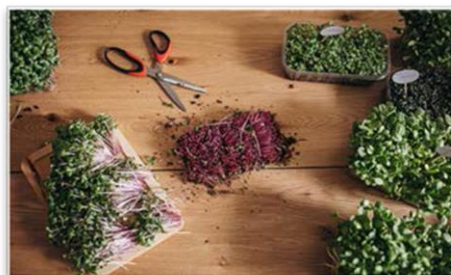
- Accurate and detailed records of plant growth, including germination rates, harvest dates, and yields
- Timely and consistent record-keeping
- Use of appropriate record-keeping tools (such as spreadsheets, notebooks, or apps)

### Category: Selling of Medicinal Plants Criteria:

- Professional presentation of plants for sale (e.g. well-organized displays, attractive signage)
- Knowledgeable and courteous customer service
- Accurate pricing and proper handling of money
- Adequate inventory management to ensure the availability of plants for sale

In addition to these categories and criteria, you could assign a point value or rating to each criterion, and use this to calculate a final score for each student. For example, you could use a 4-point scale where 4 indicates mastery, 3 indicates proficiency, 2 indicates partial mastery, and 1 indicates not proficient.

### Images:



## Lesson Plan 5

Name of Faculty: Dr. B. Bhagyamma

Class	10 <sup>TH</sup>	Subject	SOCIAL STUDIES
Lesson Name	The Movement for the Formation of Telangana State	Duration of the Lesson	
Concept(s) Covered	COOKING TELANGANA SPECIAL - TEA TIME SNACKS		
Vocation(s) or Occupation(s) that can be connected to this lesson			
COOKING TELANGANA SPECIAL - TEA TIME SNACKS			
Skills that will be inculcated			
<div>1. Cooking skills</div> <div>2. Food safety and hygiene practices</div> <div>3. Time management</div> <div>4. Creativity and innovation</div> <div>5. Entrepreneurship skills</div> <div>6. Teamwork and collaboration</div>			
Interdisciplinary concepts that may be integrated			
<div>1. Health and nutrition</div> <div>2. Cultural studies</div> <div>3. Business and economics</div> <div>4. Mathematics (measuring ingredients and calculating cost/profit)</div> <div>5. Communication skills</div>			
Learning Outcomes			
<div>1. Students will learn how to make traditional Telangana snacks</div> <div>2. Students will learn about Telangana culture and food traditions</div> <div>3. Students will learn about the nutrition and health implications of cooking and consuming snacks</div> <div>4. Students will develop time management skills</div>			
Tools/Material Needed			
<div>1. 1 Cup Urad Dal</div> <div>2. 2 Cup Water</div> <div>3. 2 Cup Rice Flour</div> <div>4. 2 Tbsp Black Sesame Seeds</div> <div>5. 1 Tsp Black Pepper (Crushed)</div>			<div>om Seeds</div> <div>)</div>
Steps			
<div>1. Select several traditional Telangana snacks to prepare, such as mirchi bajji, vada pav, or samosa.</div> <div>2. Plan the cooking process and timeline, taking into account ingredient preparation and cooking time.</div> <div>3. Ensure food safety and hygiene practices are followed throughout the cooking process.</div> <div>4. If selling, create a costing sheet and calculate the cost of goods sold and profit margin.</div> <div>5. Display or package the snacks attractively for sale.</div> <div>6. Practice effective communication and customer service skills.</div>			

	<ol style="list-style-type: none"> <li>Have students work in pairs or small groups to prepare the snacks.</li> <li>Cost of preparation would vary based on the ingredients used and the scale of the operation, but it could range from ₹500/-</li> <li>Provide time for students to enjoy the snacks together and sell them in the exhibition.</li> <li>Discuss the cultural and health implications of the snacks with the students.</li> </ol>
	<p><b>One Recipe of A Snack - Ulundu Murukku</b></p> <ol style="list-style-type: none"> <li>Firstly, in a large bowl take 1 cup of urad dal and rinse well.</li> <li>Transfer the dal to the cooker and add 2 cup water.</li> <li>Cover and pressure cook for 5 whistles or until the dal softens.</li> <li>Cool completely, and blend to a fine paste adding water as required. Keep aside.</li> <li>In a large bowl take 2 cup rice flour, 2 tbsp black sesame seeds, 1 tsp black pepper, ½ tsp Ajwain, and ½ tsp salt. Mix well.</li> <li>Now pour 2 tbsp oil and mix well. Crumble and mix well forming a moist flour.</li> <li>Now add prepared urad dal batter and knead the dough.</li> <li>Knead to a smooth and soft dough adding water as required.</li> <li>Now take large holes mold and fix to the chakli maker.</li> <li>Grease the chakli maker with some oil. This prevents the dough from sticking to the mold.</li> <li>Furthermore, make a cylindrical shape out of dough and place the dough inside the maker.</li> <li>Tighten the lid and start preparing the chaklis. On the wet cloth or butter paper make small spiral shape chaklis by pressing.</li> <li>Seal the ends so that it doesn't fall apart while deep frying.</li> <li>Take one murukku at a time and slide it into the hot oil.</li> <li>Flip the murukku and fry on medium flame till they turn crispy from both sides.</li> <li>Furthermore, drain over a paper towel to remove excess oil.</li> <li>Finally, once cooled enjoy ulundu murukku or store in an airtight container for 2 weeks.</li> <li>Sell it packaged in appropriate weights</li> </ol>
	<p><b>Precautions</b></p>
	<ol style="list-style-type: none"> <li>Follow food safety and hygiene practices to prevent foodborne illness</li> <li>Use caution when handling hot equipment and ingredients</li> <li>Follow instructions and recipes carefully to ensure the quality and consistency of the product</li> <li>Use oil with a high smoke point.</li> <li>Use a large, wide, sturdy pan.</li> <li>Make sure you have a well-fitting lid close to your hand in case the oil catches fire.</li> <li>Check the temperature of your oil.</li> <li>Never put wet food in the fryer.</li> </ol>
	<p><b>Assessment of Student Activity – 15 marks</b></p>
	<ol style="list-style-type: none"> <li>5 marks for - Evaluation of the quality of the tea time snacks, including taste, presentation, and overall appeal</li> <li>4 marks for -Assessment of the student's ability to follow food safety and hygiene practices</li> <li>4 marks for - Evaluation of the costing sheet and the student's understanding of cost and profit margin</li> <li>2 marks for - Assessment of the student's communication and customer service skills</li> </ol>
	<p><b>Reference Links</b></p>
	<ol style="list-style-type: none"> <li><a href="https://youtu.be/Xnp50GCLYQ8">https://youtu.be/Xnp50GCLYQ8</a></li> </ol>

## IMAGES



Ulundu Murukku



## Lesson Plan 6

**Name of the Faculty : Dr. P. Lakshmi Latha**

Class	IX	Subject	Social Studies
Lesson Name	Government Budget and Taxation	Duration of the Lesson	Theory 2 Classes Practical 4 Classes
Concepts Covered		Budget, Subsidy, Expenditure, Income, School budget	
Vocation(s) or Occupations(s) that can be connected to this lesson			
1. Various Handicraft products E.g.: Phenyl preparation for School use and also for selling in nearby community			
Skills that can be inculcated			
1. NSDL skill sector- Handicrafts Manufacturing. 2. Future Planning, assessing expenditure and planning income generation accordingly 3. Material management 4. Time management. 5. Financial management and marketing skills			
Inter disciplinary Concepts that can be integrated			
1.Measurements from Mathematics 2.Chemical compositions from chemistry 3.Health and hygiene from biological sciences			
Learning outcomes			
1. Understands what is budget 2. Learns to prepare school budget 3. Able to generate income through phenyl preparation and marketing 4. Becomes responsible citizen of the society			
STEPS			
<div><div><b>BUDGET</b></div><div>It is a statement of expected income and expenditure on various heads for the coming financial year.</div><div><b>GOVERNMENT EXPENDITURE</b></div><div>Government needs money to perform the following activities -<ol style="list-style-type: none"><li>Interest Payments.</li><li>States share of Taxes.</li><li>Central Sector Schemes.</li><li>Centrally Sponsored Schemes.</li><li>Finance Commission and Other Transfer.</li><li>Defence.</li><li>Subsidies.</li></ol></div></div>			

8. Pensions.
9. Other Expenditure.

### **INCOME FOR GOVERNMENT**

Government receives money from: –

1. Borrowings and other liabilities.
2. GST and others Taxes.
3. Income Tax.
4. Corporation Tax.
5. Union Excise duties.
6. Non-Tax Receipts.
7. Customs.
8. Non-Debt Capital Receipt

Like Government Budget every school also prepares Budget for its smooth running.

### **SCHOOL BUDGET**

Head of the School along with Senior Teachers prepares Budget in advance.

### **RECURRING AND NON-RECURRING EXPENDITURE OF THE SCHOOL**

1. Teacher's and other Staff Salaries.
2. Health and Sanitation in the School.
3. Maintenance of School infrastructure.
4. Electricity.
5. Water.
6. Purchasing New Equipment.
7. Miscellaneous.

### **INCOME OF THE SCHOOL**

1. Fee from students.
2. Donations
3. Government Contribution.
4. Income Generation Activities of the school.
5. Renting the school premises in Summer Vacations for Conducting other Programmes.

### **SCHOOL BUDGET E.g.:-**

<b>EXPENDITURE</b>		<b>INCOME</b>	
1. Salaries	12 Lakhs	1. Tuition and other fee	2 Lakhs
2. Health and sanitation	50 thousand	2. Donation	2 Lakhs
3. Maintenance	30 thousand	3. Govt contribution	2 Lakhs
4. New Equipment	50 thousand	4. Income generated from other activities	1 Lakh
5. Electricity and water	60 thousand	5. Renting School premises in Summer for Conducting other programmes	2 Lakhs

6. Miscellaneous

20 thousand

**INCOME GENERATION ACTIVITY:**

Phenyl preparation for School Sanitation and Sale in the Community. Items required

1 White phenyl concentrate pine oil	1 litre
2 Emulsifier Nonic ionic blende	1 litre
3 Plastic bottles 2 Litre	1 no
4. Plastic container of 50 litre capacity	1 no

**PREPARATION METHOD**

1. Take 700ml of pine oil and 300ml of Emulsifier Nonic ionic blende into 2 litre bottle and mix well.
2. Take 39 litres of water into plastic container and add mixed concentrate to it little by little. It makes 40 litres of phenyl. Keep this container by closing the lid in a safe place away from direct heat. And this can be used on a regular basis. Prepare additional phenyl as per requirement in future.

**Cost of Items for 40 litres of Phenyl.**

<u>Item</u>	<u>Rate</u>
1.One litre pine oil concentrate	Rs.145
2.One litre Emulsifier nonic ionic blende	Rs.95
3.Two litres plastic bottle – one number	Rs.2
4.Plastic container 50 litres capacity	Rs.300
<b>Total cost</b>	<b>Rs. 542</b>

Market price of one litre White Phenyl = Rs 85/-

Market value of 40 Litres of Phenyl – 85 x 40 = Rs. 3400/-

Actual Cost of 40 litres of phenyl when made in the School – Rs: 542/-

Profit Rs.3400 – Rs. 542 = Rs 2858/-

Apart from using in the school, it can also can be poured into 1 litre or 2 litre bottles and pasting a sticker with price to be sold in the nearby community for income generation.

**PRECAUTIONS:**

1. Store the Solution is a cool, dry place away from flammable items.
2. Avoid ingestion and contact with eyes.
3. Wash hands after use.
4. Keep away from Children.

**ASSESSMENT**

Continuous, Comprehensive assessment of the activity - Marks Allotted – 25

1. Pre-activity - 10 Marks
2. Activity - 10 Marks
3. Post activity - 5 Marks

Pre-activity Involves the Procurement of items.

The activity involves - Preparation of Phenyl

Post Activity Involves Showcasing and usage of product in the school and selling in the Community at a profitable price.

## Lesson Plan 7

**Name of the Faculty: Dr. P. Lakshmi Latha**

<b>Class</b>	9 <sup>th</sup>	<b>Subject</b>	Social Studies
<b>Lesson Name</b>	Government Budget and Taxation	<b>Duration of the Lesson</b>	Theory 2 Classes Practical 4 Classes
<b>Concept(s) Covered</b>			AT & GST
<b>Vocation(s) or Occupations(s) that can be connected to this lesson</b>			
1. Food Processing. Preparation and marketing of lemon squash.			
Skills that will be inculcated: NSDL skill sector - food processing. skill list - Food production			
<ol style="list-style-type: none"> <li>1. Entrepreneurial skills</li> <li>2. Cooperation</li> <li>3. Coordination</li> <li>4. Communication</li> <li>5. Planning, Execution and marketing skills</li> <li>6. Skill in preparing lemon squash, pricing and taxation.</li> </ol>			
<b>Interdisciplinary Concepts that can be integrated</b>			
<ol style="list-style-type: none"> <li>1. Measurement from mathematics</li> <li>2. Nutrition value of the product from biological science</li> <li>3. Aesthetic Value in languages</li> </ol>			
<b>Learning Outcomes</b>			
<ol style="list-style-type: none"> <li>1. Knows about different types of taxes</li> <li>2. Develops the skill of taxation and pricing of the product</li> <li>3. Inculcates good citizenship qualities</li> <li>4. Behaves responsible</li> <li>5. Avoids tax evasion</li> </ol>			
<b>Steps</b>			
<p style="text-align: center;"><b><u>Lemon squash</u></b></p> <p>Lemon squash is a readymade lemon concentrate that gets us refreshing chill lemonade. Lemon squash is made by boiling sugar in water to a string consistency and then mixed with lemon extract.</p> <p>It is an income generation activity which can be undertaken by the students by pooling resources. Final product can be marketed by adding GST in the following manner.</p>			
<b>SL.No</b>	<b>Items requirement</b>	<b>Cost Rs.</b>	
1	Cost of one lemon	5.00	
2.	Cost of 100 Lemons	5 x 100=500	

3.	Cost of 1 Kg. Sugar	60-00
4	Cost of 4 Kgs Sugar	60 x 4 = 240.
5	Citric Acid Crystals 10 grams	5.00
6	Lemon squeezer & knife	100
7	Glass bottle of 1 litre – 8 numbers Cost of each bottle Rs.100	800
8	Cost of knife and steel or wooden ladle	100
9	Plastic funnel 1.	20
10	Labels	10
	<b>Total Cost</b>	<b>Rs.1975</b>

<b>Cost to the manufacturer i.e. School / Institute</b>		
Profit 30%		$30/100 \times 1975 = \text{Rs. } 592$
Total cost + Profit of 8 litres lemon squash		$1975 + 592 = \text{Rs. } 2,567$
Cost of one litre of Lemon Squash Concentrate		$2567 \div 8 = \text{Rs. } 320.87$
<b>Cost to the wholesale merchant</b>		
Value of 8 litres of lemon squash		Rs.2567
GST @ 12%		$2567 \times 12/100 = \text{Rs. } 309.12$ (This GST amount collected by the manufacturer to be deposited to the Government)
Total		$\text{Rs. } 2567 + 309.12 = \text{Rs. } 2876$
<b>Cost to the Retailer</b>		
Value of 8 litres of lemon squash		$\text{Rs. } 2567 + 30\% \text{ profit} = 2567 + 30/100 = \text{Rs. } 3337$
GST @ 12%		$3337 \times 12/100 = \text{Rs. } 400.44$ . Rs.309.12 is already paid by the retailer to the wholesale merchant. Hence Rs. 400.44 – 309.12 = Rs. 91.32 only need
Total		To be paid by the retailer to the government. $\text{Rs. } 3337 + 400.44 = \text{Rs. } 3737.44$
<b>Cost to the Customer</b>		
Value of 8 litres of lemon squash		$\text{Rs. } 3337 + 30\% \text{ profit} = 3337 + 30/100 = \text{Rs. } 4338.1$
GST @ 12%		$4338.1 \times 12\% = \text{Rs. } 520.56$

	Total cost of 8 litres of lemon squash	Rs.4858.	
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Total amount Rs.520.56 is passed on to the customer as GST.

- I. Pre-activity - Procure all the required items.
- II. Activity Steps involved: -
  1. Take good quality lemons, wash them thoroughly and dry them in Sun.
  2. Take stainless steel container, put 4 kg. sugar and 2 litres water into it. Boil on slow fire till the sugar syrup becomes sticky. Add citric acid crystals and mix well, cook on slow flame for a few more minutes. Till the syrup becomes clear. Put off the gas and let the syrup becomes cool.
  3. Cut the lemons into halves and deseed them.
  4. Squeeze the lemons and extract the whole into one container.
  5. When the sugar syrup become cool, add the lemon juice and mix well.
  6. Pour the squash into glass bottles leaving 10 inches gap in the bottles and cap it. The gap in the bottles allows any gases released to be accommodated.
  7. Stick the labels with price on it.

**Precautions**

1. Hands and tools should be dry.
2. Bottles should be sterilized properly and dried before filling up the juice.
3. Lemons should not be squeezed hard otherwise it will give bitter taste.

**Serving Suggestion:**

Take 1 - 2 table spoons of squash in to a glass add one cup water and few ice cubes mix well and serve.

**NUTRITION VALUE OF LEMON SQUASH**

Per 200 ml of serving

	Calories	399	
	Sodium	8 mg	
	Potassium	68mg	
	Carbohydrates	104mg	
	Fibre	0.3 g	
	Sugar	101 gms	
	Protein	0.2 g	
	Vitamin 'A'	41 U	
	Vitamin 'C'	24 mg	
	Calcium	9 mg	
	Iron	0.1 mg	

**Assessment** **30 Marks**

1. Pre-activity	Procurement of material	10 marks
2. Activity	Preparation of squash and bottling	10 marks
3. Post Activity	show casing and selling adding GST	10 marks

It is continuous comprehensive evaluation

## Lesson Plan 8

**Name of Faculty: NOOR UL HUDA**

Class	IX	Subject	METHODS OF TEACHING SOCIAL STUDIES
Lesson Name	Prices and cost of living	Duration of the Lesson	7 DAYS
Concept(s) Covered		Role of government in regulating prices	
Vocation(s) or Occupation(s) that can be connected to this lesson			
Setting up a grain shop in school to learn wholesale index			
Skills that will be inculcated			
<div><div></div><div><div>1. Entrepreneurship skills, including identifying business opportunities, setting up and managing a business, and marketing and selling products.</div><div>2. Economic and financial management skills, including pricing strategies, managing inventory and expenses, and tracking revenues and profits.</div><div>3. Agricultural skills, including sourcing and selecting grains, storing and handling grains, and managing quality control.</div><div>4. Communication and interpersonal skills, including customer service and teamwork.</div></div></div>			
Interdisciplinary concepts that may be integrated			
<div><div></div><div><div>1. Mathematics: Students can use mathematical concepts such as calculating profits, discounts, and markups to determine the pricing of the grains.</div><div>2. Economics: Students can learn about economic concepts such as demand and supply, price elasticity, and market structures to understand how the grain market works.</div><div>3. Science: Students can learn about the properties of different grains, how to store them, and how to identify and prevent spoilage, which involves scientific principles.</div><div>4. Social Studies: Students can learn about the social and cultural aspects of the grain trade, such as the history and origins of different types of grains, how they are produced, and their cultural significance.</div><div>5. Language Arts: Students can develop language arts skills such as writing, speaking, and listening through creating marketing materials, negotiating with customers, and presenting ideas to the class.</div><div>6. Technology: Students can use technology such as Tally software to manage the financial aspects of the grain shop and use digital tools to create marketing materials.</div><div>7. Environmental Studies: Students can learn about sustainable agriculture practices, such as using organic or locally sourced grains, to promote environmental sustainability.</div></div></div>			
Learning Outcomes			
<div><div></div><div><div>1. Knowledge of business concepts: Students will gain knowledge of business concepts such as setting up a business, managing inventory, pricing strategies, marketing, and sales.</div><div>2. Understanding of economic concepts: Students will learn about economic concepts such as demand and supply, pricing mechanisms, and how to apply these concepts in a real-world business setting.</div><div>3. Agricultural knowledge: Students will learn about different types of grains, their properties, how to source and store them, and how to identify and prevent spoilage.</div><div>4. Entrepreneurship skills: Students will develop entrepreneurship skills such as identifying business opportunities, taking risks, and creating innovative solutions to problems.</div></div></div>			



5. Financial literacy: Students will develop financial literacy skills such as tracking expenses, revenues, and profits, and understanding how to manage finances in a business.
6. Communication skills: Students will develop communication skills such as customer service, teamwork, and negotiation skills.
7. Ethical values: Students will learn about ethical values such as honesty, transparency, and fairness in business practices.

#### **Tools/Material Needed**

1. Shelves, display stands, and weighing scales to display and sell the grains.
2. Grain bags or containers to store and transport the grains.
3. Cleaning supplies, such as brooms and dustpans, to keep the shop clean.
4. Price tags, labels, and markers to display the prices and information about the grains.

#### **Steps**

1. Identify a suitable location: The first step is to identify a suitable location for the grain shop. The location should be easily accessible to students and have sufficient space to store and display the grains.
2. Determine the type of grains to sell: The next step is to determine the type of grains to sell. The selection of grains will depend on the availability, demand, and local market conditions. It is essential to research the local market to identify the most popular and profitable grains to sell.
3. Source the grains: Once the type of grains is determined, the next step is to source them from a reliable supplier. The supplier should provide quality grains at a competitive price.
4. Set up the shop: The next step is to set up the shop. This includes installing shelves, display stands, and weighing scales. It is essential to ensure that the shop is clean, well-organized, and visually appealing.
5. Determine the pricing strategy: The pricing strategy should be based on the cost of the grains, market demand, and competition. It is essential to ensure that the prices are competitive and profitable.
6. Market the shop: The next step is to market the shop to attract customers. This can be done by placing advertisements in school newsletters, on notice boards, and on social media platforms.
7. Manage the inventory: It is important to manage the inventory to ensure that the grains are always available for sale. This includes keeping track of the stock levels, ordering more grains when necessary, and rotating the stock to ensure that the grains do not go stale.
8. In setting up a grain shop in school to learn wholesale index involves identifying a suitable location, determining the type of grains to sell, sourcing the grains, setting up the shop, determining the pricing strategy, marketing the shop, and managing the inventory. By following these steps, students can learn about business, economics, and agriculture, and develop valuable skills that can be useful in different areas of life.
9. Wholesale index and income generation by buying grains in bulk at a lower price and selling them at a markup to local customers, such as faculty members, staff, or nearby residents, while also gaining valuable experience in inventory management, marketing, and customer service. The profits generated from the grain shop can be reinvested back into the school or used for a charitable cause, providing a valuable lesson in social entrepreneurship as well.

#### **Precautions**

1. Ensure that the grains are stored in a dry and clean environment to prevent contamination and spoilage.
2. Regularly inspect the grains for signs of infestation or spoilage, and remove any damaged grains.
3. Follow safety procedures when handling grains to prevent accidents or injuries.
4. Adhere to any health and safety regulations that may apply to the storage and sale of grains.

<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"><li>1. Financial Assessment: Assess the profitability of the business by tracking expenses, revenues, and profits.</li><li>2. Customer Satisfaction Assessment: Assess customer satisfaction by soliciting feedback through surveys, interviews, or other methods.</li><li>3. Learning Assessment: Assess students' learning by evaluating their understanding of business and economic concepts and their ability to apply these concepts in real-world situations.</li><li>4. Compliance Assessment: Ensure that the business complies with any applicable regulations, such as health and safety regulations, and ethical business practices.</li></ol>

## Lesson Plan 9

**Name of Faculty: NOOR UL HUDA**

Class	9 <sup>TH</sup>	Subject	SOCIAL STUDIES
Lesson Name	Industries In India	Duration of the Lesson	4 HOURS
Concept(s) Covered		Textile Industry	
Vocation(s) or Occupation(s) that can be connected to this lesson			
ENGAGING STUDENTS IN MAKING BAGS WITH USED JEANS			
Skills that will be inculcated			
<div><div>1. Sewing skills</div><div>2. Measuring and cutting skills</div><div>3. Creativity and innovation skills</div><div>4. Problem-solving skills</div></div>			
Interdisciplinary concepts that may be integrated			
<div><div>1. Sustainable fashion and upcycling</div><div>2. Environmental science and waste reduction</div><div>3. Entrepreneurship and business skills</div></div>			
Learning Outcomes			
<div><div>1. Students will learn how to repurpose and upcycle old jeans to create a new product.</div><div>2. Students will develop their sewing, measuring, and cutting skills.</div><div>3. Students will learn about the importance of waste reduction and sustainable fashion.</div><div>4. Students will develop their creativity, innovation, and problem-solving skills.</div><div>5. Students will learn about entrepreneurship and business skills, such as marketing and pricing.</div></div>			
Tools/Material Needed			
<div><div>1. Used jeans (2-3 pairs)</div><div>2. Scissors</div><div>3. Ruler or measuring tape</div><div>4. Sewing machine or needle and thread</div><div>5. Pins</div><div>6. Iron and ironing board</div></div>			
Steps			
<div><div>1. Wash and dry the used jeans.</div><div>2. Cut off the legs of the jeans at the crotch seam.</div><div>3. Cut off the bottom hem of one of the legs to use as the bag's closure.</div><div>4. Turn the other leg inside out and sew the bottom of the leg shut.</div><div>5. Cut two pieces of denim from the remaining parts of the jeans to use as the bag's straps.</div><div>6. Pin the straps to the outside of the bag and sew them securely in place.</div><div>7. Turn the bag right side out and attach the hem piece to the top of the bag with pins.</div></div>			

8. Sew the hem piece to the bag, leaving enough space to create a buttonhole or attach a snap for closure.
9. Iron the bag to smooth out any wrinkles and make it look neat and professional.
10. Making jeans bags in the textile industry can generate income by producing and selling bags made from recycled denim, which can be marketed as eco-friendly products.

#### Precautions

1. Students should be careful when using scissors and a sewing machine/needle to avoid injury.
2. If using a sewing machine, students should be supervised and trained on how to operate it safely.

#### Assessment of Student Activity

1. 2 marks for - Students can be assessed on the creativity and originality of their designs, as well as the functionality and durability of their bags.
2. 2 marks for - Students can also be assessed on their sewing and measuring skills, as well as their ability to follow directions and work independently.
3. 2 marks for - Students can be assessed on their understanding of the importance of waste reduction and sustainable fashion, as well as their ability to apply business skills, such as marketing and pricing, to their products.



## LESSON PLAN 10

**Name of Faculty: NOOR UL HUDA**

Class	10 <sup>TH</sup>	Subject	SOCIAL STUDIES
Lesson Name	Production and Employment	Duration of the Lesson	ONGOING – 28 days
Concept(s) Covered		Sectors of Economy	
Vocation(s) or Occupation(s) that can be connected to this lesson			
TERRACE GARDENING OF COMMERCIAL CROPS			
Skills that will be inculcated			
1. Skill of Terrace gardening of organic vegetables			
2. Skill in dividing the area through calculations to arrange the plans on the terrace			
3. Skill in developing and understanding the kind of plants that can be grown on the terrace garden			
4. Skill in understanding the significance of the type of soil required for that particular growth of the plant			
5. Skill of understanding the need of every plant for their growth and development			
Interdisciplinary concepts that may be integrated			
1. Understanding the biological aspect of plant growth and maintenance			
2. Analyzing the usage of the chemicals such as insecticides and pesticides to control the attack of insecticides and pests			
3. Able to perform economical calculations of the profit and loss gained from selling the vegetables			
Learning Outcomes			
1. To make manure and understand the process of growing plants in an urban setup			
2. To use natural materials in making insecticides and pesticides by making farming more organic in nature			
3. To understand the division of area by using mathematical information and dividing the area proportionately in making the terrace garden			
4. To understand the process of growing plants and interpret the requirements needed in the process of plant growth through the biological needs of the plant			
Tools/Material Needed			
1. Tubs or Grow Bags or Drums or flower pots		8. Green covering sheet	
2. GI wires		9. Gardening tools - Hand trowels, secateurs,	
3. Watering Equipment		hoe, gardening gloves, spade, fork, shovel, rake,	
4. Soil		rose can, bamboo stakes, jute strings, and a rack	
5. Biodegradable waste or kitchen waste		to store product	
6. Water Proofing emulsion Paint		10. insecticides and pesticides	
7. Seeds			
Steps			

1. Filling Manure in the Grow Bag: To fill a large Growbag, the soil should be mixed with cow dung in a ratio of 1: 1: 1.
2. Avoid Direct Sunlight



3. Paint the Ceiling to Avoid Leakage
4. Mulching
5. Maintain it for Seven Days for the Best Yield

**1. Filling Manure in the Grow Bag:**

To fill a large Growbag, the soil should be mixed with cow dung in a ratio of 1: 1: 1. Growbag should never be filled up to the top. Add soil with lime for filling and wait for 2 days. Cocopeat is an essential part of making the potting mix. Fill the aforesaid mixture and add enough neem cake and some bone meal to it. Seedlings can then be soaked and dipped in Pseudomonas solution. Trichoderma-enriched manure can fill the grow bag and control root diseases.

**2. Avoid Direct Sunlight**

Cover it with a plastic cover

**3. Paint the Ceiling to Avoid Leakage**

Paint it with waterproofing emulsion

**4. Mulching:**

Mulch with dry leaves at the base of the plants. The falling water does not evaporate

**5. Maintain it for Seven Days for the Best Yield:**

**The First Day:**

On the first day, organic fertilizer is the important one. It can be easily made at home. Just four ingredients are enough to make this fertilizer.

1. Ten kg of cow dung
2. One kg of groundnut cake
3. One kg of neem cake
4. One kg of bone powder mixed with water or cow urine.

Cover in a large bowl. Stir well every day. Fertilizer smells good when fermented. This is an indication of compost preparation. It should be kept like this for four days. On the fourth day, the manure is ready

This fertilizer should be used on the first day. Add one cup of fertilizer to ten cups of water and pour it at the base of the plant. It is better to pour in the evening to avoid loss of manure by evaporation

**The Second Day:** On the second day do nothing special except watering.

**The Third Day:**

Pseudomonas fluorescence should be used on the third day. It is a friendly bacterium and is available for purchase in stores. Mix 20 g of Pseudomonas in one liter of water and pour it at the base of the plants. Pseudomonas can also be found in liquid form.

If liquid Pseudomonas is used, 5 ml can be mixed with one liter of water. Pseudomonas can improve plant health, enhance root growth, and enable roots to absorb soil elements. It also fights leaf spot disease, blight, and fungal diseases. Before using Pseudomonas, a teaspoon of lime should be added to the bag and distributed. Just do this once a month.

**The Fourth Day:**

On the fourth day, apply neem extract. It is available in stores under the names Azadiractin, nimbecidine, and Eco Neem Plus. Add 2 ml per liter and spray on the underside of the leaves.

**The Fifth Day:**

Fish amino acid should be applied on the fifth day. It can be made easily. Add 1 kg of herring and 1 kg of jaggery and keep in a tightly closed container. Do not open it occasionally. After 15 days you will

see the fragrant liquid on the container. After filtering, add two ml per liter of water and spray. Fish amino acid is effective for pest control. It also helps in the formation of flowers and the size, color, and smell of the fruit.

#### **Sixth Day:**

The sixth day is – a rest day. Watering alone is enough.

#### **The Seventh Day:**

The seventh day is the last day of care and management. Farmers believe that giving special care and love to the plants will give good results. So just care for them and love them.

The plant does not need soil to grow. Any growth medium is enough. Plants grow well in growing mediums such as coir pith, coco peat (processed coir pith), and neo peat (imported algae).

Hydroponics is the practice of growing plants in a particular environment by providing only moisture. Growing vegetables in the soil are very difficult in urban areas with only four or five cents of space.

The solution to this problem is to make the terrace a farm.

Terrace gardening of commercial crops can be a profitable venture by growing high-value crops like exotic vegetables, herbs, and fruits, which can be sold to restaurants or supermarkets

#### **Precautions**

##### **1. Avoid Direct Sunlight:**

It is not advisable to keep grow bags directly on the terrace. Bags should be kept out of direct sunlight for the first two weeks. This will help the seedlings' roots take root in the soil. It is only necessary to pour water twice during this time. No special fertilizer application is required.

##### **2. Paint the Ceiling to Avoid Leakage:**

It is better to paint the ceiling to avoid leakage. Do not place grow bags directly on the terrace. It is better to place it on top of two bricks. The bricks should not obstruct the flow of water. For this, the bricks should be laid in a sloping direction. There should be a distance of two feet between the bags.

3. Buying weak plants from a nursery
4. Having too many small pots
5. Over/under-watering plants
6. Do not water the leaves (which can be ground for fungus and diseases)
7. Not pruning regularly
8. Not composting
9. Ignoring a pest
10. Over-fertilizing
11. Not mulching
12. Planting out of season
13. Planting the same crop in the same pot repeatedly



#### **Assessment of Student Activity**

1. 5 marks for making a video of the terrace garden
2. 5 marks for growth and maintenance of vegetables
3. 5 marks for selling vegetables in the market



## Lesson Plan 11

Name of Faculty: NOOR UL HUDA

Class	10 <sup>TH</sup>	Subject	SOCIAL STUDIES
Lesson Name	4. Climate of India	Duration of the Lesson	4 hours
Concept(s) Covered		Seasons - winter	
Vocation(s) or Occupation(s) that can be connected to this lesson			
MUFFLER MAKING BY CROCHET			
Skills that will be inculcated			
<div>1. Skill of differentiating between the different types of material available in the market, such as natural and man-made fiber</div> <div>2. Skill in performing the Rip stitch (worked only through the back loop)</div> <div>3. Skill in developing an understanding of Crochet weaving.</div>			
Interdisciplinary concepts that may be integrated			
<div>1. Developing an understanding of using mathematical count and performing the crochet in an orderly manner to get a productive result</div> <div>2. To develop the economical concept of profit and loss from the selling of the products</div> <div>3. Developing a scientific understanding of the yarn made out of natural fiber or synthetic fiber</div> <div>4. Develop the essence of aesthetic value gained from the visual art created from the crochet technique which has a functional value imbibed in it</div>			
Learning Outcomes			
<div>1. Learn to perform the crochet technique</div> <div>2. Learn to develop precision by having alertness of mind while counting the loops which help them to develop a greater sense of the cognitive level of understanding and performing the activity meticulously</div> <div>3. Learn to differentiate the significance of fiber</div> <div>4. Learn the essence of the aesthetic value of designing by combining different colors to enrich the presentation of the muffler</div>			
Tools/Material Needed			
<div>1. Crochet Needle of 6.0mm</div> <div>2. 240 grams of yarn. (For a 1 meter and 56 cm long muffler and 15 cm wide)</div> <div>3. Scissors</div>			
Steps			
<div>Starting with the making of chains: -</div> <div><div>• For a 1-meter 56cm long and 15cm wide. 174 vertical chains are required.</div></div> <div>Basic chain procedure: -</div> <div>You should turn your crochet hook, as you loop the yarn to hook it through the stitch. To create the next chain – After you have hooked the yarn, pull it through the slip knot (first loop) and you will have</div>			

created one stitch. This means that you can move on to creating more chain stitches, in the same way.

**Process of making: -**

- After weaving a few chains (which are 15cm long) for the base of our muffler.
- The first chain must be left (from the end of the 15cm chain that we made) and beginning with the second chain.
- From the second chain, a single crochet must be done.
- Move to the next stitch and another single crochet from the back loop of the parallel chain's stitch which is side by side with our current chain.
- Repeat this until you reach the end of your 15cm base chain. (note; we are making parallel chains on our first 15 cm chain as our base)
- As you are on the end of your first parallel chain to your base chain. To start the next parallel chain, we are going to go through the back loop of our previous chain's back loop.
- Now after reaching the end of the chain of 15cm turn the work and repeat the above process until the length reaches 1 meter and 56 cm.
- Muffler making by crochet can generate income by selling handmade mufflers through online marketplaces or at local craft fairs

**Precautions**

- Make sure that the crochet that you are using is as described in the procedure. (The thickness of the crochet affects the stiffness of the muffler)
- Ending of the muffler must be carefully done. If left loose the muffler may not last long and start to dismantle from the end.
- Crochet must be handled carefully as it may prick into the finger if handled carelessly.

**Assessment of Student Activity**

1. 2 marks for the color combination
2. 1 mark for the type of yarn used for making crochet
3. 2 marks for the type of design and the evenness of the stitching.

**IMAGES**



## Lesson Plan 12

**Name of Faculty: NOOR UL HUDA**

Class	10 <sup>TH</sup>	Subject	SOCIAL STUDIES
Lesson Name	Globalization	Duration of the Lesson	2 HOURS
Concept(s) Covered		Factors that have enabled Globalization - Technology	
Vocation(s) or Occupation(s) that can be connected to this lesson			
ENGAGING AND INFORMATIVE DIGITAL POSTERS BY USING CANVA			
Skills that will be inculcated			
<div><div></div><div><div>1. Digital literacy and proficiency in using graphic design tools</div><div>2. Creativity and critical thinking in designing an engaging and informative poster</div><div>3. Communication and presentation skills in conveying a message through visual means</div><div>4. Collaboration and teamwork if working in a group</div></div></div>			
Interdisciplinary concepts that may be integrated			
<div><div></div><div><div>1. Graphic design and visual communication</div><div>2. Marketing and advertising</div><div>3. Information design and data visualization</div><div>4. Psychology and human perception</div></div></div>			
Learning Outcomes			
<div><div></div><div><div>1. Improved digital literacy and proficiency in graphic design tools</div><div>2. Enhanced creativity and critical thinking in designing an engaging and informative poster</div><div>3. Improved communication and presentation skills in conveying a message through visual means</div><div>4. Increased knowledge of effective design principles and techniques</div><div>5. Improved collaboration and teamwork skills if working in a group</div></div></div>			
Tools/Material Needed			
<div><div></div><div><div>1. Computer with graphic design software (such as Adobe Photoshop, Illustrator, or InDesign)</div><div>2. Access to high-quality images, illustrations, and fonts</div><div>3. Content and information to be included in the poster</div><div>4. Online tools can also be used such as Canva, Adobe Spark, Piktochart, Venngage, Lucidpress, DesignCap, Crello, PosterMyWall, MyCreativeShop, Desygner</div></div></div>			
Steps			
<div><div></div><div><div>1. Determine the objective and target audience of the poster.</div><div>2. Research and gather relevant information and data.</div><div>3. Sketch out a rough layout and design on paper.</div><div>4. Open the chosen graphic design software and create a new file.</div><div>5. Add and arrange the content, images, and other visual elements.</div></div></div>			

<ol style="list-style-type: none"> <li>6. Choose appropriate colors, fonts, and other design elements that suit the objective and target audience.</li> <li>7. Use design principles such as contrast, balance, and hierarchy to create an effective layout.</li> <li>8. Edit and refine the design until it meets the desired objective and visual impact.</li> <li>9. Save the final design in a suitable format for printing or digital use.</li> </ol>
<p><b>STEPS OF MAKING DIGITAL POSTER BY USING CANVA</b></p>
<p>Here are the steps to create a digital poster using Canva:</p>
<ol style="list-style-type: none"> <li>1. Sign up or log in to your Canva account.</li> <li>2. Choose the type of design you want to create. You can either search for "poster" in the search bar or select "Poster" under the "Marketing Materials" category.</li> <li>3. Choose a template that suits your design needs, or start with a blank canvas.</li> <li>4. Customize your design by changing the background color, adding images, text, and other design elements. You can use the search bar to find images, icons, and graphics to add to your design.</li> <li>5. Use the "Text" tool to add your message or caption. You can also customize the font, size, and color of your text.</li> <li>6. Use the "Uploads" tab to add your own images or graphics to your design.</li> <li>7. Arrange your design elements by dragging and dropping them where you want them on the canvas.</li> <li>8. Use the "Elements" tab to add shapes, lines, frames, and other design elements to your poster.</li> <li>9. Preview your design by clicking the "Preview" button at the top of the screen.</li> <li>10. Once you are satisfied with your design, download it by clicking the "Download" button in the top right corner of the screen. You can choose from a variety of file types, including PNG, JPG, and PDF.</li> </ol>
<p>That's it! With these steps, you should be able to create a stunning digital poster using Canva.</p>
<p>Making digital posters can lead to income generation by offering customized digital posters to clients for special events or as artwork</p>
<p><b>Precautions</b></p>
<ol style="list-style-type: none"> <li>1. Avoid using copyrighted materials without permission or proper attribution.</li> <li>2. Keep the poster visually balanced and easy to read.</li> <li>3. Avoid using too many design elements that may distract from the message.</li> <li>4. Some of these online tools may require payment for certain features or templates</li> </ol>
<p><b>Assessment of Student Activity</b></p>
<ol style="list-style-type: none"> <li>1. 1 mark to - Evaluate the effectiveness of the poster in achieving its objective and conveying a message to the target audience.</li> <li>2. 1 mark to - Evaluate the use of design principles and techniques to create an engaging and informative poster.</li> <li>3. 1 mark to - Assess the level of creativity and originality in the design.</li> <li>4. 1 mark to - Evaluate proficiency in using graphic design tools and software.</li> <li>5. 1 mark to - Assess the ability to work collaboratively and communicate effectively in a group project.</li> </ol>



### Lesson Plan 13

Name of Faculty: NOOR UL HUDA

Class	10 <sup>TH</sup>	Subject	SOCIAL STUDIES
Lesson Name	Sustainable Development with Equity	Duration of the Lesson	2 HOURS
Concept(s) Covered		The Environment and Development	
Vocation(s) or Occupation(s) that can be connected to this lesson			
BEST OUT OF THE WASTE – TERRARIUM MAKING IN A GLASS JAR			
Skills that will be inculcated			
<div><div></div><div><div>1. Creativity and innovation</div><div>2. Critical thinking and problem-solving</div><div>3. Fine motor skills</div><div>4. Planning and organizing</div><div>5. Attention to detail</div><div>6. Scientific inquiry</div><div>7. Collaboration and teamwork</div></div></div>			
Interdisciplinary concepts that may be integrated			
<div><div></div><div><div>1. Environmental science: Students will learn about the components of a self-sustaining ecosystem and the importance of recycling and waste reduction in preserving the environment.</div><div>2. Art: Students will use their creativity to design and decorate their terrariums, incorporating different textures, colors, and shapes.</div><div>3. Mathematics: Students will need to measure and calculate the appropriate amounts of soil, rocks, and plants to use in their terrariums.</div></div></div>			
Learning Outcomes			
<div><div></div><div><div>1. Understand the importance of recycling and waste reduction in preserving the environment</div><div>2. Learn the components of a self-sustaining ecosystem</div><div>3. Develop creativity and problem-solving skills</div><div>4. Enhance fine motor skills</div><div>5. Develop scientific inquiry skills</div><div>6. Promote collaboration and teamwork</div></div></div>			
Tools/Material Needed			
<div><div></div><div><div>1. Glass jar with a lid</div><div>2. Potting soil</div><div>3. Small rocks or pebbles</div><div>4. Activated charcoal</div></div></div>		<div><div></div><div><div>5. Small plants or succulents</div><div>6. Decorative elements (e.g., moss, shells, figurines)</div><div>7. Water spray bottle</div></div></div>	
Steps			
<div><div></div><div><div>1. Start by finding a suitable glass jar with a lid. Ensure that it is clean and dry.</div><div>2. Add a layer of small rocks or pebbles at the bottom of the jar. This will help with drainage and prevent water from accumulating at the bottom.</div><div>3. Add a layer of activated charcoal on top of the rocks. This will help purify the air and prevent mold and bacteria growth.</div></div></div>			



4. Add a layer of potting soil on top of the activated charcoal. Ensure that the soil is evenly distributed and levelled.
5. Choose small plants or succulents that will thrive in a closed environment. Ensure that the plants are small enough to fit into the jar.
6. Plant the selected plants or succulents into the soil. Arrange them in a way that looks aesthetically pleasing.
7. Add decorative elements such as moss, shells, or figurines to enhance the appearance of the terrarium.
8. Use a water spray bottle to mist the plants and soil. Ensure that the soil is moist but not too wet.
9. Close the lid of the jar and place it in a well-lit area that receives indirect sunlight.
10. Students can decorate the outside of the jar with paints, stickers, or other decorative items if they wish.
11. Making terrariums from waste materials can be sold online or through local craft stores as a unique home decor item

### Precautions

1. **Keeping your terrarium alive**
2. Choose a spot with plenty of natural light (but not in direct sunlight)
3. Spray your terrarium with water every couple of weeks; or when the soil is dry to the touch
4. Keep an eye on it. These tiny greenhouses can form condensation when they are closed. A little is okay, but if the glass becomes foggy it might be that you've watered it too much. You can remove the top and dry it out for a few hours to clear it up.
5. Never use glass cleaner on the inside of a planted terrarium because it can harm the plants.
6. Be cautious when setting up the layered bed inside the glass jar.
7. Make sure you avoid the seeding & budding plants
8. Use gloves while handling soil and plants to prevent allergic reactions or infections.
9. Ensure that the glass jar is clean and dry to prevent mold or bacteria growth.
10. Do not overwater the terrarium, as this can lead to mold or root rot.

### Assessment of Student Activity

1. 2 marks for - Creativity and innovation in designing and decorating the terrarium
2. 2 marks for - Attention to detail in planting and arranging the components
3. 2 marks for - Scientific inquiry skills in understanding the components of a self-sustaining ecosystem and the role of each component in the terrarium
4. 2 marks for - Collaboration and teamwork skills in working together to create the terrarium
5. 2 marks for - Overall presentation and quality of the finished terrarium



## Lesson Plan 14

Name of Faculty: **Dr. Nakka Anuradha**

<b>Class</b>	IX	<b>Subject</b>	Social Studies
<b>Lesson Name</b>	Biosphere	<b>Duration of the Lesson</b>	7 to 10 Days
<b>Concepts Covered</b>		Natural vegetation, grassland, human society and environment	
<b>Vocation(s)Occupation(s)that can be connected to this lesson</b>			
Maintenance of nursery			
<b>Skill that will be Inculcated</b>			
1.Communication skills, 2. Learning and listening skills, 3.Dexterity, Physical skills, 4.Creativity, honesty 5.Inquiry skill, 6. Adaptability, 7.Conflict resolution, 8. Management skill in terms of time staff tools and budget. 9. Organisation skills. 10. . Mulching and weeding skills.			
<b>Interdisciplinary concepts that may be integrated</b>			
1. <b>Horticulture</b> - for select healthy seeds pre-treatment of seeds. 2. <b>Botany</b> -for sowing the seeds at right depth with adequate spacing. 3. <b>Geography</b> -For choice of site, soil, source of water drainage. 4. <b>Art education</b> - Organising and select the designs for nursery beds. 5. <b>Economics</b> - Promote business and to know market needs and size of the market. 6. <b>English</b> - for communication skills.			
<b>Learning Outcomes</b>			
1. Awareness towards the design of the nursery site and water source. 2. Recognise the importance of selecting healthy seeds, handing, storage and treatment of seeds. 3. Understand the whole process of soil solarisation techniques. 4. Students can demonstrate seeds sowing in plug trys and watering. 5. Analyse the market needs, size of the market, economy of labour and budget.			
<b>Tools/Material Needed</b>			
1.Site, soil, water drainage, 2.Seeds, Compost, Fungicides, 3.Fine nozzle water can, khurpi, 4.Polybags, Coco-peat, Sawdust 5.Labour, Transport, wheel-barrow, kudali Fork , crowbar, 6. Perlite, Mulching material.			
<b>Steps</b>			



- 1). Arrange a field visit to nearby nursery or field.
- 2). Guest lecture by expert in the field of nursery.
- 3). Train the students at least 4 days to collect the seeds and in soil solarisation techniques, showing seeds, watering, composting etc.
- 4). Choice of site for nursery
- 5). Design of the nursery, size and quality of water supply.
- 6). Collection of seeds, handling, storage and pre-treatment of seeds.
- 7). Seedling production, soil mixture, filling poly bags/pots, showing seeds etc.
- 8). Care of nursery stock, Transport, organise and marketing and selling the stock.

#### **Precautions**

- 1). Avoid to select top soil because it contains weed seeds.
- 2). Practice safety measures to avoid occupational hazards.
- 3). Select healthy seeds free from infections.
- 4). Seeds must be sown at right depth with adequate spacing.
- 5). Seeds must be planted late in the afternoon.
- 6). Take care of nursery maintenance to free from pests and pathogens.
- 7). Avoid wastage in terms of money, time, and resources.
- 8). Avoid pollution with usage of organic compost/ green alternatives.

#### **Assessment**

- 1). What criteria will you follow while selecting a nursery site .
- 2). Describe the soils solarisation techniques.
- 3). Explain the precautions to be taken during preparation of nursery beds.
- 4). How can you organise nursery in a creative and profitable way.

## Lesson Plan 15

Name of Faculty: **Dr. Nakka Anuradha**

<b>Class</b>	X	<b>Subject</b>	Social Studies
<b>Lesson Name</b>	Settlements - Migrations	<b>Duration of the Lesson</b>	4 to 5 Days
<b>Concepts Covered</b>		Seasonal and Temporary Migration, Rural to rural and Rural to Urban Migration.	
<b>Vocation(s)Occupation(s)that can be connected to this lesson</b>			
1. Paper plates, cups, bags and paper covers manufacturing.			
<b>Skill that will be Inculcated</b>			
1.Active listening skills 2.Troubleshooting skill 3.Leadership 4.Communication skill 5.Adaptability 6.Accountability 7.Organisational skill 8. Dexterity 9.Creativity 10.Coordination skill			
<b>Interdisciplinary concepts may be integrated that</b>			
1. <b>Economics</b> - Budgeting, production and processing of goods. 2. <b>Mathematics</b> - knowledge of Arithmetic, Geometry in designing through 3. <b>e-Commerce</b> - Market their products through, e-Commerce platforms. 4. <b>Mechanical</b> - Machines and tools usage, repair and maintenance. 5. <b>Environment</b> -Public safety and security in producing the products.			
<b>Learning Outcomes</b>			
1) Knowledge about the supply of Machines, raw materials. 2) Discriminate the quality aspects. 3) Hands on experience to choose the designs, shapes of the products. 4) Understand the impact of producing these products on reducing the% of rural migration. 5) Explain the benefits of using these paper products instead of non-degradable products on human health and quality of environment.			
<b>Tools/Material Needed</b>			
1. Machines, scissors, handles 2. Land/ place, labour 3. Packing materials 4. Bottom reels, punching machines 5. Printed PE paper 6. Old newspapers, gums.			
<b>Steps</b>			
1) Arrange training program for students for 2 days.			

- 2) Allow students to visit the paper plates, Cup manufacturing units.
- 3) Ask the students to prepare paper covers and bags on their own.
- 4) Let them collect the required materials, machines, etc.
- 5) Design the place for establishing the production unit.
- 6) Prep the plate mold on the paper machine.
- 7) Apply the paper machine, and trim the plates, and cups to shape.
- 8) Remove the plates and cups from the mold, and pack them accordingly.
- 9) Marketing the products online/offline.

**Precautions**

- 1) Use materials to minimize waste.
- 2) Practice safety measures to avoid occupational hazards.
- 3) Handle materials, machines, and tools safely and correctly.
- 4) Take collective measures to get the correct shape and design.

**Assessment**

- 1) Write the process of producing the paper plates, bags, covers, and paper cups.
- 2) Describe the impact of these units in reducing the level of rural migration.
- 3) Demonstrate how you can market your product with the help of e-commerce platforms.
- 4) Explain how these products will help us to save the environment from pollution.

## Lesson Plan 16

**Name of Faculty: Dr.Nakka Anuradha**

<b>Class</b>	IXth	<b>Subject</b>	Social Studies
<b>Lesson Name</b>	Industrialization and social change	<b>Duration of the Lesson</b>	7 Days
<b>Concepts Covered</b>		Cotton, spinning and weaving. Women, children and Industrialisation	
<b>Vocation(s)Occupation(s)that can be connected to this lesson</b>			
1. Lace-making and knitting units/Industries			
<b>Skill that will be Inculcated</b>			
1.Creativity 2. Honesty 3.Accountability 4.Leadership 5. Management 6.Dexterity 7.Adaptability 8.Conflict resolution 9.Communication skills			
<b>Interdisciplinary concepts that may be integrated into</b>			
1 ). <b>Technology</b> -To prepare quality yarn, select designs . 2). <b>Maths</b> - the development of lace designs, models with mathematical shapes. 3). <b>Economics</b> - Market structure and promotion of goods and budgeting 4). <b>Chemistry</b> - while dying yarn and Lace. 5). <b>Management</b> -For effective management of labour, time, money and resources.			
<b>Learning Outcomes</b>			
1).Identify different types of fabrics. 2).Understanding about yarn and their creative uses. 3).Apply the core principles of science including innovation, Discovery related to nature and design of lace. 4). Synthesize and apply research methods and theories to generate new fabrics, Textile design, process the discipline specific problems. 5).Apply the consumer data to anticipate the needs, behaviour of consumer.			
<b>Tools/Material Needed</b>			
1).Yarn, Needles. 2).Needle - cups. 3). Yarn guide. 4).Yarn bobbins. 5).Measuring tape. 6). Stitch markers.			

7). Scissors. 8). Stitch holders. 9). Colours.
<b>Steps</b>
1). Visit to nearby Lays making, knitting units. 2). Provide training to the students in lace making. 3). Ask them to collect consumed data to understand the market. 4). Collect the yarn from mills, store with care. 5). Prepare creative stitching and designing. 6). Warping and knitting making lab dip and dying. 7). Cutting and packing the final product. 8). Transport to market or get orders through on-line
<b>Precautions</b>
1). Ensure that the yarn does not get dirty and entangled. 2). Handle materials and tools safely and correctly. 3). Take corrective measures to get the correct shape. 4). Use materials to minimise the waste. 5). Maintain a clean and hazard free working area. 6). Ensure that the cut pattern is as per requirements. 7). Maintain tools with care. 8). Minimise health and safety risks to self and others due to own actions
<b>Assessment</b>
1). Identify the tools required for lace making. 2). Identify the uses of raw materials as per the specifications. 3). Manipulate the number of stitches to attain the required shapes of lace. 4). Explain the most popular designs and marketing processes.

## Lesson Plan 17

**Name of Faculty: Smt. C. Subha Venugopal**

<b>Class</b>	<b>9</b>	<b>Subject</b>	<b>Social Studies</b>
<b>Lesson Name</b>	<b>Credit in the Financial System</b>	<b>Duration of the Lesson</b>	45 minutes
<b>Concept(s) Covered</b>		Bank deposits as money	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
Starting a bank in school by students using Tally for accounting can be an income-generating activity			
<b>Skills that will be inculcated</b>			
<div>1. Financial management skills: Starting a bank involves managing finances, tracking income and expenses, and making informed financial decisions. Students can learn basic financial management skills such as budgeting, forecasting, and financial analysis.</div> <div>2. Entrepreneurial skills: Starting a bank requires an entrepreneurial mindset. Students can develop skills such as creativity, innovation, risk-taking, and problem-solving, which are crucial for entrepreneurship.</div> <div>3. Communication skills: Effective communication skills are essential in running a successful bank. Students can develop skills such as active listening, verbal and written communication, and interpersonal skills.</div> <div>4. Leadership skills: Starting and managing a bank involves leadership skills such as decision-making, delegation, and team management. Students can learn how to lead, motivate and inspire a team to achieve common goals.</div> <div>5. Critical thinking skills: Starting a bank requires critical thinking skills to analyze financial data, identify problems, and develop solutions. Students can develop skills such as logical reasoning, analysis, and problem-solving.</div> <div>6. Technology skills: The use of Tally for accounting requires technology skills such as software installation, configuration, and usage. Students can learn how to use different software applications, troubleshoot technical issues and stay updated with technological advancements.</div> <div>7. Time management skills: Starting a bank involves managing multiple tasks and meeting deadlines. Students can develop time management skills such as prioritization, scheduling, and goal setting.</div>			
<b>Interdisciplinary concepts that may be integrated</b>			
<div>1. Business Management: Starting a bank involves various aspects of business management such as creating a business plan, financial management, marketing, and operations management.</div> <div>2. Accounting: The use of Tally for accounting is a critical aspect of starting a bank. Students will need to learn basic accounting concepts such as financial statements, bookkeeping, and recording transactions.</div> <div>3. Technology: The use of Tally requires the use of technology. Students will need to have basic computer skills and an understanding of software installation, configuration, and usage.</div> <div>4. Mathematics: Students will need to understand basic mathematical concepts such as percentages, interest rates, and financial calculations.</div> <div>5. Economics: Understanding basic economic concepts such as supply and demand, pricing,</div>			

<p>and market competition can help students make informed decisions about their bank's products and services.</p> <ol style="list-style-type: none"> <li>6. Legal and regulatory framework: Starting a bank involves complying with legal and regulatory requirements. Students will need to understand the laws and regulations governing financial institutions in their country or state.</li> <li>7. Communication skills: Effective communication skills are essential in running a successful bank. Students will need to communicate effectively with customers, colleagues, and stakeholders.</li> </ol>	
<b>Learning Outcomes</b>	
<ol style="list-style-type: none"> <li>1. Conceptual understanding of Banking Operations</li> <li>2. Explain the principles of banking.</li> <li>3. Elucidate the broad functions of banks.</li> <li>4. Understand the difference between First lenders (Surplus economic Units and Borrowers (Deficit economic units)</li> <li>5. Financial Intermediaries</li> <li>6. Bank margin</li> </ol>	
<b>Tools/Material Needed</b>	
<ol style="list-style-type: none"> <li>1. Computer: You'll need a computer to install and use Tally.</li> <li>2. Tally software: Download Tally software from the official website.</li> <li>3. Bank account: Open a bank account to manage your finances.</li> <li>4. Business plan: Develop a clear business plan to guide your decisions.</li> <li>5. Accounting knowledge: Basic accounting knowledge will help you use Tally effectively.</li> <li>6. Marketing materials: Use marketing materials such as flyers and posters to promote your bank.</li> </ol>	
<b>Steps</b>	
<ol style="list-style-type: none"> <li>1. Develop a business plan: Before starting any business, it's important to have a clear plan that outlines your objectives, strategies, target market, competition, and financial projections. This will help you stay focused and make informed decisions.</li> <li>2. Register your business: Depending on the legal requirements in your country or state, you may need to register your business and obtain necessary permits or licenses.</li> <li>3. Set up a bank account: You'll need a bank account to manage your finances, receive payments from customers, and make transactions. Research different banks and choose the one that best suits your needs.</li> <li>4. Choose accounting software: Tally is a popular accounting software used by businesses of all sizes. You can download the software from the official website and install it on your computer.</li> <li>5. Set up Tally: Once you've installed Tally, you'll need to set up your company and configure the settings. Tally provides user-friendly tutorials and documentation to guide you through the process.</li> <li>6. Offer banking services: You can offer banking services to students and staff in your school, such as opening accounts, processing transactions, and providing financial advice. You can charge fees for these services.</li> <li>7. Promote your bank: Use marketing strategies such as social media, flyers, and posters to promote your bank and attract customers.</li> </ol>	
<b>Precautions</b>	
<ol style="list-style-type: none"> <li>1. Adhere to legal requirements: Make sure you adhere to any legal requirements for starting and operating a bank.</li> </ol>	

2. **Manage risks:** Manage risks associated with handling financial information and transactions.
3. **Keep records accurate and up-to-date:** Accurate and up-to-date records are crucial for managing your bank and complying with legal requirements.

**Assessment of Student Activity    6 MARKS FOR EACH QUESTION**

1. **Financial Assessment:** Conducting a financial assessment can help determine the profitability of the project. The assessment can include evaluating revenue streams, costs, and cash flow projections. It is essential to determine if the project can generate enough revenue to cover its expenses.
2. **Student Learning Assessment:** The project can also be assessed based on the students' learning outcomes. This assessment can include evaluating their understanding of accounting concepts, financial management, and entrepreneurship. It is essential to determine if the students have achieved the desired learning outcomes.
3. **Customer Satisfaction Assessment:** Assessing customer satisfaction can help determine the success of the project. This assessment can include evaluating customer feedback on the services provided by the bank, their willingness to use the services, and their level of satisfaction.
4. **Operational Assessment:** Assessing the operational aspects of the project can help identify areas that need improvement. This assessment can include evaluating the bank's processes, systems, and procedures. It is essential to determine if the bank is running smoothly and efficiently.
5. **Compliance Assessment:** Starting a bank involves complying with legal and regulatory requirements. The project can be assessed based on its compliance with relevant laws and regulations. It is essential to determine if the bank is meeting the legal and regulatory requirements.



## Lesson Plan 18

**Name of Faculty: C.Subha Venugopal**

Class	X: UNIT V	Subject	SOCIAL SCIENCES
Lesson Name	Indian Rivers and Water Resources	Duration of the Lesson	3 DAYS
Concept(s) Covered	Indian Rivers and Water Resources		
Vocation(s) or Occupation(s) that can be connected to this lesson			
Supervise Digging - Rain Water Harvesting – Pits in each House			
Skills that will be inculcated			
<div>1. Interpersonal Relations</div> <div>2. Communication Skills</div> <div>3. Decision Making</div> <div>4. Negotiation skills</div> <div>5. Leadership Skills</div> <div>6. Collaborative Skills and Co-operative Skills</div> <div>7. Conflict Resolution Skill</div>			
Interdisciplinary concepts that may be integrated			
<div>1.Public Administration</div> <div>2.Political Science</div> <div>3. Economics</div> <div>4.Law</div> <div>5.English</div>			
Learning Outcomes			
<div>1. Conceptual Understanding of Water Resources need and Importance of Water Conservation</div> <div>2. Differentiate Himalayan Rivers and Peninsular Rivers</div> <div>3.Gain Insight into water Shed and Water Management</div> <div>4.Acquire Knowledge on Issues in Water Management</div> <div>5.Understands the need for reforms in Water Acts and Policies of India</div>			
Tools/Material Needed			
<div>1.Reference material</div> <div>2.Water Acts and Policies in India</div> <div>3. Government GOS Basin-wise average flow and utilizable water (in km<sup>3</sup>/ year) (Source:NCIWRD,</div>		ndia nsular Rivers	
Steps			
<div>1.Power Point Presentation on Rivers of India</div> <div>2.Organize a lecture on water Resources and Management</div> <div>3. Map Pointing</div> <div>4.Flipped Class room / Discussion on Water Acts and Policies</div> <div>5.Lecture on Rain Water harvesting</div> <div>6.Lecture on an Over View of existing Frame Work and Proposed reforms</div> <div>7.Survey on Rainwater pits in the village.</div> <div>8. Awareness camp on water conservation</div>			
Precautions			
<div>1. Soft interaction with villagers</div> <div>2. Management of water and water laws in India</div> <div>3. Water as a natural resource and economic good</div>			

4. Use national water policy
5. Understand the redefinition of the role of the government
6. Understand the existing water law framework

Understand the International legal framework

#### **Assessment of Student Activity**

1. Analyse Rivers of India
2. Explain the Sardar Sarovar Act
3. Discuss the nuances of National Water Policy
4. The Godavari originates at \_\_\_\_\_
5. The Mahanadi rises near Sihawa in \_\_\_\_\_
6. Chattishgarh and runs through \_\_\_\_\_
7. 70% of our surface water resources are polluted. Why?

## Lesson Plan 19

Name of Faculty: Smt.C. Subha Venugopal

Class	IX	Subject	Methods of Teaching Social Studies
Lesson Name	Our Earth	Duration of the Lesson	3 DAYS
Concept(s) Covered		EARTH	
Vocation(s) or Occupation(s) that can be connected to this lesson			
Start up on Installation of Solar Panels.			
Skills that will be inculcated			
<div><div></div><div><div>1. Electrical skills: Basic electrical skills are essential for working with solar panels and wiring. Learning about electrical circuits, wiring, and safety practices will be beneficial.</div><div>2. Roofing skills: If the solar panels will be installed on the roof, it is important to have some knowledge of roofing, including how to work safely on a roof and how to properly seal the roof penetrations.</div><div>3. Carpentry skills: In some cases, the installation of the mounting system may require carpentry skills such as measuring, cutting and drilling.</div><div>4. Design skills: Design skills are important for assessing the site and planning the installation of the solar panel system.</div><div>5. Project management skills: Project management skills will be helpful in managing the installation process, coordinating with vendors and contractors, and keeping the project on schedule and within budget.</div><div>6. Communication skills: Communication skills are important for coordinating with stakeholders, working with customers and vendors, and managing any issues that arise during the installation process.</div><div>7. Safety skills: Safety skills are essential for working with the high voltage electrical components involved in a solar panel installation. This includes knowledge of safety practices and equipment, and how to properly use them.</div></div></div>			
Interdisciplinary concepts that may be integrated			
<div><div></div><div><div>1. Geology</div><div>2. History</div><div>3. Astronomy</div><div>4. Physical Science, Physical Geology</div><div>5. Chemistry</div><div>6. Astro Biology</div></div></div>			
Learning Outcomes			
<div><div></div><div><div>1. Conceptual Understanding of Earth.</div><div>2. Students will be able to list key concepts and components of the earth, recite the hours it takes to rotate once on its axis, and the days to revolve around the sun.</div><div>3. Name and describe the layers of the Earth.</div><div>4. Describe how the Earth’s crust differs from the Earth’s lithosphere</div><div>5. Describe and draw the differences between P and S waves and how they move through the different layers of the Earth.</div><div>6. Describe and draw the differences between P and S waves and how they move through the different layers of the Earth.</div></div></div>			

7. Describe how we describe elevations of features on the Earth's surface.

### Tools/Material Needed

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Tape measure</li><li>• Level</li><li>• Drill</li><li>• Screwdriver</li><li>• Wrenches</li><li>• Wire cutters/strippers</li><li>• Crimping tool</li><li>• Caulk gun</li><li>• Safety equipment (gloves, safety glasses, etc.)</li></ul> | <ul style="list-style-type: none"><li>• Solar panels</li><li>• Mounting system (roof or ground)</li><li>• Inverter</li><li>• DC wiring</li><li>• AC wiring</li><li>• Breaker box</li><li>• Net meter (if connecting to the grid)</li><li>• Electrical conduit</li><li>• Conduit fittings</li><li>• Junction boxes</li><li>• Mounting hardware (screws, bolts, etc.)</li><li>• Sealant/caulk</li></ul> |
|--|---|

### Steps

Installing solar panels for a startup requires careful planning and execution. Here are the general steps to follow:

1. Evaluate the site: Evaluate the site where you plan to install the solar panels. Check for factors such as the orientation of the roof, shading, and obstructions.
2. Determine your energy needs: Determine the amount of energy your startup consumes on average. This will help you determine the size of the solar panel system you need.
3. Choose a solar panel system: Choose a solar panel system that fits your energy needs and budget. Research different brands, types of panels, and inverter systems.
4. Obtain necessary permits: Obtain necessary permits from your local government and utility company. You may need to submit plans and have an inspection.
5. Install the mounting system: Install the mounting system for the solar panels on the roof or ground. This will depend on the site evaluation in step 1.
6. Install the solar panels: Install the solar panels on the mounting system. Follow the manufacturer's instructions carefully and ensure proper wiring.
7. Connect the inverter: Connect the inverter to the solar panels and your electrical system. The inverter will convert the DC power produced by the panels into AC power for use by your startup.
8. Connect to the grid: If you plan to connect to the grid, you will need to have a net meter installed by your utility company. This will allow you to sell excess energy back to the grid.
9. Test the system: Test the solar panel system to ensure that it is working properly. Check for any issues and address them before activating the system.
10. Activate the system: Once the system has been tested and is functioning properly, activate it to start generating clean, renewable energy for your startup.

It's important to note that the installation process may vary depending on the specific solar panel system you choose and the site where it will be installed. It's recommended to work with a qualified solar installer to ensure the best results.

### Precautions

1. Safety equipment: Always wear appropriate safety equipment such as gloves, safety glasses, and hard hats when working with solar panels and electrical components.
2. Qualified personnel: Ensure that all personnel involved in the installation are qualified and trained in the installation and maintenance of solar panel systems.
3. Electrical safety: Solar panel systems produce high voltage DC electricity, which can be dangerous if not handled properly. Ensure that all electrical components are properly installed and grounded, and that all wiring is appropriately sized and rated.

4. Roof safety: If installing solar panels on a roof, take appropriate safety precautions such as using fall protection equipment and working in teams to ensure that personnel are not working alone.
5. Weather conditions: Take weather conditions into account when planning the installation, and avoid installing panels during adverse weather conditions such as high winds or heavy rain.
6. Permits: Obtain all necessary permits and approvals from local government and utility companies before starting the installation.
7. Quality equipment: Ensure that all components and materials used in the installation are of high quality and meet industry standards.
8. Maintenance: Solar panels require regular maintenance to ensure they are functioning properly and safely. Develop a regular maintenance plan and follow it carefully.

#### **Assessment of Student Activity 5 Marks for Each Question**

1. Energy consumption: Determine the amount of energy your startup consumes on average. This will help you determine the size of the solar panel system you need.
2. Roof orientation and shading: Assess the orientation of your roof and the amount of shading it receives throughout the day. Solar panels work best when they receive direct sunlight for most of the day, so a south-facing roof with minimal shading is ideal.
3. Available space: Assess the available space on your roof or ground where solar panels can be installed. Ensure that there is enough space to install the required number of panels and that the area is not obstructed by trees, buildings or other structures.
4. Regulatory requirements: Check with your local government and utility company for any regulatory requirements or permits that may be required for installing solar panels.
5. Financial viability: Assess the financial viability of installing solar panels. Consider the cost of the system, the potential savings on energy bills, and any incentives or rebates that may be available.
6. Maintenance and repair: Consider the ongoing maintenance and repair requirements of the solar panel system. Determine if you have the necessary resources and expertise to maintain and repair the system.

## Lesson Plan 20

Name of Faculty: Smt. C. Subha Venugopal

<b>Class</b>	<b>IX, Chapter 9</b>	<b>Subject</b>	<b>Social Studies</b>
<b>Lesson Name</b>	<b>Why People Require Credit</b>	<b>Duration of the Lesson</b>	45 minutes
<b>Concept(s) Covered</b>	<p><b><u>Theme: Why People need Credit?</u></b>            People need credit for a variety of reasons            Agriculture :  <b>OLD FARMING</b>            In earlier times farmers were self-dependent &amp; self sufficient.  <b>NEW FARMING</b>            practices require substantial amount of cash in hand – to buy seeds, fertilisers, pesticides etc. and to pay for ploughing, threshing, harvesting and hired workers.  <b>CONSUMERISM</b>            In Modern days consumerism has increased.            Reasons for Increased availability of credit            1.Increased availability of finance through a variety of credit arrangements.            2.availability of variety of goods            Provision to pay in installments.            Main reason is to borrow for Medical requirements</p> <p><b><u>Case study of Anil a Shoe maker</u></b>            Anil obtains loans from two sources. First, he asks the leather supplier to supply leather now and promises to pay him later. Second, he obtains a loan in cash from the trader as advance payment for 1000 pairs of shoes with a promise to deliver the whole order by the end of the month.            Sub Topic: Credit            Credit (loan) refers to an agreement in which the lender supplies the borrower with money, goods or services in return for the promise of future payment.  <u>Nature of Demand in Rural areas</u>            In the rural areas, the main demand for credit is for crop production. Crop production involves considerable costs of seeds, fertilizers, pesticides,</p> <p><b><u>Sub Topic : Credit Scenario</u></b>            1. Borrow with Promise to repay later.            2.Loan in Cash from the Trader</p> <p><b><u>Sub Topic: Credit (Loan)</u></b>            In rural areas main demand for credit is for crop production.            Crop Production: It involves ,considerable cost of Seeds, fertilizers,water,electricity,repair of equipment.            Time Span: 4 Months between purchase of inputs and sale of Yield from the crop            Crop Loans: Crop Loans are obtained by farmers at the beginning of the season            Repayment of Loan dependent?</p>		

Repayment of the loan is crucially dependent on how good the crop was and subsequently, the income Generated from farming.

**Why people fail to repay loans ?**

Repayment of the loan is crucially dependent on how good the crop was and subsequently, the income generated from farming..

**Sub Topic: Debt Trap:**

A debt trap is a situation, where a borrower is forced to take on new loans to repay existing ones.

Debt trap occurs when debt obligations surpass one's loan repayment capacity.

Debt trap does not necessarily occur because of high –ticket loans. If borrowers' income is adequate big loans can be repaid. Thereby loan amount need not necessarily be equated with a Debt Trap.

**Sub Topic : Occurrence of Debt Trap**

Failure to pay equated monthly installments EMIs on time ,interest on the outstanding amount will keep increasing and may include late payment Penalties

**Sub Topic: Behaviour of Borrower**

Indulgence :

- 1.Taking fresh loans to repay previous loans
- 2.Even small loans may push a borrower into a Debt Trap in case he/she cannot repay loan on time and if interest component keeps increasing

Sub Topic: Indebtedness-Other reasons

- 1.Expensive short term loan to tide over an immediate crisis
- 2.Sudden loss of repayment capacity/Loss of Job
3. Postponement of Total Debt repayment.
4. Defaulting on loan Commitment due to indulgence.

Sub Topic: Credit for Socio Cultural Situations.

1. Marriages,Deaths
2. Other Major celebrations

**SubTopic: Terms of Credit**

1. Interest along with Principal amount.
- 2.Demand for Collateral Security

**Sub Topic: .Rights of Lender:**

Failure to repay by borrower

Lenders rights to sell assets like land titles ,bank deposits Gold of borrower.

**Sub Topic: Collateral Security/ Terms of Credit**

Interest rate, collateral, documentation required and mode of repayment together comprise of what is called Terms of Credit

The assets owned by borrower like land, buildings,Vehicles,live Stock, bank Deposits ,gold

**Sub Topic : Formal and Informal Sources of Credit in India**

Formal loans Are procured from Banks and co-operatives

Bank loans require proper documents and collateral Security. Rate of lending is Rs25 for every 100 rupees

Informal loans: Are procured from Money lenders.

Sub Topic; Self help Groups; A group of people /individuals who come together to address a common issue or condition

Government,NGO's

Pool savings Group -15-20amount of saving : rs 25 -100

Eligibility: on completion of a year of Pooling

	<p>Great Resources Coping strategies Bank linkages enhance loan amount available to all members. Sanction of Loan and Responsibility of repayment of loan is in the name of the group.</p> <p><b><u>Sub topic” Advantages of Self – Help Groups</u></b></p> <ol style="list-style-type: none"> <li>1. Collateral security is not mandatory</li> <li>2. Loans to self – help groups are meant to create self-employment opportunities for members.</li> </ol> <p><b><u>Sub topic: Reasons for taking Loans</u></b></p> <ol style="list-style-type: none"> <li>1. Small loans for releasing mortgaged land</li> <li>2. To Meet working Capital needs(buying seeds,Fertilizers and raw materials.</li> </ol> <p>Advantages; Women become financially Self –Reliant.</p> <p><b><u>Sub Topic: Financial Literacy</u></b></p> <p>Financial literacy is the education and understanding of various financial areas Focus is on the ability to manage personal financial matters in an efficient manner.</p> <p>Sub Topic; Financial Stability and development Council (FSDC) carried out a Base line Survey NCFE-FLIS 2013-2014 to assess state of financial literacy and inclusion.</p> <p>Second Financial Literacy and Inclusion survey NCFE- FLIS 2019 was conducted in 2018-2019</p> <p><b><u>Objective of Survey.</u></b></p> <p>Assess status of Financial literacy . To take on board initiatives made by the Government and Financial Regulators through education and literacy programs. Inclusion, establish extent to which programs have been developed to improve literacy status in the country.</p> <p>Sub Topic:Credit RiskCredit risk is the possibility for a loss to occur due to the failure of a borrower to meet its contractual obligation to repay a debt. For example, a homeowner may stop making mortgage payments. This is also called ‘default risk’ or ‘counter-party risk’, and pertinent credit events may include bankruptcy, failure to pay, loan restructuring, loan moratorium, or accelerated loan payments.</p>
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>	
<ol style="list-style-type: none"> <li>1. Start up on Banking Solutions</li> <li>2. Self employment; start Up on Guidance and Counselling services.</li> <li>3. Self employment: Accounting in Tally.ERP 9 managing School accounts ,</li> <li>4. Accounts of Local Business men</li> </ol>	
<b>Skills that will be inculcated</b>	
<ol style="list-style-type: none"> <li>1.Accounting</li> <li>2. Budgeting.</li> <li>3.Borrowing</li> <li>4. Negotiation and Banking Operational skills</li> <li>5.counselling skills</li> <li>6. Leadership</li> <li>7. Decision making</li> <li>8. Critical and analytical skills</li> <li>9.Direct Investment</li> <li>10. Collateral Security, Credit Risk</li> </ol>	



<b>Interdisciplinary concepts that may be integrated</b>
1.Banking and Finance 2. Accounting 3.Psychological concept of Guidance and Counseling 4.English proficiency 5.Agricultural crops & crop loans
<b>Learning Outcomes</b>
1. Awareness on banks and banking Solutions 2. 2.Develop Public Speaking skills 3. Able to operate accounts using tally 4. Start Guidance and Counselling Service
<b>Tools/Material Needed</b>
1.Financial Instruments 2.Accounting Package Tally ERP 9
<b>Steps</b>
<u>Pre Activity Stage:</u> 1.Flipped Class room via Online Videos and Supporting Content. Followed by, group discussion, Interactive Session 2..Organize a Guest lecture on Credit, Crop Loans and Collateral security by a banker 3.lecture on Debts and Debt Trap 4. lecture on Collateral security/ Norms 5.Awarenes program on need and importance of Saving and avoidance of Debt Trap 6.Rally on Financial Discipline and Repayment of loans 7. Orientation Program on Self Help Groups 8. Orientation on Tally ERP 9 <u>II Activity Stage:</u> 1. Debate on Pros and cons of Credit and Debit 2. Interaction with Self Help Groups/project on Self Help Groups 3.Enactment Skit on Debt Trap, Behavior of Borrower 4.Survey on debts and debtors 5. Student demonstrate their Tally skills 6. Student s speak on Financial Literacy <u>III; Post activity Stage</u> 1.Students set up a START UP on Banking solutions and Utilization of Tally ERP 9 2. Students set up a Guidance and Counseling service centre
<b>Precautions</b>
1. Sensitive to emotions of borrowers 2. Use of polite language
<b>Assessment of Student Activity</b>
1. Prepare a family survey schedule 2. Conduct a test on tally erp 9 3. Conduct a oral test on guidance and counselling services. 4. Write a dialogue on self help groups

## CONCLUSION

Education is the foundation for the development of a fair and equitable society. It needs to focus on all-around development, including vocational education and practical experience. The teachings of mahatma Gandhi on education, such as the emphasis on craft-centered education, the importance of self-realization, and the activity method of learning, are still relevant today and have been reflected in the nep 2020. The integration of vocational education into mainstream education will promote skill-building and the dignity of labor, and help bridge the gap in learning outcomes. By providing holistic education, we can help develop critical thinking, creativity, scientific temper, communication, collaboration, and social responsibility, which are essential 21st-century skills. Ultimately, education should aim to create a happy and peaceful community life, where everyone has the opportunity to earn their livelihood and realize their potential.

Incorporating vocational skills into social science teaching is a great way to prepare students for the workforce and help them develop critical thinking and problem-solving skills. By providing work-based education opportunities such as guest speakers, group projects, role-playing exercises, work-based learning, internships, service learning, field trips, tutoring, writing articles, social media management, and freelance work, students can gain practical experience and develop important skills that will benefit them in the future. These opportunities not only help students understand how social science concepts are applied in the workplace but also provide them with valuable experience and the chance to earn money while still in school. By integrating vocational skills into social science teaching, we can better prepare students for success in both academics and the workforce.

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Would like to extend heartfelt gratitude to **Dr. B. Bhagyamma**, Asst. Professor at MANUU Hyderabad, and her co-researchers, **Dr. P. Laxmi Latha, Noor Ul-Huda, Dr. Anuradha, and Mr. Subha Venugopal**, for their significant contribution to the field of education through their Minor Research Project Report on "Integration of Vocational Education in School Education by Subject Methodology Social Science."

The research report, which was submitted to the Mahatma Gandhi National Council of Rural Education (MGNCRE) under the joint project with the Ministry of Education, Govt. of India, Hyderabad is a commendable effort towards promoting vocational education in teacher education programs.

The report provides valuable insights into the integration of vocational education in teacher education through the social science methodology, which is essential for strengthening curricular reforms in teacher education and promoting experiential learning, skilling, and community engagement.

Appreciating Dr. Bhagyamma and her co-researchers for their dedication and hard work in completing this research project, which is instrumental in advancing the cause of education in our country. Their contribution to the field of vocational education is invaluable and confident that their recommendations will help pave the way for the effective implementation of vocational education in teacher education programs.

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<https://www.youtube.com/watch?v=pIIZ2LUx8Kk>
- **"How to Create an Awesome Poster with Canva" by Jessica Stansberry Link:**  
<https://www.youtube.com/watch?v=ZeGK9OipERw>
- **"How to Make a Poster Using Piktochart" by Piktochart Link:**  
<https://www.youtube.com/watch?v=qfCmVvTmTbs>
- **"How to Create a Poster in Adobe InDesign" by Satori Graphics Link:**  
<https://www.youtube.com/watch?v=nYhAcR05NwQ>
- **"How to Create a Research Poster Design in Illustrator" by Yes I'm a Designer Link:**  
<https://www.youtube.com/watch?v=4g3q7zUaL6U>
- ecourseonline .iasri.res.in water resources availability and requirement in India
- ecourseonline .iasri.res.in Water Resources in India and its Demand
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- lotusarise.com Water Resources in India
- IX social studies Text Book

- A dictionary of Finance and Banking by Jonathan Law
- **Finance: The Basics by Erik Banks, Author: Erik Banks, Publisher: Routledge**
- **Money Banking Finance reference book by N. K. Sinha, Author: N. K Sinha, Publisher: BSc Publishing Co. Pvt. Ltd**
- <https://www.nasa.gov/index.html>
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- “NASA Earth Observatory.”
- NASA Summer of Innovation website
- Accounting in Tally ERP 9
- <https://www.viewsonic.com>
- [https://tally solutions .com](https://tallysolutions.com)
- Corporate finance Institute.com
- Economics of Money and Banking [wwwcoursera.org](https://www.coursera.org)
- [www. Vedantu.com](https://www.vedantu.com) - **Money and Banking**
- 8 Steps for Flipped Class room <https://www.viewsonic.com>
- [https://tally solutions .com](https://tallysolutions.com)
- Corporate Finance Institute.com]
- Economics of Money and Banking [wwwcoursera.org](https://www.coursera.org)

## ANNEXURE

Dr. B. Bhagyamma is a highly qualified and experienced teacher educator with a Ph.D. in Psychology and Education from Osmania University. Her Ph.D. research focused on work engagement, psychological well-being, emotional intelligence, and organizational citizenship behavior among executives. In addition, she has an M.Phil. in Education, M.A. in Psychology, English and Political Science, and is qualified for UGC-NET in Education. Dr. Bhagyamma has extensive work experience in the field of education, including 22 years in the department of education as an Assistant Professor at the Institute of Advanced Study in Education (I.A.S.E). She has work experience as a lecturer in special education at several institutions, including College of Teacher Education, Andhra Mahila Sabha, Hyderabad, and Sweekaar Rehabilitation Institute for Handicapped. Dr. Bhagyamma is currently an Assistant Professor at Maulana Azad National Urdu University.



Dr. Bhagyamma has presented her research at several national and international conferences and seminars. Her areas of interest include social competence, learner support, conflict management, and the education of special children. She has also attended a UGC-sponsored refresher course in education at the Academic Staff College, Osmania University. Worked as a paper setter and evaluator for various universities such as Osmania University, Hyderabad, Pallamaru University, Mahbubnagar, Mahatma Gandhi University, Nalgonda and Sri Padmavati Women's University, Tirupati. Worked as an NSS coordinator. Wrote 8 Books in the area of Inclusive Education and Pedagogy of Social Sciences

Dr. Anuradha Nakka is an Assistant Professor at the College of Teacher Education, Andhra Mahila Sabha, Osmania University in Hyderabad. She holds a Ph.D. from Krishna University and an M.Phil. from Madurai Kamaraj University, both in education. Dr. Nakka has 15 years of professional experience and has worked as a lecturer at various colleges in Andhra Pradesh and Telangana. She has published 7 research articles in UGC Care Journals and 5 articles in other UGC-approved journals. She has also presented research papers at national and international conferences. Her research interests include teacher stress, education reforms, and the role of information and communication technology in education. Dr. Nakka has also supervised several postgraduate projects and is currently enrolled four students in doctoral programs and awarded.



Ms. Noor ul Huda is an accomplished individual from Hyderabad with an impressive academic and professional background. She holds four Master's degrees, two graduation courses, and three diploma courses in various fields. Ms. Huda is a passionate researcher and has presented seven papers in National, International, and State Level conferences and seminars. Currently, she is involved in the UGC STRIDE transdisciplinary group project, organized by the School of Economics, and has also registered a patent. Additionally, Ms. Huda is in the process of publishing a book. Ms. Huda has dedicated seven years of her career to the education department and is making significant contributions to the field. She also provides extended services by teaching a Philosophy course at Muffakham Jah College of Engineering and Technology college.



Ms. Huda is a member and Joint Secretary of the Telangana Private Colleges and Schools Management & Staff Welfare Association. She has previously held positions as the Centre Director for the JNCTE course and was the Centre Head of Anushree Educational Society. Currently, she is working in an affiliated college of Osmania University and is involved in the MNGCRE project, which aims to strengthen curricular reforms in teacher education through vocational education, experiential learning, skilling, and community engagement.

**Dr. P. Lakshmi Latha.** Having 22 years of experience in the Education field. Worked as a lecturer in Osmania University-affiliated colleges for 10 years and as Principal for 7 years. Till date working as a Principal in Don Bosco COE, Mahatma Gandhi University, Nalgonda since 2018. Having a few tens of National and international publications and presentations on various topics for my credit. Author of Social science textbooks for B.Ed. English medium Jayam series and Telugu academy, Government of Telangana. Prepared self-study materials for B.Ed. and M.Ed. distance mode, Ambedkar University.



**D.B. Subha** is a highly educated and accomplished individual who has obtained multiple degrees in various fields of study. After completing her secondary education, she went on to pursue a Bachelor of Arts degree in Economics, Statistics, and Political Science at Stella Maris College in Chennai. She then continued her studies at the same institution, completing a Master of Arts degree in Medical and Psychiatric Social Work (MSW). Subha's passion for education led her to pursue a Master of Education degree from Annamalai University in Tamil Nadu, where she specialized in curriculum development and innovative teaching methods. She further expanded her knowledge and skills by completing an M.Phil degree, where she conducted a study on the personal values of primary and secondary teachers in government and private schools in Hyderabad district. During her M.Phil studies, she also developed expertise in advanced research methodology, extension education, and educational technology. D.B. Subha has gained a wealth of work experience throughout her career. She started her professional journey as a Research Assistant at Council for Social Development, Rachana (DR. Durga Bai's Home Rachana), where she worked on various research projects related to social development. She was appointed as a lecturer at the College of Law for Women, Andhra Mahila Sabha, where she taught law and related subjects. She then took on the role of Principal at Nalgonda Public School, where she oversaw the school's operations and curriculum development.



Later on, she served as a lecturer at the College of Teacher Education, Andhra Mahila Sabha, where she shared her knowledge and experience with aspiring teachers. She also worked as a visiting faculty member at Arts & Science College for Women, Andhra Mahila Sabha, where she taught various courses related to skill development, the Indian constitution, good governance, and civil services. Most recently, she has been working as an Assistant Professor at Stanley College of Engineering & Technology for Women, where she teaches Essence of Indian Traditional Knowledge (EITK) and helps students gain a deeper understanding of India's rich cultural heritage.

Subha has also given several guest lectures on a variety of topics, including national integration, Indian constitution, multiple intelligence, and positive discipline. She has published several books, including a compilation of institutional finance for women urban entrepreneurs, co-authored textbooks on methods of teaching social studies, and a manual for Gurukul Mains.

## SELF -DECLARATION

**TITLE OF THE MINOR RESEARCH PROJECT:** Joint Research Project on Integration of Vocational Education in School Education by Subject Methodology Social Science

**NAME of LEAD RESEARCHER:** Dr. B. Bhagyamma

**NAMES of CO-RESEARCHERS:** Dr. P. Laxmi Latha, Noor Ul-Huda, Dr. Anuradha, Mrs. Subha Venugopal

1. I/We confirm that I/We have read, understood, and agreed to the submission guidelines, policies, and this submission declaration as per the MGNCRE Work Order.
2. I/We confirm that the Research Report is the author's original work and the Research Report has not received prior publication and is not under consideration for publication elsewhere.
3. I/We confirm that the lead researcher and the co-researchers listed on the title page and in this form have contributed significantly to work, have read the Research Report, attest to the validity and legitimacy of the content, and agree to its submission.
4. I/We confirm that the Research Report contents now submitted are not copied or plagiarized versions of some other published work.
5. I/We declare that I/We have/shall not submit the material for publication in any other Journal or Magazine.
6. On behalf of all Co-Authors, I bear full responsibility for this submission.

Date: 17.03.2023



**Signature of Lead Researcher**  
(Signed on behalf of all co-researchers)



# **Minor Research Project Report on Integration of Vocational Education in School Education by Subject Telugu Methodology**

*Submitted By*

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**&**

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**Overall Project Coordinator from Osmania University : Dr D Sunitha, Assistant  
Professor, UCE, OU**

**Submitted To**  
**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Ministry of Education, Govt. Of India, Hyderabad**



**Joint Project**

*March 2023.*

## ముందు మాట

2014 జూన్ 2వ తేదీన తెలంగాణ రాష్ట్రం ఆవిర్భవించింది. తెలంగాణ రాష్ట్రం ఏర్పడిన సందర్భంగా మన రాష్ట్ర ప్రభుత్వం తెలంగాణ సంస్కృతి, సాహిత్యం, చరిత్రను తెలిపే విధంగా పాఠాలు ఉండాలని నిర్ణయించింది. తెలుగు పాఠ్య పుస్తకాలను పరిశీలించి తెలంగాణ సాహిత్యం, సంస్కృతి ప్రతిబింబించేలా పాఠ్య పుస్తకాలను రూపొందించారు.

భాష వాచకాలు ద్వారా విద్యార్థి స్థానిక వనరుల వినియోగం, సంస్కృతి, తమ సాహిత్య విశేషాలను మరియు చారిత్రక వైభవాలను తెలుసుకోగలగాలి. దానితో పాటు ఆలోచించటం, నూతన వస్తు వినియోగాలను, స్థానిక వనరుల ద్వారా నవీన వస్తు ఆవిష్కరణ, స్పష్టమైన భావ వ్యక్తీకరణ సామర్థ్యాలను పెంపొందించుకోగలగాలి. నిరంతరం వృత్తి పర నైపుణ్యాలను, జ్ఞాన పరిధిని విస్తృత పరుచుకుంటూ ఉన్నత వ్యక్తీకర్తాన్ని, విశిష్ట వైఖరులను సంతరించుకోవాలి. దీని ద్వారా పిల్లలలో అవగాహన చేసుకొని ప్రతిస్పందించే సామర్థ్యాలను, సామాజిక స్పృహ , మానవతా విలువలు, మానవ సంబంధాలు, పల్లె జీవన చిత్రణ మరియు పర్యావరణ విలువలు మొదలైన ఇతివృత్తాల ఆధారంగా పాఠ్య అంశాలను నిపుణుల కమిటీ ఎంపిక చేయడం జరిగింది.

విద్యలో వృత్తి విద్య మరియు అనుభవపూర్వక అభ్యసన కార్యక్రమాల ఏకీకరణ జరగాలి. వ్యవస్థాపక భోదన, వృత్తి విద్య భోదన, అనుభవపూర్వక అభ్యసన భోదన మరియు వృత్తులలో విద్యార్థి ఉపాధ్యాయులను నైపుణ్యవంతం చేయడంలో సహాయ పడుతుంది. ప్రతి పాఠంలో వృత్తిపర సామర్థ్యాలకు, సాధనకు అనుగుణంగా స్థానిక వనరులను ఉపయోగించుకుంటూ విభిన్న కోణాల్లో ఆలోచించటం, సృజనాత్మకంగా వ్యక్తీకరించటం మరియు మేధోమధన ప్రక్రియల ద్వారా జరగాలి. పాఠ్య పుస్తక పరిధిని దాటి నేర్చుకోడానికి వీలుగా ప్రాజెక్టు పనులు, వృత్తిపరమైన పనులు చేయడానికి ప్రోత్సహకాలుగా రూపొందించబడింది. స్వయం అధ్యయనాన్ని కొత్త విషయాలపట్ల ఆసక్తి, కుటీర పరిశ్రమలను ప్రోత్సహించేలా ఉన్నాయి. దీని ద్వారా విద్యార్థులు సమాజంలో స్వయం పోషకులుగా, విరామ సమయాలను తగు విధముగా వినియోగించుకొని కుటుంబ ఆర్థిక అభివృద్ధికి సహాయకారులుగా ఉండేలా పొందుపరచడం జరిగినది.

విద్యార్థి తన సమూహంలోని విద్యార్థులలో ఒకడిగా వుంటూ గాంధీజీ చెప్పినట్లుగా "learning by doing " "పనియే ప్రత్యక్ష దైవం " అభ్యసేస్తూ పని అనుభవాన్ని పొందినట్లయితే తనను తన కుటుంబ సభ్యులు, తన తోటి మిత్రులు, తన బంధుగణం అందరు పని పట్ల ఒక వైఖరిని ప్రదర్శించినట్లు అయితే అందుకు కుటుంబం, సమూహం, గ్రామం , పల్లెలు, పట్టణాలు అందరు కలిసి వసుదైక కుటుంబం నిర్మించి భారత దేశమును విశ్వ గురువుగా నిలిపే అవకాశం ఉన్నది.

డా. జె. కృష్ణయ్య

Lead researcher

# CONTENT TABLE

S.NO	CLASS	TOPIC	OCCUPATION	PREPARED BY
1	9వ తరగతి	రంగాచార్యతో ముఖముఖీ	వ్యాఖ్యాత తయారు చేయటం	డా.జె.కృష్ణయ్య
2	9వ తరగతి	వాయసం	పక్షులను పరిరక్షించడం, ఎరువులను తయారు	డా.పి. కృష్ణ వేణి
3	9వ తరగతి	కోర్స్	చిత్రలేఖనం (పెయింటింగ్)	R. రామకృష్ణ
4	9వ తరగతి	వాగ్భూషణం	వ్యాఖ్యాతగా తయారు చేయటం.	R. రామకృష్ణ
5	9వ తరగతి	చెలిమి	నాటకాల ప్రదర్శనం చేయటం.	డా.పి. కృష్ణ వేణి
6	9వ తరగతి	తియని పలకరింపు	వివాహ పరిచయ కార్యక్రమ నిర్వహణ.	డా.జె.కృష్ణయ్య
7	10వ తరగతి	దాన శీలము	నీతి కథలు రాయటం.	R. రామకృష్ణ
8	10వ తరగతి	వీర తెలంగాణ	రచనలు, ఏకపాత్రాభినయం చేయటం.	డా.పి. కృష్ణ వేణి
9	10వ తరగతి	నగర గీతం	రోడ్ల తయారీ విధానం.	డా.జె.కృష్ణయ్య
10	10వ తరగతి	భాగ్యోదయం	జీవిత చరిత్ర రాయటం.	డా.జె.కృష్ణయ్య
11	10వ తరగతి	శతక మధురిమ	పాటలు, గీతాలను రాయటం.	R. రామకృష్ణ
12	10వ తరగతి	లక్ష్యసిద్ధి-I	వ్యాసాలు రాయడం.	R. రామకృష్ణ
13	10వ తరగతి	లక్ష్యసిద్ధి-II	కాగితాలతో బ్యాగులను తయారు చేయటం.	R. రామకృష్ణ
14	10వ తరగతి	జీవన భాష్యం	రచనలు చేయడం.	డా.జె.కృష్ణయ్య
15	10వ తరగతి	గోలకొండ వట్టణం	టూరిస్ట్ గైడ్, నమూనాలను తయారు చేయటం.	డా.పి. కృష్ణ వేణి
16	10వ తరగతి	భిక్ష	టూరిజం గైడ్ గా తయారు అవ్వటం.	డా.జె.కృష్ణయ్య
17	10వ తరగతి	భూమిక	ఉత్తమ కథలను రాయటం, సేకరించటం.	డా.పి. కృష్ణ వేణి
18	9వ తరగతి	శతక మధురిమ	మోటివేషనల్ స్పీకర్ గా స్థిరపడటం.	డా.జె.కృష్ణయ్య
19	10వ తరగతి	కొత్తబాట	మిమిక్రి ఆర్టిస్ట్ గా స్థిరపడటం.	డా.జె.కృష్ణయ్య
20	10వ తరగతి	ఎవరి భాష వాళ్ళకు వినసాంపు	సినీగీతాలు, రచయితగా ఎదగడం.	డా.జె.కృష్ణయ్య

## పరిచయం

తెలుగు బోధనా శాస్త్రం ద్వారా ఉపాధ్యాయ విద్యలో సమీకృత వృత్తి విద్య పేరుతో ఈ పథకం ద్వారా 9 వ మరియు 10 వ తరగతి విద్యార్థులు తాను తన పాఠ్య అంశాల ద్వారా వృత్తి విద్య మరియు అనుభవ పూర్వక అభ్యసనాన్ని ఏకీకృతం చేయడం ప్రధాన లక్ష్యంగా పెట్టుకొంది. సాధారణంగా విద్యార్థి సంప్రదాయక కోర్సులు, పాఠ్య ప్రణాళిక, సిలబస్ విద్య ప్రణాళికనే కాకుండా విద్యార్థి తను మాధ్యమిక స్థాయి నుండే ప్రయోగ పాఠాల ద్వారా విద్యార్థి తనలోని దాగియున్న శక్తి యుక్తులను బహిర్గతం చేయడం ద్వారా తన జ్ఞానాత్మక మరియు భావావేశం రంగం మరియు మానసిక చలనాత్మక క్రియల ద్వారా తగిన వ్యక్తీకరణ ద్వారా విద్యార్థి ఒక వ్యాపార సమారంభకుడుగా, వ్యవస్థాపకుడు లేదా పారిశ్రామిక వేత్తగా ఎదగడానికి దోహదం చేయడమే దీని లక్ష్యం.

విద్యార్థి తన స్థానిక వనరుల ద్వారా ఎటువంటి వస్తువులను / నూతన ప్రక్రియలను నెరవేర్చుటలో తనకున్న జ్ఞాన అభినివేశనల ఆధారంగా నూతన వస్తు తయారీ, వినియోగించడానికి సృష్టమైన వైఖరులు ఏర్పరచుకోవడం జరుగుతుంది. ఈ బోధన విధానం ద్వారా విద్యార్థులు నగదు ప్రవాహాలు మరియు ఆదాయం, అప్పు నిర్వహణ ఖర్చులు లాంటి వ్యయ విశ్లేషణలతో సహా వివిధ భావనలు, నైపుణ్యాలు అలాగే వివిధ కార్యకలాపాల ద్వారా నేర్చుకునేందుకు అవకాశం ఉన్నది.

స్థూలంగా అమూర్త భావన ఏమిటంటే విద్యార్థి యొక్క అభ్యసన పరిధి విశాలంగా విస్తృతం అవుతుంది. అలాగే అభ్యసన పరిధిని విస్తరించుకోవడంతో పాటుగా తాను కేవలం ఉద్యోగిగా కాకుండా ఉద్యోగాలను కల్పించే ఉద్యోగ సృష్టి కర్త(యజమాని) గా మార్చేలా చేసే ఈ ప్రయత్నమే ఈ ప్రాజెక్టు ముఖ్య ఉద్దేశం.

ఈ ప్రాజెక్టులో 9 వ మరియు 10 వ తరగతి తెలుగు పాఠ్య పుస్తకాల నుండి ఎంచుకున్న అంశాలకు తగిన విషయ విశ్లేషణ చేయడం జరిగింది. వాటినుండి 20 పాఠ్య ప్రణాళికలను తయారు చేయడం జరిగింది.

## ఉపయోగాలు :

1. విద్యార్థి తన చుట్టూ ఉన్న/ ఇంటి దగ్గర / పాఠశాల దగ్గర ఉన్న వనరులతో తగిన విధంగా ఆలోచన చేసి ఉత్పాదక వస్తువుగా తయారు చేయుట.
2. ముందుగా తను నేర్చుకుని ఇతర విద్యార్థులకు మార్గదర్శనం చేయుట.
3. పని అనుభవాన్ని సమాజానికి పరిచయం చేయడం. ఉద్యోగిగా కాకుండా ఉద్యోగాల సృష్టికర్తగా మారడం.
4. సులభమైన పనులు / వృత్తుల నుండి క్లిష్టముగా ఉన్న విషయాల పట్ల ఆసక్తిని రేకెత్తించడం.

## ఎందుకు ఈ ప్రాజెక్ట్ చెయ్యాలి.... ?

1. సమాజంలో వివిధ వృత్తుల ఆదరణ కరువైనది కనుక.
2. విదేశీ సంస్కృతుల వలన ఆచార వ్యవహారాలు /కట్టుబాట్లు /వ్యక్తులలో మార్పురావడం వలన.
3. సమాజములోని విభిన్న వృత్తులు/ పనిముట్లు / పరికరాలను మళ్ళీ వెలుగులోకి తీసుకురావడం కోసం.
4. విద్యార్థి "మొక్కై వంగనిదే మ్రానై వంగునా అనే నానుడి బట్టి " శిశు దశలోనే పని అనుభవాన్ని జోడిస్తే అందుకు తగిన విధంగా మార్చడానికి అవకాశం ఉన్నది.
5. పాఠ్య ప్రణాళిక /సిలబస్ /కరికులం లో నేటి పరిస్థితులకు అనుగుణంగా మార్చాల్సిన అవసరం ఉంది.
6. పాఠశాల /సమాజం/ గ్రామం / పల్లెలు / పట్టణాలు తద్వారా దేశ సంపద మరియు తలసరి ఆదాయం పెరుగుతుంది.

టూల్స్ / వనరులు/సహజ వనరులు :

1. మన దేశం ముఖ్యంగా అనేక అపార ఖనిజ సంపదకు నెలవైన దేశం.
2. విద్యార్థులకు ప్రాథమిక /మాధ్యమిక మరియు ఉన్నత స్థాయిలో తగిన శిక్షణ ఇస్తే అతను ఒక నిపుణుడుగా మారే అవకాశం ఉన్నది.
3. విద్యార్థుల సహజ శక్తి, సామర్థ్యాలు/ అభిరుచులు/ అలవాట్లు ఒక సాధన, చోదక శక్తి ప్రక్రియగా మార్చితే అందుకు బీజం ఆ దశలో పడటం వలన అతనిలో ఒక మార్పు కలిగి ఉన్నతమైన నిపుణుడుగా మారే అవకాశం ఉన్నది.



## 9 వ తరగతి

### 1. రంగాచార్యతో ముఖాముఖీ - ఇంటర్వ్యూ చేసే వ్యక్తిగా ఎదగడం.

నిర్ణీత విషయాలపై పూర్తి అవగాహన ఏర్పడుతుంది.

సృజనాత్మకంగా అలోచించి మాట్లాడటం.

అవగాహనతో సందర్భానికీ అనుగుణంగా మాట్లాడటం.

సంపూర్ణ మూర్తిమత్వాన్ని కలిగి ఉండటం.

T.V న్యూస్ ఛానల్ ఏర్పాటు చేసి యజమానిగా మారటం.

### 2. వాయసం - పక్షుల రెట్టను సేకరించి ఎరువులు తయారు చేసి అమ్మటం.

వాస్తవాలను తార్కికంగా మాట్లాడ గలగడం.

కెమికల్, ఫెర్టిలైజర్స్ పక్కన పడేసి సహజ ఎరువుల వాడకం.

సముచిత భాషను ఉపయోగించి స్వాగతాలను రాయడం.

సరైన వైజ్ఞానిక పరమైన ఆధారాలతో క్రియాత్మకంగా ప్రతిస్పందించటం.

ఎరువుల కొట్టు యజమానిగా మారటం.

### 3. కోరస్ - చిత్రలేఖనం మరియు రంగులు అద్దటం.

వివిధ అంశాలకు చెందిన భావాలను గ్రహించడం.

సమకాలీన అంశాలపై అభిప్రాయాలను చిత్రాల ద్వారా తెల్పుడం.

పరిసరాలలో మార్పులను వివిధ ప్రక్రియలలో సొంతంగా తయారు చేయడం.

సృజనాత్మకతను పెంపొందించడం.

ప్రింటింగ్ ప్రెస్ మరియు ఆర్ట్ గ్యాలరీని సొంతంగా స్థాపించడం.

### 4. వాగ్భూషణం - వ్యాఖ్యాతను తయారు చేయడం.

అవగాహన ప్రతిస్పందనను కలిగి ఉండడం.

వివిధ అంశాల గూర్చి సొంత మాటలతో వివరించగలగటం.  
సామాజిక అంశాలపై అభిప్రాయాలను స్పష్టంగా దైర్యంగా తెలపటం.  
విశ్లేషనాత్మకంగా, వర్ణనాత్మకంగా మాట్లాడ గలగటం.  
యాంకర్ మారి గొప్ప, వాఖ్యాత గా మారడం.

#### 5. చెలిమి - నాటకాల ప్రదర్శన డ్రామా ఆర్కిస్ట్ గా చేయడం.

పాఠశాలలో నాటకాలను, డ్రామాలను ప్రదర్శింప చేయటం.  
నాటకాలలో పాత్రలకు జీవం పోసి సహజత్వాన్ని ఉట్టి పడేలా చేయడం.  
పాత్రలకు అనుగుణంగా నటించడం.  
రసాత్మక అభినయం చేయగలుగుతాడు.  
ఆర్ట్ డైరెక్టర్, నటుడుగా మారి పేరు ప్రఖ్యాతులు ఘడించుట.

#### 6.తీయని పలకరింపు - వివాహ పరిచయ వేదిక, కార్యక్రమ నిర్వహణ, ఈవెంట్ మేనేజ్ మెంట్

వ్యక్తులలో సహకార భావనను కలిగి ఉండటం.  
ఇతరుల మనో భావాలను అర్థం చేసుకొని అవగాహనతో మెలగడం.  
సమాజంలో గొప్ప వ్యక్తులుగా తాయారు కావడం.  
సమాజానికి అవసరమైన సంఘాలను ఏర్పరచవచ్చును.  
మ్యారేజ్ బ్యూరో ను నివహించడం.

### 10 వ తరగతి

#### 7. దాన శీలం - నీతి కథలు రాయడం.

వ్యక్తుల మధ్య మంచి, చేదు లక్షణాలకనుగుణంగా ప్రవర్తించడం.  
పాత్రల అంతర్యాలను, స్వభావాలను వివరించ గలగడం.  
నీతి కథల ద్వారా సమాజ ఉన్నతికి తోడ్పాటులో స్వీయ ఎదుగుదలకు పాటు పడటం.  
పుస్తక ముద్రణ, పంఫిటీ దారులుగా తయారవటం.

8. వీర తెలంగాణ - బుర్ర కథలు, ఏకపాత్రాభినయనం

సమకాలీన చారిత్రక వైభవాలను గూర్చి తెలుసుకోవటం.

సంస్కృతిలోని గొప్పతనాలను స్పష్టంగా ఇతరులకు చెప్పగలగడం.

వారసత్వ సంపదలను సేకరించి, అమ్మడం.

తద్వారా వ్యాపార వేత్తగా తయారవటం.

9. నగర గీతం - రొట్టెల తయారీ విధానం

కాలాలకు అనుగుణంగా ఆహార అలవాట్లను మెరుగుపరచుకోవడం.

సంయోగ వియోగ పద్ధతుల గూర్చి అవగాహన కలిగి ఉండటం.

సీజన్లకు అనుగుణంగా ఆహారపు ఉత్పత్తులను తయారు చేయటం.

ఆహారపు ఉత్పత్తుల ద్వారా లాభాలను గడించటం.

10. భాగ్యోదయం - జీవిత చరిత్రలు రాయటం.

స్వీయ రచన, సృజనాత్మక వ్యక్తీకరణ పెంపొందించటం .

గొప్ప గొప్ప వ్యక్తుల యొక్క అనుభవాలను, అనుభూతులను సమాజానికి

అందించేలా చేయగలగడం.

పుస్తక ప్రచురణ అంశాల పట్ల మెళుకువలను తెలుసుకోవటం.

వివిధ రకాల ప్రచురణ సంస్థల సమన్వయాన్ని తెలుసుకోవటం.

11. శతక మధురిమ - పాటలను / గీతాలను రాయటం.

తాను గ్రహించే అంశాలను సవివరంగా తెలుపగలగటం.

అంశాలకు సరైన కారణాలతో సమర్థిస్తూ, విభేదిస్తూ రాయగలగటం.

సంగీత పరికరాల, భాషలో ఉండే మెళకువలను తెలుసుకోవటం.

గీత రచనల ద్వారా సమాజంలో గొప్ప వ్యక్తిగా తయారవటం.



**12. లక్ష్య సిద్ధి - I వ్యాసాలను రాయటం.**

తమ అనుభవాలనుండి వచ్చిన అంశాల గూర్చి సామాజిక సమస్యలపై  
అభిప్రాయాలను స్పష్టంగా చెప్పగలగడం.  
ప్రసార మాధ్యమాలలోని విషయాన్ని విమర్శిస్తూ, విశ్లేషిస్తూ రాయగలగటం.  
వ్యక్తులను గాని, సమాజంలోని అంశములని గాని కించ పరిచకుండా వ్యక్తిత్వం కలిగి  
ఉండాలి.  
పాఠకులని ఆకర్షిస్తూ ఉత్సుకతను రేకెత్తించే విధంగా ఉండటం.  
తద్వారా గొప్ప రైటర్ గా స్థిరపడటం.

**13. లక్ష్య సిద్ధి - II కాగితాలతో బ్యాగులను తయారు చేయటం.**

భావనలను, సూక్ష్మ అంశాలకు గల బేధాలను వివరించగలడటం.  
నూతన అంశాలను సేకరించి, తద్వారా వ్యవస్థీకరించటం.  
ధరలను నిర్ణయించటంలో విచక్షణని కలిగి ఉండటం.  
సరైన ప్రణాళికలను తయారు చేసుకునేలా ఎదగటం.  
కాగిత పరిశ్రమల యజమానిగా తయారవటం.

**14. జీవన భాష్యం - రచనలను చేయటం.**

సాంఘిక, సామాజిక అంశాలపై అభిప్రాయాలను కలిగి ఉండటం.  
సృజనాత్మక ప్రశంసనీయమైన రచనలు చేయగలగటం.  
ఆసక్తిని కలిగించి తద్వారా కార్యోన్ముఖులుగా చేసేలా రచనలు ఉండటం.  
తమ రచనల వాళ్ళ పాఠకులను కట్టిపడే విధంగా ఉండటం.  
మనో విశ్లేషణాత్మక వ్యక్తిగా, మంత్రణం, మార్గదర్శకునిగా ఎదగటం.

**15. గోలకొండ పట్టణం. - టూరిస్ట్ గైడ్ గా మారటం.**

భాషను గురించి తెలుసుకోవటం.  
చారిత్రక కాట్టడాలలో సాంకేతికతను కలిగి ఉండటం.

భాషాంతరికరణ నైపుణ్యం కలిగి ఉండటం.

సమయం వాక్పాఠ్యంపై పట్టు కలిగి ఉండటం.

ఆర్థిక స్వాతంత్ర్యం కలిగి ఉండటం.

**16. భిక్ష - - టూరిస్ట్ గైడ్ గా మారటం**

దేశ, రాష్ట్రాల మధ్య సన్నిహిత సుబందం ఏర్పరచటం.

సంస్కృతి, నాగరికత, ఆచార్య వ్యవహారాలు, చారిత్రక అంశాల గూర్చి

అవగాహన కలిగి ఉండటం.

టూరిజం ప్యాకేజీ, తలసరి ఆదాయం పెరుగుదల గూర్చి తెలుసుకోవటం.

భాషాంతరికరణ నైపుణ్యం కలిగి ఉండటం.

ఆర్థిక స్వావలంబన కలిగి ఉండటం.

**17. భూమిక - నమూనాలను సేకరించటం.**

సృజనాత్మక కథలను, పేరికలను సేకరించటం.

శాస్త్ర సాంకేతికలో వచ్చిన మార్పులను గ్రహించటం.

సంఘటనలను అర్థం చేసుకొని, సందర్భానుసారంగా తమ వైఖరులను

తెలియజేసేటట్లు ఉండటం.

లక్క బొమ్మలు, నిర్మల్ బొమ్మలు పెద్ద ఎత్తున అమ్మి వ్యాపార వేత్తగా స్థిరపడటం.

**9 వ తరగతి**

**18. శతక మధురిమ- మోటివేషనల్ స్పీకర్ గా స్థిరపడటం.**

భాషా నైపుణ్యాలపై పట్టుకలిగి ఉండుట.

విద్యార్థులు, యువకులలో నైపుణ్యాభివృద్ధిని పెంపొందించుట.

వివిధ హావ భావాలను ప్రదర్శించే నైపుణ్యం కలిగి ఉండటం.

కమ్యూనికేషన్ స్కిల్స్ ను ప్రదర్శించుట.

భాష మీద మంచి పట్టుకలిగి అనర్గళ ఉపన్యాసం ఇచ్చుట.

ఊహాత్మక ప్రతిపాదనకు వాస్తవికతను కల్పించి ప్రభావితం చేయడం.

గొప్ప వ్యాఖ్యాతగా స్థిరపడటం.

## 10 వ తరగతి

**19. కొత్తబాట - మిమిక్రి ఆర్టిస్ట్ గా స్థిరపడటం.**

భాషా నైపుణ్యాలపై పట్టుకలిగి ఉండుట.

సందర్భానికి అనుగుణంగా షేజి పై వివిధ ప్రదర్శనలు ఇచ్చుట.

వేదిక పై వివిధ హావ భావాలను, హాస్య చతురతను ప్రదర్శించే నైపుణ్యం కలిగి ఉండటం.

కమ్యూనికేషన్ స్కిల్స్ ను ప్రదర్శించుట.

భాష మీద మంచి పట్టుకలిగి అనర్గళ ఉపన్యాసం ఇచ్చుట.

ఊహత్మక ప్రతిపాదనకు వాస్తవికతను కల్పించి ప్రభావితం చేయడం.

**మిమిక్రి ఆర్టిస్ట్ గా, యాంకర్ గా స్థిరపడుట.**

**20. ఎవరి భాష వాళ్లకు వినసొంపు - సినీగీతాలు, రచయితగా ఎదగడం.**

భాషా నైపుణ్యాలపై పట్టుకలిగి ఉండుట. లేఖన నైపుణ్యంతో రాయడం.

సందర్భానికి అనుగుణంగా వివిధ రచనలు చేయుట.

నిర్ణీత విషయం పై పూర్తి స్థాయి అవగాహనా పెంపొందించుకోవడం.

అమూర్త భావనలను సాధనా రూపం కలిగించి విస్తృతపరచడం.

భాష మీద మంచి పట్టుకలిగి అనర్గళముగా గీతాలను, రచనలను రాయడము.

ఊహత్మక ప్రతిపాదనకు వాస్తవికతను కల్పించి ప్రభావితం చేయడం.

**మంచి పాటల రచయిత గా అంతర్జాతీయ వేదికలపై పొందడం.**

**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Department of Education, Ministry of Education, Government of India**  
**Lesson Plan Format**

Name of Faculty: డా. జె.కృష్ణయ్య

Class	9 వ తరగతి	Subject	తెలుగు
Lesson Name	రంగాచార్య తో ముఖాముఖి	Duration of the Lesson	45 నిమిషాలు
Concept(s) Covered	ఇంటర్వ్యూ విధాన ప్రక్రియ మరియు వ్యాఖ్యాతగా పని చేయడం.		
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. మౌఖిక-ముఖాముఖి - ఇంటర్వ్యూ విధాన ప్రక్రియ మరియు వ్యాఖ్యాతగా పనిచేయడం. 2. 3.			
<b>Skills that will be inculcated</b>			
1. జన సమూహంలో ఉంటూ ఒక విషయంపై స్పష్టంగా మాట్లాడటం. 2. అవగాహనతో సందర్భానికి అనుగుణంగా మాట్లాడటం. 3. స్పష్టనాత్మకంగా ఆలోచించి మాట్లాడటం. 4. సన్నివేశానికి అనుగుణంగా తగు రీతిలో హాస్య, ఉద్వేగ వికాసాలతో మాట్లాడటం. 5. భాషా నైపుణ్యాలైన శ్రవణ,భాషను,వరన, లేఖనాధులను అభివృద్ధిని పరచుట.			
<b>Interdisciplinary concepts that may be integrated</b>			
1. సాంఘిక శాస్త్ర, సామాజిక అవకాశాల మేళవింపు. 2. ఇన్ఫర్మేషన్ కమ్యూనికేషన్ అండ్ టెక్నాలజీ(ICT) ని జతపర్చడం. 3. నవీన బోధనా పద్ధతులను అమలు పరచడం. 4. ఆంగ్లము, హిందీ భాషలపై పట్టుకలిగి భాషాంతరీకరణం చేయడం. 5.			
<b>Learning Outcomes</b>			
1. భాషపై పట్టుకలిగి మరియు పదజాలంపై అధికారం కలిగి తగు సందర్భంలో ఉపయోగించడం. 2. నిర్ణీత విషయంపై పూర్తి స్థాయి అవగాహనను పెంపొందించుకోవడం. 3. తగిన సందర్భానికి అనుగుణంగా విషయాన్ని విశ్లేషించగలగడం. 4. తార్కికంగా మూర్తిమత్వాన్ని ప్రదర్శించగలగడం. 5.			
<b>Tools/Material Needed</b>			
1. కుర్చీలు 2. మైకు 3. టేబుల్		4. విద్యుత్ బ్యాటరీ 5. సభాస్థలి 6.	
<b>Steps</b>			
1. ఆహ్వాదకరమైన వేషధారణం. 2. ప్రశాంతమైన వాతావరణంతో సరైన పరిసరాలను ఏర్పాటు చేయుట.			



3. తగిన రీతిలో వేదికను ఏర్పాటు చేసి సభాస్థలిని అలంకరించడం.
4. కుర్చీలు, బల్లలు, మైకులు మరియు ప్రేక్షకుల గ్యాలరీని ఏర్పాటుచేయుట.
5. ఉత్సాహంతో పాల్గొనుట. అభ్యంతరాలు, ఇబ్బందులు తలెత్తకుండా ముందే నివారణ చర్యలను సరిచూసుకొనుట.
6. అభ్యంతరాలు, ఇబ్బందులు తలెత్తకుండా ముందే నివారణ చర్యలను సరిచూసుకొనుట.
7. కార్యక్రమానికి ముందే మాక్ డ్రిల్లును నిర్వహించుట.

#### Precautions

1. ఎన్నుకున్న శీర్షికపై ఎయ్ అంశాల మీద, ఎటువంటి ప్రశ్నలు వేయాలో తగిన విధంగా నిర్ణయించుట.
2. తీసుకున్న అంశాన్ని జాగ్రత్తగా (సబ్టెక్టు+కంటెంట్)కు అనుగుణంగా ఉండేటట్లు చూడటం.
3. సందర్భానికి అనుగుణంగా వ్యవహరించడం.
4. ఇతరుల మనోభావాలు(కుల, మత, జాతి, లింగ)వరమైన బేధాలు రాకుండా చూడటం.
5. సున్నితమైన మరియు కొంతమేర కఠిన ప్రశ్నలను అడగటం తగిన సమాధానాలు రాబట్టడం.
6. చిరాకు, కోపం, ఉద్వేగం, విరామ చిహ్నాలను పాటించడం.
7. సభాకంపం లేకుండా కార్యక్రమ నిర్వహణ సజావుగా జరిపించడం.
- 8.

#### Assessment of Student Activity

1. ఎయ్ అంశాలపై ప్రశ్నలు అడగాలో ముందుగా టూల్స్ ప్రశ్నావత్రం రుబ్రిక్స్ తయారు చేయాలి.
2. ప్రతి ప్రశ్నకు ఎంత వెయిటేజి ఇవ్వాలో తగిన భారత్వ పట్టికను తయారు చేసి కేటాయించాలి.
3. వ్యక్తిగత మదింపు చేసి తగిన మాపణం చేయాలి.
4. అంచనా మాపని పట్టిక (రేటింగ్ స్కేల్) టేబుల్ ఆధారంగా తగిన విశ్లేషణ చేయాలి.

#### Reference Links

1. <https://www.indeed.com/communicationskills/>
2. <https://en.m.wikipedia.org/wiki>
3. <https://pressbooks.nsc.ca/chapter/>
4. <https://ohiostate.pressbook.pub/interview/>

Name of Faculty: డా. పి. కృష్ణవేణి

Class	9వ తరగతి	Subject	తెలుగు			
Lesson Name	వాయసం	Duration of the Lesson	3 పరియడ్లు			
Concept(s) Covered	పర్యావరణ పరిరక్షణలో పక్షుల పాత్ర.					
Vocation(s) or Occupation(s) that can be connected to this lesson						
1. పక్షుల రకాలు, ప్రత్యేకతలు, గొప్పతనం, పక్షుల గూక్కు వాటి గొప్పతనాన్ని గురించి సేకరించి ప్రదర్శనను (ఎగ్జిబిషన్) ఏర్పాటు చేయటం.						
Skills that will be inculcated						
1. తార్కికంగా, వాస్తవికంగా, శాస్త్రీయంగా ఆలోచించడం. 2. వైజ్ఞానికంగా కారణాలను విశ్లేషించడం. 3. సృజనాత్మకంగా మాట్లాడకలుగుట. 4. విన్న చూసిన, చదివిన అంశాలపై విమర్శనాత్మకంగా మాట్లాడుట.						
Interdisciplinary concepts that may be integrated						
1. పర్యావరణ పరిరక్షణ 2. వ్యవసాయం 3. పాలినేషన్స్ 4. ఆయుర్వేదం మరియు యునాని వైద్యంలో పక్షుల వినియోగ						
Learning Outcomes						
1. పక్షుల గొప్పతనం, ఆవేదనను అర్థం చేసుకుంటారు. 2. సర్వప్రాణుల పట్ల దయకలిగి ఉండాలని తెలుసుకొని తన వైఖరి మార్చుకుంటారు. 3. 'పక్షులు నశిస్తే మానవజాతికి నష్టం వాటిల్లుతుంది' అనే వాస్తవాలను అవగాహన చేసుకుంటారు. 4. అంటురోగాలు రాకుండా పక్షులు మానవులను కాపాడే విధానాన్ని అవగాహన చేసుకుంటారు. 5. పక్షుల పరిరక్షణకై చేపట్టవలసిన చర్యలను విశ్లేషణాత్మకంగా వివరించగలుగుతారు.						
Tools/Material Needed						
1. పక్షుల వీడియోలు. 2. ప్రదర్శనకు ఒక గది. 3. చార్ట్ పేపర్లు, స్కిచ్ పెన్నులు. 4. పక్షుల గూళ్ళ (Models) తయారీకి కావలసిన సామగ్రి.						

(PTO)

<b>Steps</b>
<ol style="list-style-type: none"> <li>1. పక్షుల రకాలు, వాటి గొప్పతనం, గూళ్ళ గురించి పూర్తి అవగాహన ఇవ్వాలి.</li> <li>2. విద్యార్థులను గ్రూపులుగా విభజించి సమాచారం సేకరించమనాలి.</li> <li>3. సేకరించిన సమాచారంపై పూర్తి అవగాహన, సూచనలు, సలహాలు ఇవ్వాలి.</li> <li>4. పక్షి జాతుల రకాలు, వాటి ఆవశ్యకత, వాటి గూళ్ళకు సంబంధించిన వీడియోలను చూయించాలి.</li> <li>5. పక్షిజాతుల పరిరక్షణకై చేపట్టవలసిన చర్యలను చర్చించాలి.</li> <li>6. పర్యావరణ పరిరక్షణకు పక్షులు ఏవిధంగా ఉపయోగపడుతున్నాయో చర్చించాలి.</li> <li>7. పక్షులు నశిస్తే మానవజాతికి వాటిల్లే నష్టాలను వాస్తవాలతో అవగాహన కల్పించాలి.</li> <li>8. ప్రతి పక్షి గొప్పతనాన్ని తెలియజేస్తూ ప్రదర్శనను ఏర్పాటు చేయాలి.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. పక్షుల గూళ్ళను సేకరించడంలో తగిన జాగ్రత్తలు తీసుకోవాలి.</li> <li>2. గూళ్ళను పరిశీలించి అదే మాదిరిగా గూళ్ళను తయారుచేసే విధంగా చూడాలి.</li> <li>3. వాస్తవాలను మాత్రమే ప్రదర్శించాలి.</li> <li>4. Science Teacher &amp; Telugu Teacher కలిసి ప్రదర్శన ఏర్పాటు చేయాలి.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. పక్షులు వాటి ప్రత్యేకతలను, పర్యావరణ పరిరక్షణలో పక్షుల పాత్రను గురించి వ్యాసరచన చేయించి తగిన భారత్వ పట్టికల ద్వారా మదింపు చేయాలి.</li> <li>2. పర్యావరణ పరిరక్షణలో పక్షుల పాత్ర అనే విషయంపై విద్యార్థులచే మాట్లాడించి, మదింపు చేసి, సూచనలు, సలహాలు ఇవ్వాలి.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. <a href="https://ec.europa.eu/nature">https://ec.europa.eu/nature</a></li> <li>2. <a href="https://www.perkypet.com">https://www.perkypet.com</a></li> <li>3. <a href="https://www.scienceclean.org.n2">https://www.scienceclean.org.n2</a></li> </ol>



**Name of Faculty: R Ramakrishna**

<b>Class</b>	9వ తరగతి	<b>Subject</b>	తెలుగు
<b>Lesson Name</b>	కోరస్	<b>Duration of the Lesson</b>	1 పీరియడ్
<b>Concept(s) Covered</b>			
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. రంగులు అర్థం 2. పెయింటింగ్ వేయడం ...			
<b>Skills that will be inculcated</b>			
1. శ్రవణం, వ్రతనం, భాషణం, లేఖనం 2. సృజనాత్మకత, 3. అర్థం చేసుకోవటం 4. ప్రతిస్పందించటం			
<b>Interdisciplinary concepts that may be integrated</b>			
1. భాషా నైపుణ్యాలు 2. గణిత శాస్త్ర అవగాహన			
<b>Learning Outcomes</b>			
1. విద్యార్థులు సందర్భానుసారంగా చిత్రాలతో ప్రతిస్పందించటం 2. విషయ అవగాహన కలిగి ఉండటం 3. వివిధ అంశాలకు చెందిన భావాలను గ్రహించటం. 4. సామాజిక అంశాలపై అభిప్రాయాలను స్పష్టంగా తెలపగలరు. 5. పరిసరాలలోని మార్పులను వివిధ ప్రక్రియలో సొంతంగా తయారు చేయగలరు.			
<b>Tools/Material Needed</b>			
1. వాటర్ కలర్స్ 2. ఛార్జ్స్ 3. బ్రష్		4. రంగుల కాగితాలు 5. 6.	
<b>Steps</b>			
1. సామాజంలోని కొత్త ధోరణులను, వాస్తవాలను గ్రహించగలరు. 2. మొదటగా మనం నిర్ణయించుకున్న అంశాలపై సరైన అవగాహనను కలిగి ఉండాలి.			



3. దానికి సంబంధించిన మూల అంశాలను తెలిపే రంగులను నిర్ణయించాలి.
4. ఒక కార్డు బోర్డు తీసుకొని దానికి మొదటగా తెలుపు రంగును వేయాలి.
5. దాని తర్వాత మనం గీయదలచిన అంశానికి చెందిన చిత్రం ఔట్ లైన్ గీయాలి.
6. నిర్ణీత రంగులను గుర్తించి ఔట్ లైన్ గుండా రంగులను గీయాలి.
7. ఔట్ లైన్ చిత్రంలో నిర్ణీత రంగులను ఆకర్షణీయంగా అద్దాలి.

#### Precautions

1. ఏ విషయం గురించి చెప్పదలచామో దాని గురించి సరైన నిర్ణయం జరగాలి.
2. ఔట్ లైన్ ను జాగ్రత్తగా గీయవలను.
3. రంగులను వృధా చేయరాదు.
4. కార్డు బోర్డు, రంగులను జాగ్రత్తగా ఉపయోగించవలెయును.
5. ఏ అంశము గూర్చి చెప్పదలచామో ఆ అంశము ప్రతిబింబించేలా ఉండాలి.

#### Assessment of Student Activity

1. ఏ అంశము గూర్చి చెప్పదలచామో ఆ అంశంపై పరిశోధన జరగాలి.
2. ఏ నైపుణ్యాలను నిర్ణయించామో అవి సాధించేలా జరగాలి.
3. ఎక్స్ బిషన్ ఏర్పాటు చేయాలి.

#### Reference Links

1. [www.youtube.com](http://www.youtube.com)
2. [www.pinterest.com](http://www.pinterest.com)
3. [www.wikihow.com](http://www.wikihow.com)
4. [www.creativeblog.com](http://www.creativeblog.com)
5. [www.howtodrawforkids.com](http://www.howtodrawforkids.com)

**Lesson Plan Format**

Name of Faculty: R Ramakrishna

Class	9వ తరగతి	Subject	తెలుగు
Lesson Name	వాగ్దాషణం	Duration of the Lesson	1 పీరియడ్
Concept(s) Covered			
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. వాఖ్యతను తయారు చేయటం.			
Skills that will be inculcated			
1. శ్రవణం, వ్రతనం, భాషణం, లేఖనం 2. సృజనాత్మకత 3. భాష గురించి తెలుసుకోవటం 4. వ్యక్తీకరణ 5. అవగాహన			
Interdisciplinary concepts that may be integrated			
1. భాషా నైపుణ్యాలు 2. భాషాంతరీకరణం 3. సామాజిక శాస్త్ర సమన్వయం			
Learning Outcomes			
1. ఇచ్చిన అంశాన్ని గురించి ఊహిస్తూ మాట్లాడగలగాలి. 2. చూసిన, చదివిన అంశాలపై విమర్శనాత్మకంగా మాట్లాడటం. 3. చర్చల్లో పాల్గొనడం 4. సామాజిక అంశాలపై అభిప్రాయాన్ని స్పష్టంగా తెలపగలగాలి. 5. భావోద్వేగంగా మాట్లాడటం 6. విశ్లేషణాత్మకంగా, వర్ణనాత్మకంగా మాట్లాడటం			
Tools/Material Needed			
1. కథల పుస్తకాలు 2. నాటకాల పుస్తకాలు 3., బాషా సాహిత్య పుస్తకాలు		4. 5. 6.	
Steps			
1. ఆకర్షణీయమైన వేషధారణ			

2. ప్రశాంతమైన వాతావరణంలో సరైన పరిసరాలను ఏర్పాటు చేయటం.
3. ఏ ఏ అంశాలకు అనుగుణంగా మాట్లాడాలో నిర్ణయించడం.
4. మాట్లాడుతున్న మాటలలో చతురతను కనపరచటం.
5. పదాలను స్పష్టంగా, సూటిగా ఉండాలి.
6. ఏ అంశము గురించి వాఖ్యానం చేస్తున్నామో దానికి ఆకర్షణీయమైన పదాలను ఏర్పరచటం .

#### Precautions

1. ఏ అంశానికి వాఖ్యానం చేయదలచామో దానికి సరైన ప్రణాళికను తయారు చేయటం.
2. పదాలను పలుకునపుడు స్పష్టంగా, సూటిగా ఉండాలి.
3. పదాలు ఆకర్షణీయంగా ఉండేలా చూసుకోవాలి.
4. వేష దారణలో తగు జాగ్రత్తలను తీసుకోవాలి.
5. అసందర్భ పదాలు, నిర్దిష్ట అంశములను దాటకుండా చూసుకోవాలి.

#### Assessment of Student Activity

1. ఏ ఏ అంశాలకు వాఖ్యానం చేయదలచామో దానికి సరైన ప్రణాళికను తయారు చేసుకోవాలి.
2. సరైన అంశములను సరైన వ్యాఖ్యానం చేసామో లేదో బేరీజు వేసుకోవాలి.
3. ఏ ఏ ప్రమాణాలకు అనుగుణంగా వ్యాఖ్యానం చేయదలచామో అది సాదించాలి లేనిది సరి చూడాలి.

#### Reference Links

1. [www.tipsnepal.com](http://www.tipsnepal.com)
2. [www.quora.com](http://www.quora.com)
3. [www.learnesi.net](http://www.learnesi.net)
4. [www.youth4work.com](http://www.youth4work.com)
5. [www.showgaga.com](http://www.showgaga.com)

**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
Department of Education, Ministry of Education, Government of India  
**LESSON PLAN FORMAT**

Name of Faculty: డా. పి. కృష్ణవేణి

Class	9వ తరగతి	Subject	తెలుగు
Lesson Name	చెలిమి	Duration of the Lesson	3 పీరియడ్లు
Concept(s) Covered	నాటకీకరణకై సంభాషణలు రాయడం, నాటక రూపంలో ప్రదర్శించడం		
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. నాటక ప్రదర్శన			
Skills that will be inculcated			
1. పాత్రోచిత భాషణ నైపుణ్యం, రచనా నైపుణ్యం పెంపొందుతాయి. 2. నటనా కౌశలం పెంపొందుతుంది. భాషా నైపుణ్యాలు ప్రదర్శించడం. 3. భావస్పష్టత, భాషా నిర్మలత ఏర్పడుతుంది. 4. వాచిక, అంగీక, అభినయ సామర్థ్యాల అభివృద్ధి. 5. సభాకంపం తొలగిపోతుంది. ధైర్యం అలవడుతుంది.			
Interdisciplinary concepts that may be integrated			
1. చారిత్రక, సామాజిక విషయాలను ఇతివృత్తంగా తీసుకోవడం. 2. మూఢ నమ్మకాల నిర్మూలన. 3. సాంఘిక దురాచారాలు.			
Learning Outcomes			
1. స్నేహం, సంబంధ బాంధవ్యాల విలువ తెలుసుకొని మెలగటం. 2. స్వేచ్ఛగా, ఆత్మ విశ్వాసంతో నాటక ప్రదర్శనలు ఇవ్వగలగడం. 3. విద్యార్థులలో సహకార అభ్యుసనం, సరియైన జీవన విధానం ఏర్పడుతుంది. 4. పాత్రలలోని మంచి, చెడులను, నీతిని అర్థం చేసుకొని అవగాహనతో మెలగటం. 5. నవరసాలు ఉట్టిపడే విధంగా చమత్కారంగా సంభాషించే నైపుణ్యం.			
Tools/Material Needed			
1. ఒక గది. 2. మైకులు, 3. పాత్రలకు అనుగుణమైన వేషధారణ 4. ఎంట్రి టికెట్స్			

(PTO)



<p><b>Steps</b></p> <ol style="list-style-type: none"> <li>1. ప్రదర్శించడానికి నిర్ణయించుకున్న అంశంపై పూర్తి అవగాహనను కలిగించటం.</li> <li>2. పాత్రోచిత సంభాషణ విధానాన్ని నేర్పించాలి. రోజువారీ అభ్యసనం జరగాలి.</li> <li>3. ఒకరు మాట్లాడటం పూర్తి చేసాకే మరొకరు మాట్లాడాలి అని సూచించాలి.</li> <li>4. నాటకంలో తనలో తాను మాట్లాడుకోవడం, ప్రకాశంగా మాట్లాడటం ఎలాగో తెలిపాలి.</li> <li>5. సహజంగా సంభాషణలు చెప్పగల సామర్థ్యం పెంచుకొనేలా ప్రోత్సహించాలి.</li> <li>6. సందర్భోచిత భాషణం, సమయస్ఫూర్తి పెంపొందేలా చూడాలి.</li> <li>7. నాటక ప్రదర్శన చేయించి వ్యక్తిగత దోషాలను సమోదు చేసుకొని, నివారణ విధులను సూచించాలి.</li> <li>8. నిర్ణయించుకున్న ప్రదేశంలో ప్రణాళికను అనుసరిస్తూ నాటకాల ప్రదర్శన ఏర్పాటు చేయాలి.</li> </ol>
<p><b>Precautions</b></p> <ol style="list-style-type: none"> <li>1. పాత్రకు అర్హులైన విద్యార్థులను జాగ్రత్తగా ఎంపిక చేయాలి.</li> <li>2. విద్యార్థులు క్రమశిక్షణను పాటించేలా చూడాలి.</li> <li>3. నాటక ప్రదర్శనకు ఎంచుకున్న అంశం ద్వారా ఏమి చెప్పదలచామో ఆ అంశం ప్రతిబింబించేలా ఉండాలి.</li> <li>4. విద్యార్థుల మధ్య వివాదాలు రాకుండా జాగ్రత్తగా చూడాలి.</li> <li>5. నాటక ప్రదర్శనకై ఏర్పాటు చేసుకోవటంలో తగిన జాగ్రత్తలు తీసుకోవాలి.</li> <li>6. నాటక ప్రదర్శనకు టీకెట్ ధర నిర్ణయించేటప్పుడు ఆలోచించి నిర్ణయించుకోవాలి.</li> <li>7. నాటకాల ప్రదర్శనకు తల్లిదండ్రులను ఆహ్వానించినప్పుడు ఏలాంటి అసౌకర్యాలు కలుగకుండా చూసుకోవాలి.</li> <li>8. పాఠశాల విద్యార్థులకు, విద్యార్థుల తల్లిదండ్రులకు ప్రదర్శనలు వేరు వేరుగా ఏర్పాటు చేయాలి.</li> </ol>
<p><b>Assessment of Student Activity</b></p> <ol style="list-style-type: none"> <li>1. పాత్రల అనుగుణంగా సంభాషణ, హాహాభావ ప్రదర్శనలు సరిగా ప్రదర్శించటాన్ని పరిశీలించి మదింపు చేయాలి.</li> <li>2. నాటక ప్రదర్శన ఏర్పాటు చేయాలి.</li> <li>3. ప్రదర్శనకు సరియైన టీకెట్ ధర నిర్ణయించుకోవాలి. (లావాదేవీలు చూసుకోవాలి).</li> </ol>
<p><b>Reference Links</b></p> <ol style="list-style-type: none"> <li>1. <a href="http://lit.mit.edu&gt;subject.term">http://lit.mit.edu&gt;subject.term</a></li> <li>2. <a href="http://itsmyschoollibrary.com">http://itsmyschoollibrary.com</a></li> </ol>

Name of Faculty: డా. జె. కృష్ణయ్య

Class	9వ తరగతి	Subject	తెలుగు
Lesson Name	తీయని పలకరింపు	Duration of the Lesson	45 నిమిషాలు
Concept(s) Covered			
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. వివాహ పరిచయ వేదిక కార్యక్రమం నిర్మాణం గూర్చి తెలుసుకొనుట, మ్యారేజ్ బ్యూరో మరియు ఈవెంట్ మేనేజ్మెంట్ 2. 3.			
Skills that will be inculcated			
1. సంభాషణ నైపుణ్యము. 2. వ్యక్తీకరణ - సృజనాత్మకత. 3. అవగాహన - ప్రతిస్పందన 4. శ్రవణ నైపుణ్యం. 5. భాష నైపుణ్యాలు ప్రదర్శించడం.			
Interdisciplinary concepts that may be integrated			
1. సాంఘిక శాస్త్రాల ఆధారంగా వ్యక్తులతో కలుపుగోలుతనాన్ని ప్రదర్శించడం. 2. కట్టు కానుకలు విషయంలో గణిత శాస్త్రాల పరిచయము. 3. వంశవృక్షమును ఏడు తరాలకు చరిత్ర అంశాలతో సరిపోల్చడం. 4. ఇతర ప్రదేశాల కుటుంబ ఇరువర్గాలను జియోగ్రాఫికల్ గా ఒకే వేదికపై కలపడం. 5. వధూవరులు ఇద్దరు ఒకరికొకరు నచ్చుకోవడంలో సౌందర్య శాస్త్రాన్ని పరిచయం చేయడం.			
Learning Outcomes			
1. సంబంధ బాంధవ్యాలు మెరుగుపరచడం. 2. జీవిత గమనానికి సులభమైన మార్గాలు ఏర్పడతాయి. 3. ఇతరుల మనోభావాలను అర్థం చేసుకొని అవగాహనతో మెలగటం. 4. సరైన జీవన విధానం ఏర్పడుతుంది. 5. వైవాహిక జీవితాన్ని గడుపుతూ వసుధైక కుటుంబంగా జీవించడం.			

<b>Tools/Material Needed</b>	
1. ఒక గది	4. ఫ్యాన్
2. 4 కుర్చీలు	5. లైటు
3. వధువు-వరుడు ఫోటోలు	6. టేబుల్, సౌకర్యవంతమైన సోఫా సెట్
<b>Steps</b>	
<ol style="list-style-type: none"> <li>1. వ్యాపార కూడలిలో మ్యారేజ్ బ్యూరోను ప్రారంభించాలి.</li> <li>2. అందులో సౌకర్యవంతంగా కూర్చోవడానికి వీలుగా ఉండే వసతులు కల్పించడం.</li> <li>3. వధూవరుల ఫోటోలను ఇరు వర్గాలకు పంపించడం.</li> <li>4. ఇరువురికి నిర్ణీత తేదీ, సమయం కేటాయించి ఒక ఒప్పందానికి వచ్చే విధంగా ఏర్పాటు చేయడం.</li> <li>5. వధూవరులు ఇద్దరు నచుకున్న తరువాత కట్న కానుకల ఒప్పందానికి రావడం.</li> <li>6. నిర్ణీత తేదీ ప్రకారం వారి వివాహ ముహూర్తం నిర్ణయించడం.</li> <li>7. నిర్వహణా విధానంలో జరిగిన లావాదేవీల ఆధారంగా వారి నుండి తగిన పారితోషికం ఫీజు తీసుకోవడం.</li> <li>8.</li> </ol>	
<b>Precautions</b>	
<ol style="list-style-type: none"> <li>1. వధూవరుల ఎంపిక విషయం సరిగ్గా ఉన్నదీ, లేనిది ఒకే అంచనాకు రావడం.</li> <li>2. వివాదాలు లేకుండా జాగ్రత్త పడటం.</li> <li>3. కట్న కానుకలు విషయంలో తగిన జాగ్రత్తలు తీసుకోవడం.</li> <li>4. వ్యక్తిగత విషయాలను ఇరు వర్గాలతో చర్చించడం.</li> <li>5. గొడవలు, తగాదాలు రాకుండా జాగ్రత్తగా వివాహం జరిపించడం.</li> <li>6. వ్యక్తిగత - ఇష్టా ఇష్టాలపై ఏమైనా సమస్యలు ఉంటే సానుకూల దృక్పథంతో పరిష్కరించడం.</li> </ol>	
<b>Assessment of Student Activity</b>	
<ol style="list-style-type: none"> <li>1. కీలక నిర్ణయాలు సరైనవో కావో అని పరిశీలన చేయాలి.</li> <li>2. ఇరువురి (వధువు-వరుడు) అవసరాలపై ఒకే రుబ్రిక్ తయారు చేయటం.</li> <li>3. వ్యక్తిగత - ఇష్టా ఇష్టాలపై సరైన విశ్లేషణ చేసుకోవడం.</li> <li>4. ఆఫీస్ అడ్డె8000/- రూ . రవాణా చార్జీలు 2000/- ఫీజు 5000/- మొత్తం 15,000/. రూపాయలు.</li> </ol>	
<b>Reference Links</b>	
<ol style="list-style-type: none"> <li>1. <a href="https://www.telugumatrimony.com">https://www.telugumatrimony.com</a></li> <li>2. <a href="https://www.ideamakemoney.com">https://www.ideamakemoney.com</a></li> <li>3. <a href="https://www.royalmatrimonium.com">https://www.royalmatrimonium.com</a></li> <li>4. <a href="https://www.telugumarriagebeauro.com">https://www.telugumarriagebeauro.com</a></li> <li>5. <a href="https://www.wedgatematrimoney.com">https://www.wedgatematrimoney.com</a></li> </ol>	

**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Department of Education, Ministry of Education, Government of India**  
**Lesson Plan Format**  
**Name of Faculty: R Ramakrishna**

<b>Class</b>	<b>10వ తరగతి</b>	<b>Subject</b>	<b>తెలుగు</b>
<b>Lesson Name</b>	<b>దాన శీలము</b>	<b>Duration of the Lesson</b>	<b>1 పీరియడ్</b>
<b>Concept(s) Covered</b>			
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. నీతి కథలను రాయడము.			
<b>Skills that will be inculcated</b>			
1. అవగాహన - ప్రతిస్పందన 2. వ్యక్తీకరణ - సృజనాత్మకత 3. అర్థం చేసుకోవటం 4. భాష గురించి తెలుసుకోవటం			
<b>Interdisciplinary concepts that may be integrated</b>			
1. భాషా నైపుణ్యాలు 2. సమాజ శాస్త్రం 3. నీతి శాస్త్రం.			
<b>Learning Outcomes</b>			
1. అనుభూతులను, అనుభవాలను స్పష్టంగా వివరించగలరు. 2. ఇచ్చిన అంశం ఆధారంగా చిన్న చిన్న కథలను రాయగలుగుతారు. 3. తగిన ఉదాహరణలతో సమర్థిస్తూ, నైతికంగా చెప్పగలుగుతారు. 4. పాత్రల అంతర్వాలను, స్వభావాలను వివరిస్తూ రాయగలుగుతారు. 5. వ్యక్తరణ అంశాలను విరివిగా సులభంగా వినియోగించగలుగుతారు.			
<b>Tools/Material Needed</b>			
1. కార్తీకాలు 2. పెన్నులు 3. నీతి కథల వృత్తాలు		4. సమకాలీన అంశాలు 5. బొమ్మలు 6.	



<b>Steps</b>
<ol style="list-style-type: none"> <li>1. సమకాలీన అంశాలపై ముందుగా ప్రేరణను కలిగి ఉండాలి.</li> <li>2. ప్రేరణ వలన కలిగిన ఆలోచనలను సరైన క్రమంలో ఒక పేపర్ పై రాయాలి.</li> <li>3. ఏ అంశానికై ఖాతాను ప్రారంభించాలో దాని యొక్క సంఘటనల క్రమాన్ని రూపొందించాలి.</li> <li>4. సరైన పాత్రలను, తారాగణాన్ని రూపొందించాలి.</li> <li>5. రూపురేఖలు తర్వాత, కథ కోసం అవుట్ లైన్ ను సృష్టించాలి.</li> <li>6. ఏ అంశాలపై కథలను రాయదలచామో ఆ దృక్కోణాన్ని స్థాపించాలి.</li> <li>7. సరైన సమయానికి అనుగుణంగా మొదటి డ్రాఫ్ట్ రాయాలి.</li> <li>8. మొదటి నుండి పాఠకులను ఆకర్షించేలా సవరించాలి. .</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. సమకాలీన అంశాలపై ప్రేరణనలో సరైన నిర్ణయం జరగాలి.</li> <li>2. కథలను రాయటంలో సరైన ప్రణాళికను రూపొందించాలి.</li> <li>3 కథల, పాత్రల నిర్ణయంలో సరితూగేలా చూడాలి.</li> <li>4. ఏ అంశంపై కథలను రాయదలచామో ఆ అంశంనకు అనుగుణంగా ఉండాలి.</li> <li>5 ఇతర అంశాలు, అసందర్భ అంశాలు విరివిగా లేకుండా ఉండాలి.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. విద్యార్థులు తమ అనుభవాలకు అనుగుణంగా చిన్న చిన్న కథలను రాయండి.</li> <li>2. మీ చుట్టూ ఉన్న అంశాలపై మీ అభిప్రాయాలను రాయాలి.</li> <li>3. సమాజంలో నైతికతను పెంచేలా ఉండే అంశాలను గుర్తించండి.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. <a href="http://www.grammarly.com">www.grammarly.com</a></li> <li>2. <a href="http://www.thoughtfullearning.com">www.thoughtfullearning.com</a></li> <li>3. <a href="http://www.masterclass.com">www.masterclass.com</a></li> <li>4. <a href="http://www.thewritepractice.com">www.thewritepractice.com</a></li> <li>5. <a href="http://www.wikihow.com">www.wikihow.com</a></li> </ol>

Name of Faculty: డా. పి. కృష్ణవేణి

Class	10వ తరగతి	Subject	తెలుగు			
Lesson Name	వీర తెలంగాణ	Duration of the Lesson	3 పిరియడ్లు			
Concept(s) Covered	ఏకపాత్రాభినయం, బుర్రకథలు					
Vocation(s) or Occupation(s) that can be connected to this lesson						
<ol style="list-style-type: none"> <li>1. ఏకపాత్రాభినయాల ప్రదర్శన.</li> <li>2. బుర్రకథల ప్రదర్శన.</li> </ol>						
Skills that will be inculcated						
<ol style="list-style-type: none"> <li>1. శ్రవణ, భాషణ, పఠన, లేఖనాల అభివృద్ధి</li> <li>2. సన్నివేశానికి అనుగుణంగా హాస్య, ఉద్వేగ వికాసాలలో మాట్లాడుట.</li> <li>3. నవరసాలను తగురీతిలో సంభాషణలో ప్రదర్శించడం.</li> <li>4. మధర స్వరంతో శబ్దగాంభీర్యం, అర్థగాంభీర్యం లోపించకుండా సంభాషించుట.</li> <li>5. సృజనాత్మకత - వ్యక్తీకరణ.</li> </ol>						
Interdisciplinary concepts that may be integrated						
<ol style="list-style-type: none"> <li>1. నవీన బోధనా పద్ధతులను అమలుపరచడం.</li> <li>2. వివిధ భాషలకు, విషయాలకు చెందిన ఇతివృత్తాలను గ్రహించడం.</li> <li>3. చారిత్రక, సాంస్కృతిక, విజ్ఞాన శాస్త్రాల మేళవింపు.</li> <li>4. ఆంగ్లము, హిందీ భాషలపై పట్టు కలిగి భాషాంతరీకరణం చేయడం.</li> <li>5. సామాజిక స్పృహ.</li> </ol>						
Learning Outcomes						
<ol style="list-style-type: none"> <li>1. నిర్ణీత విషయంపై పూర్తి స్థాయి అవగాహనను పెంపొందించుకోవడం.</li> <li>2. తార్కికంగా మూర్తిమత్వాన్ని ప్రదర్శించగలగడం.</li> <li>3. పాత్రపోషణ సామర్థ్యం, సంభాషణ చాతుర్యం పెంపొందించుకోవడం.</li> <li>4. భాషపై పట్టు కలిగి పదజాలంపై అధికారం కలిగి తగు సందర్భంలో ఉపయోగించుకోవడం.</li> <li>5. సామాజిక అంశాలపై అభిప్రాయాలను స్పష్టంగా, నిర్ణయంగా తెలపగలరు.</li> </ol>						
Tools/Material Needed						
<ol style="list-style-type: none"> <li>1. ప్రదర్శనకు ఒక గది.</li> <li>2. పాత్రకు అనుగుణమైన వేషధారణ.</li> <li>3. మైకులు.</li> </ol>						

<b>Steps</b>
<ol style="list-style-type: none"> <li>1. ప్రదర్శించడానికి ఎంచుకున్న అంశంపై పూర్తి అవగాహనను కలిగించుట.</li> <li>2. పాత్రోచిత సంభాషణను నేర్పించాలి.</li> <li>3. సహజంగా సంభాషణలు చెప్పగల సామర్థ్యం పెంచుకొనేల ప్రోత్సహించాలి.</li> <li>4. పాత్రోచిత వేషధారణం.</li> <li>5. సందర్భోచితంగా భాషించడం, సమయస్ఫూర్తితో మసలుకునే విధంగా చూడాలి.</li> <li>6. రోజు వారి అభ్యసనం జరగాలి.</li> <li>7. ఏకపాత్రాభినయాలు విద్యార్థులచే ప్రదర్శింపచేసి వ్యక్తిగత దోషాలను గుర్తించి నివారణ విధులను సూచించాలి.</li> <li>8. నిర్ణీత ప్రదేశంలో, సముచిత వేషధారణతో ప్రదర్శనలు ఏర్పాటు చేయాలి.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. పాత్రకు అర్హులై, పాత్రలో జీవించ కలిగే విద్యార్థులను జాగ్రత్తగా ఎంపిక చేసుకోవాలి.</li> <li>2. ఏలాంటి అవాంతరాలు జరుగకుండా ప్రదర్శన ఏర్పాటు చేసుకోవాలి.</li> <li>3. పాత్రకు అనుగుణంగా ఉండే వేషధారణ ఉండే విధంగా చూసుకోవాలి.</li> <li>4. గ్రామస్థుల ముందు ప్రదర్శనలు ఏర్పాటు చేసినప్పుడు ప్రణాళికను సిద్ధం చేసుకొని, సమయం వృధా కాకుండా చూసుకోవాలి.</li> <li>5. గొడవలు, తగాదాలు రాకుండా జాగ్రత్తగా నిర్వహించాలి.</li> <li>6. Entry Ticket నిర్ణయించేటప్పుడు లావాదేవీలు పరిగణలో ఉంచుకొని నిర్ణయించాలి.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. ఏకపాత్రాభినయాల ప్రదర్శన - ముఖ్యాంశాల పరిశీలనకు తగిన రేటింగ్ స్కేలు.</li> <li>2. బుర్రకథల ప్రదర్శన - ముఖ్యాంశాల పరిశీలన, సూచనలు ఇవ్వాలి.</li> <li>3. నిర్ణయించుకున్న ప్రదేశంలో ప్రదర్శనలు ఏర్పాటు చేయాలి.</li> <li>4. Entry Ticket నిర్ణయించుకోవాలి. (లావాదేవీలకు అనుగుణంగా)</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. <a href="http://te.m.wikipedia.org">http://te.m.wikipedia.org</a></li> <li>2. <a href="http://glosbe.com">http://glosbe.com</a></li> <li>3. <a href="http://andhrabharati.com">http://andhrabharati.com</a></li> <li>4. <a href="http://www.ntnews.org">http://www.ntnews.org</a></li> </ol>



Name of Faculty: డా. జె. కృష్ణయ్య

Class	10 వ తరగతి	Subject	తెలుగు
Lesson Name	నగర గీతం	Duration of the Lesson	45 నిమిషాలు
Concept(s) Covered	రోడ్ల తయారీ విధానం గురించి తెలుసుకోవడం.		
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. రోడ్ల తయారీ విధానం గురించి తెలుసుకోవడం.			
2.			
3.			
Skills that will be inculcated			
1. సృజనాత్మక నైపుణ్యంతో రోడ్లను ఎలా తయారు చేయాలో అనే అవగాహన పొందడం.			
2. చలన నైపుణ్యంతో అందమైన ఆకృతిలో రోడ్లను తయారు చేయుట.			
3. అవగాహన ప్రతిస్పందన.			
5. రోడ్లను ఎలా తయారు చేయాలనే విషయాన్ని అర్థం చేసుకోవడం.			
6. వ్యక్తీకరణ నైపుణ్యం మరియు నిర్వహణ విధానం.			
7.			
Interdisciplinary concepts that may be integrated			
1. చలననైపుణ్యం.			
2. సమాజ శాస్త్ర పరిచయం			
3. గణితశాస్త్రం వివిధ ఆకృతులుగా తయారు చేయడం అమ్మకం మరియు కొనుగోలు.			
4. నిర్వహణ నైపుణ్యం.			
5.			
Learning Outcomes			
1. సంయోగ వియోగ పద్ధతుల గూర్చి తెలుసుకొనుట.			
2. విశ్లేషణ వ్యవస్థీకరణ నైపుణ్యాన్ని వివరించుట.			
3. ఆహారపు అలవాట్లను మెరుగుపరచుకొని ఆరోగ్య మెళకువలను పాటించుట.			
5.			
Tools/Material Needed			
1. రోడ్ల పెన్, 2. పీట, గరిటె 3. రోడ్ల కర్ర		4. వేడినీరు 5. కర్రల పాయింట్ 6. భద్రపరిచే పాత్రలు, ప్లాండ్	

### Steps

1. జోన్న, రాగి మరియు సజ్జలు లేదా గోధుమ పిండిని సేకరించడం.
2. పిండిన వేడి నీటితో కలిపి ముద్దగా తయారు చేయుట.
3. పిండిని చిన్న చిన్న గుండ్రని ముద్దలుగా వేరు చేయడం.
4. చిన్న చిన్న గుండ్రని ముద్దలను చేతివ్రేళ్ళతో అదుముతూ రొట్టెను గుండ్రని ఆకారంగా తయారు చేయటం.
5. చేసిన పచ్చి రొట్టెను వేడి మంట మీద ఉన్న పెనం మీద వేయటం.
6. అటు తర్వాత ఉప్పు నీళ్లతో రొట్టెపై తడమడం,
7. రెండు వైపుల సరైన విధంగా మాఫెల రెండు ప్రక్కలా త్రిప్పటం.
8. రొట్టెని బొడిపెలు వచ్చేవరకు కాలపడం.

### Precautions

1. నాణ్యమైన రాగులు, జొన్నలు, సజ్జలు మరియు గోధుమలను ఎంచుకోవాలి.
2. వాటిని తేమ నుండి రాళ్లు రప్పలు లేకుండా జల్లెడ పట్టాలి.
3. వాటిని పురుగులనుండి చెమ్మ లేకుండా ఎండ బెట్టాలి.
4. ఎండిన వాటిని మెత్తగా ఉండేటట్లు పిండిని పట్టించాలి.
5. పిండిని అవసరమనుకున్న రొట్టెలకు సరిపడే విధంగా వేడి నీటితో నానబెట్టాలి.
6. తయారీ విధానంలో తగు జాగ్రత్తలను పాటించవలెను.
7. రొట్టెలను కాలేటప్పుడు వేడి మంటకు దూరంగా కూర్చోవాలి.
8. తయారైన రొట్టెలను వేడి పాత్రలో భద్రపరచుకోవాలి.
9. ధర నిర్ణయంలో సరైన వెలను నిర్ణయించాలి.

### Assessment of Student Activity

1. మీకు అందుబాటులో ఉన్న కొన్ని మిశ్రమాలను కలిపి రొట్టెలను తయారు చేయండి.
2. తయారీకి ఐన ఖర్చుల పట్టికను తయారు చేసి అమ్మకపు వెలను నిర్ణయించాలి.
3. రద్దీగా ఉండే మార్కెట్ పరిసరాలలోని ఒక ప్రదేశాన్ని ఎన్నుకొని కొనడానికి అనుకూలంగా ఉన్నదా లేదా అని పరిశీలన చేయాలి.
4. వస్తువు తయారు చేయుటకు అయ్యే ఖర్చు ఒక్కొక్క రొట్టెకు రూపాయలు 20/- మార్కెట్ వేళా 30/- రూ లాభం 10/- రూపాయలు

### Reference Links

1. <https://myfoodstory.com/soft-rotis-recipe/>
2. <https://www.shurp.com/recipes/wheat-roti->
3. <https://www.tarladalal.com/plain-ragi-roti-plain-nachni-roti->
4. <https://cookingfromheart.com/ragi-roti/>

**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Department of Education, Ministry of Education, Government of India**  
**Lesson Plan Format**

Name of Faculty: డా.జె.కృష్ణయ్య

Class	10 వ తరగతి	Subject	తెలుగు
Lesson Name	భాగ్యోదయం	Duration of the Lesson	
Concept(s) Covered	జీవిత చరిత్ర మరియు స్వీయ చరిత్ర రచనలు చేయడం		
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. జీవిత చరిత్ర మరియు స్వీయ చరిత్ర రచనలు చేయడం మరియు యాత్ర రచన విశేషాలు రాయడం.			
Skills that will be inculcated			
1. స్వీయ రచన సృజనాత్మక వ్యక్తికరణ ప్రశంస సామర్థ్యాలను పెంపొందించటం. 2. రాసిన అంశాలను భావానికి అనుగుణంగా వాక్యాలు, పదాలు అక్షర దోషాలపరంగా సరైన విధంగా సరి చేయుట. 3. ప్రశంసకు సంబంధించిన విషయాలను రాసి తగిన ఉదాహరణ ఇచ్చి అవగాహన కల్పించుట. 4. రాసిన విషయాలను సరైన విధంగా ప్రదర్శించుట. 5. విషయానికి మరియు సన్నివేశానికి అనుగుణంగా వివిధ నైపుణ్యాలను నవరసాలతో మేలవించి రాయుట			
Interdisciplinary concepts that may be integrated			
1.సాంఘిక, మానవ శాస్త్రాలు పరిచయం. 2.వ్యక్తి యొక్క చారిత్రక అంశాలపై లోతైన పరిశీలన చేయుట. 3. చేసిన పనులు సేవలను వివిధ గణిత, సాంఖ్యిక శాస్త్రాల ఆధారంతో నిరూపించుట. 4. వ్యక్తులు సంఘటనలపై, జీవనశైలిపై పరిసరాలప్రభావాన్ని చూపించుట.			
Learning Outcomes			
1.వివిధ కోణాల్లో ఆలోచించే విధానం మెరుగుపడుతుంది. 2.లేఖన ద్వారా సృజనాత్మక వ్యక్తికరణ నైపుణ్యం మెరుగుపడుతుంది. 3. వాస్తవిక ఉపాత్మక ప్రతిపాదనకు నిజమైన రూపం రావడానికి అక్షరబద్ధత కల్పించడం. 3.ముద్రితమైన జీవిత చరిత్ర పుస్తకాలను అమృతపు నైపుణ్యాలను తెలుసుకోవడం. 4. వ్యవస్థీకృతమైన మార్కెటింగ్ నిర్వహణ విధానం మెలకువలను పరిచయం చేయడం.			
Tools/Material Needed			
1. తెల్ల పేపర్ బిండ 2. పెన్నులు, టేబుల్, కుర్చీ 3. ప్రింటింగ్ మిషన్		4. రాయడానికి అనుకూలంగా ఉండే బల్ల, 5. లైట్ 6. బుక్ బైండింగ్ ప్యాకింగ్	



## Steps

1. ఒక అంశాన్ని ఎన్నుకొనుట జీవిత చరిత్ర శ్రేయ చరిత్ర రచన యాత్ర చరిత్ర మరియు నవలలను రాయడం.
2. ఎంచుకున్న అంశాన్ని పరిశీలన చేసి సరియైన విషయంను గుర్తించుట.
3. అంశాలను మేలవింపుగా చేసి రాయుట.
4. రాసిన విషయాలను అన్నిటిని జతపరిచి ప్రింటింగ్ కి ఇచ్చుట.
5. ప్రింటింగ్ అయిన పుస్తకాలను మార్కెటింగ్ చేయడం కొరకు ఇతరుల సహాయం కోరుట
6. మార్కెట్ చేసిన తర్వాత లాభనష్టాలను బేరిజు వేయుట.

## Precautions

1. ఎంచుకున్న అంశము కంటెంటుకు అంటే విషయానికి సరైనదా కాదా అని బేరిజు వేయుట.
2. తీసుకున్న అంశాన్ని జాగ్రత్తగా సబైక్టు మరియు కంటెంటుకు అనుగుణంగా ఉండేటట్లు చూడటం.
3. సన్నివేశానికి అనుగుణంగా స్క్రిప్టును తయారు చేయడం.
4. ఆ స్క్రిప్టు ప్రకారం అందరి భావనలకు అనుకూలంగా ఒప్పుకునే విధంగా రాయడం.
5. రచించిన స్క్రిప్టును జాగ్రత్తగా పరిచి ప్రింటింగ్ కు పంపించడం.
6. ప్రింటింగ్ అయిన అంటే ముద్రణ అయిన పుస్తకాలను జాగ్రత్తగా ప్యాకింగ్ చేయడం.
7. ప్యాకింగ్ చేసిన పుస్తకాలను జాగ్రత్తగా బుక్కు షాపుకు అనగా బుక్ షోర్ కు తరలించడం.
8. పుస్తకాల షాపు యజమానితో సరైన వెల ను నిర్ణయించుటకు అగ్రిమెంట్ చేసుకోవడం.
9. అలాగే వివిధ పుస్తకాల యొక్క పబ్లిషర్స్ కు సంబంధించిన విషయాలకు వెల ను బుక్కు స్క్రిప్ట్ కు ఖరీదు 100 రూపాయలు ప్రింటింగ్ 30 రూపాయలు అలాగే రవాణా ఖర్చు 20 రూపాయలు మొత్తం కలిపితే 150 రూపాయలు మరియు అతని యొక్క లాభం అనగా ప్రాఫిట్ 50రూపాయలు.

## Assessment of Student Activity

1. అంశంపై తీసుకునే నిర్ణయంలో మార్కెటింగ్ సర్వే చేయాలి.
2. మార్కెట్ అవసరాలపై ఒక ప్రశ్నాపత్రం ను తయారు చేయాలి.
2. ప్రశ్నాపత్రంలో లభించిన సమాధానాల ఆధారంగా ఏ అంశానికి ప్రాధాన్యత నివాలో తగిన భారత్వ పట్టికను తయారుచేసి వాటి విలువ నిర్ణయించాలి.
3. ప్రస్తుత మార్కెట్ విలువ మరియు డిమాండ్ సపై అవసరాలను బట్టి తగిన అంశాన్ని ఎన్నుకొని రచనలు చేయాలి.
4. ముద్రణ అయిన తర్వాత మార్కెట్లో సగటు వినియోగదారుడు కొనుగోలు చేయగలడా లేదా అనే విషయాన్ని నిర్ణయించుకొని నిర్ణీత ధరలను నిర్ణయించాలి.

## Reference Links

1. [https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction\\_to\\_HTML/Creating\\_hyperlinks](https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Creating_hyperlinks)
2. <https://developers.google.com/apps-script/guides/html/templates>
3. <https://stackoverflow.com/questions/8240472/printing-a-web-page-using-just-url-and-without-opening-new-window>
4. <https://britannica.com>

**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Department of Education, Ministry of Education, Government of India**  
**Lesson Plan Format**

Name of Faculty: డా. జై కృష్ణయ్య

Class	9వ తరగతి	Subject	తెలుగు
Lesson Name	శతక మధురిమ	Duration of the Lesson	45 నిమిషాలు
Concept(s) Covered	మోటివేషనల్ స్పీకర్ గా రాణిస్తూ స్థిరపడటం.		
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. మోటివేషనల్ స్పీకర్ గా రాణిస్తూ స్థిరపడటం. 2.			
Skills that will be inculcated			
1. భాష నైపుణ్యాల పై పట్టు కలిగి ఉండటం. 2. విద్యార్థులు యువకులలో నైపుణ్య అభివృద్ధిని పెంపొందించుట. 3. వివిధ హావభావాలను ప్రదర్శించే నైపుణ్యం కలిగి ఉండటం. 2. కమ్యూనికేషన్ స్కిల్స్ నైపుణ్యవంతంగా ప్రదర్శించుట. 4. భాష మీద పట్టు కలిగి అనర్గల ఉపన్యాసం ఇచ్చుట.			
Interdisciplinary concepts that may be integrated			
1. సాంఘిక, సామాజిక శాస్త్ర పరిచయం. 2. తత్వశాస్త్ర పరిచయం. 4. విజ్ఞాన శాస్త్ర పరిచయము. 3. మనోవిజ్ఞాన శాస్త్ర పరిచయం. 5. తార్కిక శాస్త్ర పరిచయము. 6. పౌరశాస్త్ర పరిచయము.			
Learning Outcomes			
1. భాష పై పట్టు కలిగి అనర్గళంగా మాట్లాడటం. 2. ప్రతిపాదనకు వాస్తవికతను కల్పించి వ్యక్తిని ప్రభావితం చేయడం. 3. సాంఘిక నైతిక విలువలను పాటించడం. 4. వాస్తవికతకు దగ్గరగా తీసుకు కొద్దిగ దగ్గరకు తీసుకు రావడం. 5. అంతర్గత శక్తులను వెలికి తీయడం సృజనాత్మకతను ప్రదర్శించడం.			
Tools/Material Needed			
1. వేదిక 2. బల్బులు 3. కుర్చీలు		4. మైకు 5. స్పీకర్లు 6. ప్రేక్షకుల గాకలరీ	
Steps			
1. ప్రేరణకు సంబంధించి మంచి కథా వస్తువుని ఎన్నుకోవడం. 2. సన్నివేశానికి అనుగుణంగా సరైన కథలు చెప్పడం. 3. భావానికి అనుగుణంగా మాటలను వ్యక్తపరచడం. 4. అనుకున్న విషయం పట్ల శ్రోతలను కార్యోన్ముఖులుగా చేసే విధంగా చేయడం. 5. విద్యార్థులు యువకులను దాగివున్న అంతర్గత ఉద్దీపనను ప్రేరేపించి వారిలో కోరికను రగిలించడం. 6. ప్రేరణ చేసి బహిర్గత క్రియల ద్వారా నెరవేర్చడం. 7. కార్యక్రమం నిర్వహణలో పాలుపంచుకోవడం మొదలగునవి.			



### Precautions

1. చెప్పబోయే అంశానికి మరియు ప్రేక్షకులకు అనుకూలమైన వాతావరణ సృష్టించడం.
2. అంశం వక్రదారి పట్టకుండా చూడడం.
3. మాట్లాడేటప్పుడు వేదికపై ఎలాంటి ఒత్తిడికిలోనవ్వకుండా చూసుకోవడం.
4. అంశములు కులం, మతం, లింగ, జాతి భేద భావాలను పాటిస్తూ ఎవరిని నొప్పించకుండా చూడటం.
5. వ్యక్తులను వారిలో ఉన్న సృజనాత్మకతను వెలికి తీసి బహిర్గత వరుస్తూ వారిని ఉన్నత వ్యక్తులుగా తీర్చిదిద్దడం.

### Assessment of Student Activity

1. సన్నివేశానికి చెప్పబోయే అంశం సరైనదా కాదా అని మదింపు చేయాలి.
2. ప్రేక్షకుల ఆలోచనకు నిర్వహించే కార్యక్రమమునకు రెండు కలిసి ఒకే విధంగా ఉన్నాయా లేదా అని చూసుకోవాలి.
3. కార్యక్రమం నిర్వహణకు 15000/- అయితే వసతుల కల్పనకు 15000/- రూపాయలు అలాగే మాట్లాడే వ్యక్తికి 20000/-  
రూపాయలు మొత్తం కలిపితే 50000/- రూపాయలు వ్యక్తికి లాభం 20000/- రూపాయలు.

### Reference Links

1. <https://www.brainfanzo.com>
2. <https://www.speakerflow.com>
3. <https://www.rocketexpansion.com>
4. <https://www.publicwords.com>

**Lesson Plan Format**

**Name of Faculty: R Ramakrishna**

<b>Class</b>	<b>10 వ తరగతి</b>	<b>Subject</b>	<b>తెలుగు</b>			
<b>Lesson Name</b>	<b>లక్ష్య సిద్ధి</b>	<b>Duration of the Lesson</b>	<b>1 పీరియడ్</b>			
<b>Concept(s) Covered</b>	<b>పరిచయం</b>					
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>						
1. వ్యాసాలు రాయడం						
<b>Skills that will be inculcated</b>						
1. అనుభూతులను, అనుభవాలను స్పష్టంగా వివరించగలగాలి. 2. అవగాహన - ప్రతిస్పందన 3. వ్యక్తీకరణ - సృజనాత్మకత 4. భాష గురించి తెలుసుకోవటం 5. భాషా నైపుణ్యాలు						
<b>Interdisciplinary concepts that may be integrated</b>						
1. భాషా నైపుణ్యాలు 2. సాంఘిక శాస్త్రం పరిచయము 3. సామాజిక శాస్త్రం						
<b>Learning Outcomes</b>						
1. విషయాలను తగిన ఉదాహరణలతో వ్యాసం రాయడం. 2. తన అనుభవాల నుండి నచ్చిన / నచ్చని అంశాల గురించి సామాజిక సమస్యలపై అభిప్రాయాలను తెలుపగలరు. 3. వివిధ అంశాల మధ్య పోలికలను తెలుపగలరు. 4. ప్రసార మాధ్యమాల్లోని విషయాన్ని వివరిస్తూ విశ్లేషిస్తూ రాయగలరు. 5. పాత్రల ఆంతర్యాలను, స్వభావాలను వివరిస్తూ రాయగలరు.						
<b>Tools/Material Needed</b>						
1. కలములు 2 కాగితాలు 3. కలర్ పేపర్స్, పెన్స్ కలర్స్		4. సామాజిక, సాంస్కృతిక అంశాలు 5. ప్రామాణిక అంశాల వుస్తకాలు 6. రచనలు				
<b>Steps</b>						

1. సమకాలీన సంఘటనలోని ముఖ్యమైన వాటిని తీసుకోవాలి.
2. ఆ యా అంశాలకు సంబంధించిన పూర్వ జ్ఞానాన్ని కలిగి ఉండాలి.
3. పూర్వాపరాలను తెలుపు అంశాలను సంబంధించిన ప్రామాణిక అంశాలను సేకరించాలి.
4. ఏ అంశాలను ఏ విధంగా రాయాలో ముందుగా ప్రణాళికను తయారు చేసుకోవాలి.
5. వ్యాసాలలోని మూలా అంశములను ఏ ఏ భాగాలలో పొందుపరచాలో నిర్ణయించాలి.
6. నిర్ణీత పరిధిని పాటిస్తూ ఆ యా అంశాల వివరణ, విశ్లేషణ చేస్తూ సులభంగా పదజాలాన్ని పాటిస్తూ వ్యాసం రాయాలి.

#### Precautions

1. ఏ ఏ అంశాల గురించి వ్రాయదలచామో ఆ యా అంశాలను దాటి వెళ్ళరాదు.
2. సులభమైన పదజాలమును అందరికీ అర్థమయ్యే విధంగా ఉండాలి.
3. ఏ వ్యక్తులకు గాని, సమూహాలకు గాని కించపరచాకుండా రాయగలగాలి.
4. ప్రామాణికతను, యధార్థానికి అనుగుణంగా స్పందించే విధంగా ఉండాలి.
5. నిర్ణీత పరిధిని దాటకుండా రాయగలగాలి.
7. కించ పరిచే విధంగా అప్రమాణంగా ఉండకుండా జాగ్రత్త వహించాలి.

#### Assessment of Student Activity

1. ఏ అంశానికై వ్యాసము రాసామో ఆ అంశమును అనుగుణంగా ఉందో లేదో సరి చూసుకోవాలి.
2. ప్రామాణికతను పాటించామో లేవు చూసుకోవాలి.
3. వివిధ రకాల వ్యాసాలను సేకరించి, చదవాల్సి, సమీక్షలు రాయాలి.
4. సమకాలీన అంశాలపై వ్యాసాలు రాయాలి.

#### Reference Links

1. [www.eenadu.com](http://www.eenadu.com)
2. [www.namasteetelangana.com](http://www.namasteetelangana.com)
3. all news papers సంపాదకీయాలు
4. [www.wikipedia.com](http://www.wikipedia.com)

**Lesson Plan Format**

**Name of Faculty: R Ramakrishna**

<b>Class</b>	<b>10 వ తరగతి</b>	<b>Subject</b>	<b>తెలుగు</b>
<b>Lesson Name</b>	<b>లక్ష్య సిద్ధి</b>	<b>Duration of the Lesson</b>	<b>1 పీరియడ్</b>
<b>Concept(s) Covered</b>			
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. కాగితాలతో బ్యాగుల తయారీ విధానము			
<b>Skills that will be inculcated</b>			
1. అవగాహన - ప్రతిస్పందన 2. వ్యక్తీకరణ - సృజనాత్మకత			
<b>Interdisciplinary concepts that may be integrated</b>			
1. సృజనాత్మకత 2. గణిత శాస్త్రం 3. ఆర్థిక శాస్త్రం			
<b>Learning Outcomes</b>			
1. భావనలను, సూక్ష్మ అంశాలను బేధాలను వివరించగలగాలి. 2. విశ్లేషించగలగటం 3. నూతన అంశాలను సేకరించటం, వ్యవస్థీకరించటం. 4. కీలక అంశాలను గుర్తించగలగడం.			
<b>Tools/Material Needed</b>			
1. రంగుల కాగితాలు 2 కలర్ పేపర్స్, కలర్ పెన్స్ 3. తాడు		4. గమ్ బాటిల్ 5. రంగులు, కార్డు బోర్డు 6. అద్దక ముద్రలు కత్తెర	
<b>Steps</b>			
1. వివిధ రకాల దళసరి రంగు కాగితాలను సేకరించటం. 2. ఎంచుకున్న కాగితాలను ఆకారాలకు అనుగుణంగా మడవటం చేయాలి. 3. క్షితిజ సమాంతరంగా మడత చేయాలి. 4. అడుగు భాగంలో దళసరి అట్ట అని లేదా కార్డు బోర్డు ముక్కలని తొడగాలి. 5. ఆధారాన్ని గమ్ ద్వారా మూసివేయాలి. 6. రెండు వైపులా అకార్డియన్ మడతలు చేయాలి. అతికించాలి. 7. ఓపెన్ సైడ్ లో పట్టుకోవటం కోసం రంధ్రాలు చేయాలి. 8. రంధ్రాల ద్వారా ఒక తాడును కట్టాలి. 9. ఇప్పుడు కాగితాల బ్యాగ్ తయారు అవుతుంది.			

10. అలంకారాల కోసం వివిధ రకాల రంగులను, అద్దకాలను వేయవచ్చు.
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. సరైన కాగితాలను ఎంచుకోవాలి.</li> <li>2. రంగులను వృధా చేయరాదు.</li> <li>3. తయారీ విధానంలో తగు జాగ్రత్తలను పాటించవలెయును.</li> <li>4. సరైన ప్రణాళికను పాటించాలి.</li> <li>5. ధర నిర్ణయంలో సరైన నిర్ణయం తీసుకోవాలి.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. వార్త ప్రతీకల ద్వారా కాగితాల బ్యాగులను తయారు చేయండి.</li> <li>2. అమ్మకము, తయారీకి అయిన ఖర్చుల పట్టికను తయారు చేయండి.</li> <li>3. వృధాగా ఉన్న వస్తువుల ద్వారా ఏదైనా ఒక నమూనాలను తయారు చేయండి.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. <a href="http://www.thebetterindia.com">www.thebetterindia.com</a></li> <li>2. <a href="http://www.wikihow.com">www.wikihow.com</a></li> <li>3. <a href="http://www.wikipedia.com">www.wikipedia.com</a></li> <li>4. <a href="http://www.youtube.com">www.youtube.com</a></li> </ol>



Name of Faculty: డా. జె. కృష్ణయ్య

<b>Class</b>	<b>10 వ తరగతి</b>	<b>Subject</b>	<b>తెలుగు</b>
<b>Lesson Name</b>	<b>జీవన భాష్యం</b>	<b>Duration of the Lesson</b>	<b>45 నిమిషాలు</b>
<b>Concept(s) Covered</b>		కవితలు, పాటలు, రచనలు ద్వారా వ్యక్తుల జీవితాలను మార్గదర్శనం చేయడం. సినిమా పాటలు, యూట్యూబ్ ద్వారా వాణిజ్యపరమైన గుర్తింపు ద్వారా రాణించుట.	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. సినిమా పాటలు, యూట్యూబ్ ద్వారా వాణిజ్యపరమైన గుర్తింపు ద్వారా రాణించుట.. 2..			
<b>Skills that will be inculcated</b>			
1. అనుభూతులను, అనుభవాలను జ్ఞానపరమైన ఆలోచనలను వాస్తవికతను కల్పించుట. 2. అవగాహన మరియు ప్రతిస్పందన. 3. చలన నైపుణ్యాల ద్వారా వివిధ రచనలు, పాటలు, గేయాలు రచించుట. 4. సృజనాత్మక ప్రశంస ద్వారా రాసిన అంశాలకు భావానికీ లయాత్మకంగా, రాగయుక్తంగా పాటలు రచించుట. 5. భాష నైపుణ్యాలు శ్రవణ, భాషణ, పఠన మరియు లేఖనాల ద్వారా ప్రదర్శించుట.			
<b>Interdisciplinary concepts that may be integrated</b>			
1. సాంఘిక, సామాజిక శాస్త్రాల పరిచయం. 2. వ్యక్తుల యొక్క చారిత్రక అంశాలపై లోతైన పరిశీలన(history). 3. సాహిత్య సేవల ఆధారంగా గణిత శాస్త్ర పరిచయం. 4. సాహిత్యము మరియు భాష శాస్త్రాల పరిచయం.. 5. కవి వర్ణన - వస్తువుకు చిత్రణ రూపం కల్పించే సౌందర్య శాస్త్రాల పరిచయం. 6. అమూర్త జ్ఞానపరమైన అంశాలను బహిర్గతం చేస్తూ వస్తువుకు చిత్రణ రూపం కల్పించే అద్భుత సౌందర్య శాస్త్రాల (Esthetic Sciences) పరిచయం.			
<b>Learning Outcomes</b>			
1. ఊహాత్మక ప్రతిపాదనకు నిజమైన రూపం రావడానికి అక్షరాల అల్లికలతో శృతిలయల ద్వారా అద్భుతమైన పాటలను గేయాలను రచించడం. 2. చక్కటి సృజనాత్మక ప్రశంస నీయమైన పాటలను పరిచయం చేయడం. 3. ఆలోచన విధానం చురుకుగా తయారవుతుంది. 4. భాషపై పట్టు కలిగి పదజాలంపై అధికారం ఏర్పడి అద్భుతమైన పాటలను రచించగలగడం. 5. విషయాలపై లోతైన అవగాహన పెంపొందించు కొనుట. 6. తగు సందర్భానికి అనుగుణంగా విషయాలను స్ఫురణ ఆయా సన్నివేశాలకనుగుణంగా నవరసాలతో కూడిన పాటలను, గేయాలను మరియు యుగళ గీతాలను రచించుట.			

Tools/Material Needed	
1. పేపర్ 2. పెన్నులు 3. కుర్చీ	4. రాయడానికి అనుగుణంగా ఉండే టేబుల్ 5. సన్నివేశానికి అనుగుణమైన వాస్తవికతతో కూడిన ప్రదేశం 6.
Steps	
<p>1. ఏదైనా ఒక సన్నివేశానికి తగిన అంశాన్ని ఎన్నుకొనుట (పాటలు, రచనలు, కవితలు) రాయటం.</p> <p>2. ఎన్నుకున్న అంశానికి అనుగుణంగా, సన్నివేశానికి అనుగుణమైన మరియు అవసరమైన పాటలను రాయడానికి ప్రణాళికను రచించుట.</p> <p>3. రాసిన అంశాలన్నింటిని మేళవింపుగా, కళాత్మకంగా చేసి ఒకే చోట కూర్చుట.</p> <p>4. పదజాలంను ఒకదానితో ఒకటి జతపరిచి ప్రాస నియమము ఉండే విధంగా చూడాలి.</p> <p>5. పాటలలో అంశాలను ఏయే భాగాలలో పొందు పర్చాలో నిర్ణయించాలి.</p> <p>6. నిర్ణీత పరిధిని పాటిస్తూ, ఆయా అంశాల వివరణ విశ్లేషణ చేస్తూ సులభమైన రీతిలో పాటలను, గేయాలను మరియు కవితలు రాయాలి.</p> <p>7. విశ్లేషణ చేసిన తర్వాత చివరగా అన్ని విధాల సరైనదని ఎంచుకొనుట.</p> <p>8.</p>	
Precautions	
<p>1. ఎంచుకున్న అంశం సరైనదా కాదా అని నిర్ణయించాలి.</p> <p>2. సన్నివేశానికి తగిన విధంగా స్క్రిప్ట్ మరియు లిరిక్స్ ను తయారు చేయుట.</p> <p>4. ఆ స్క్రిప్ట్ అందరి భావనలకు అనుగుణంగా ఉండే విధంగా రాయడం.</p> <p>5. ఇతరుల మనోభావాలు కుల మత జాతి లింగ భేదపరమైన భేదాలు రాకుండా సున్నితమైన అంశాలను దృష్టిలో ఉంచుకొని సగటు ప్రేక్షకుల్ని మెప్పించే విధంగా రాయడం.</p> <p>6. ప్రామాణికతను, యదార్థానికి అనుగుణంగా స్పందించే విధంగా ఉండాలి.</p> <p>7.</p>	
Assessment of Student Activity	
<p>1. ఎటువంటి అంశాలపై, సన్నివేశాలపై పాటలు రాయాలో ముందుగా తెలుసుకొనుట. ప్రశ్నావళిని తయారు చేయుట.</p> <p>2. సన్నివేశానికి కనుగుణంగా, దృశ్యానికి అనుగుణంగా తగిన పాటలు, గేయాలు ఉన్నాయా లేదా అని నిర్ణయించడం.</p> <p>3. ఆ పాట, గేయం సరైనదా కాదా అని విషయ నిపుణులతో అభిప్రాయ సేకరణ చేయాలి.</p> <p>4. పాటకు అంచనా మాపని (రేటింగ్ స్కేల్) ద్వారా తగిన మాపణం చేయాలి.</p>	
Reference Links	
<p>1. <a href="https://www.azlyric.com">https://www.azlyric.com</a></p> <p>2. <a href="https://www.amusixmatch.com">https://www.amusixmatch.com</a></p> <p>3. <a href="https://www.genious.com">https://www.genious.com</a></p> <p>4. <a href="https://www.lyricstraining.com">https://www.lyricstraining.com</a></p> <p>5. <a href="https://www.musicindustryhowto.com">https://www.musicindustryhowto.com</a></p>	



**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Department of Education, Ministry of Education, Government of India**  
**LESSON PLAN FORMAT**

Name of Faculty: డా. పి. కృష్ణవేణి

Class	10వ తరగతి	Subject	తెలుగు
Lesson Name	గోలకొండ పట్టణము	Duration of the Lesson	2 పిరియడ్లు
Concept(s) Covered	సందర్భకులకు టూరిస్ట్ గైడ్ గా పనిచేయటం		
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. టూరిస్ట్ గైడ్ గా పనిచేయడం. 2. 3.			
Skills that will be inculcated			
1. సజనాత్మకంగా ఆలోచించి మాట్లాడటం. 2. జన సమూహంలో ఉంటూ ఒక విషయంపై వర్ణనాత్మకంగా, స్పష్టంగా మాట్లాడటం. 3. స్థానిక కళారూపాలను చూసి ప్రతిస్పందించడం. 4. అవగాహనతో సందర్భానికి అనుగుణంగా మాట్లాడటం. 5. విన్న చూసిన, చదివిన అంశాలపై విమర్శనాత్మకంగా మాట్లాడటం.			
Interdisciplinary concepts that may be integrated			
1. స్థానికంగా ఉన్న వివిధ చారిత్రాత్మక కట్టడాల గురించి ప్రాంతాల గురించి చెప్పగలగటం. 2. చారిత్రాత్మక కట్టడాల పరిరక్షణ సైన్స్ ద్వారా తెలుసుకుంటారు. 3. గోలకొండ కోట కట్టడంలోని సాంకేతిక నైపుణ్యం తెలుసుకొని Technology వరంగా integrate చేసి చెప్పడం. 4. చారిత్రాత్మక కట్టడాలు ఇప్పటికీ చెక్కుచెదరకుండా ఉండడానికి గల సాంకేతిక కారణాలు.			
Learning Outcomes			
1. నిర్దిష్ట విషయంపై పూర్తి స్థాయి అవగాహనను పెంపొందించుకోవడం. 2. తగిన సందర్భానికి అనుగుణంగా విషయాన్ని వివరించగలగడం. 3. సామాజిక, సాంస్కృతిక రంగాలకు చెందిన పారిభాషిక వదాలను అర్థం చేసుకొని వినియోగించగలగడం. 4. స్థానికంగా ఉన్న చారిత్రాత్మక కట్టడాల పూర్వాపరాల గురించి తార్కికంగా విశ్లేషించకలుగుతారు.			
Tools/Material Needed			
1. గోలకొండ కోట చిత్రపటం. 2. టూరిజం డిపార్ట్ మెంట్ వారిచే శిక్షణా కార్యక్రమం. 3. స్థానిక, చారిత్రాత్మక కట్టడాల దర్శనం. 4. స్థానిక, చారిత్రాత్మక కట్టడాల చరిత్ర - వివరాలు.			

(PTO)



<b>Steps</b>
<ol style="list-style-type: none"> <li>1. ఎంచుకున్న అంశాల మీద పూర్తి అవగాహన కల్పించడం.</li> <li>2. స్థానికంగా చారిత్రాత్మక కట్టడాలను ప్రత్యక్షంగా దర్శింప చేయ్యాలి.</li> <li>3. దర్శించిన తరువాత అనుభవాలను వ్యాసంగా రాయించాలి.</li> <li>4. టూరిజం డిపార్ట్‌మెంట్ వారిచే సరియైన శిక్షణా కార్యక్రమాన్ని నిర్వహింప చేయ్యాలి.</li> <li>5. శిక్షణా కార్యక్రమం తరువాత స్థానికంగా ఉన్న చారిత్రాత్మక కట్టడాలను ప్రత్యక్షంగా చూస్తూ వర్ణించే విధానాన్ని గమనించాలి.</li> <li>6. సెలవు రోజులలో విద్యార్థులను చారిత్రక కట్టడాలకు, చారిత్రక ప్రదేశాలకు ఉపాధ్యాయులు తీసుకెళ్ళి వారు సంభాషించే విధానాన్ని పరిశీలించి తగిన సూచనలు ఇవ్వాలి.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. టూరిస్ట్ గైడ్‌గా వాస్తవాలను మాత్రమే సందర్శకులకు వివరించాలి.</li> <li>2. సందర్శకుల మనోభావాలు దెబ్బతినకుండా వ్యవహరించాలి.</li> <li>3. చిరాకు, కోపం లేకుండా సందర్శకులతో మెలగాలి.</li> <li>4. సభ్యత, సంస్కారములతో సందర్శకులతో మెలగాలి.</li> <li>5. చారిత్రాత్మక కట్టడాలను ప్రత్యక్షంగా చూడటానికి వెళ్ళినప్పుడు తగిన జాగ్రత్తలు తీసుకోవాలి.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. స్థానికంగా ఉన్న చారిత్ర కట్టడాల విషయాలపై వ్యాసాన్ని రాయించి, పరిశీలించాలి. సూచనలు, సలహాలు ఇవ్వాలి.</li> <li>2. వారు వివరించే విధానాన్ని విని సరియైన మార్గదర్శకం ఇవ్వాలి.</li> <li>3. టూరిజం డిపార్ట్‌మెంట్ వారు ఇచ్చిన శిక్షణా కార్యక్రమంపై Feedback తీసుకోవాలి.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. <a href="https://tourism.gov.in">https://tourism.gov.in</a></li> <li>2. <a href="https://www.sarvagyan.com">https://www.sarvagyan.com</a></li> </ol>

**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
**Department of Education, Ministry of Education, Government of India**  
**Lesson Plan Format**

Name of Faculty: డా. జై కృష్ణయ్య

Class	X	Subject	తెలుగు
Lesson Name	భిక్ష	Duration of the Lesson	45 నిమిషాలు
Concept(s) Covered	టూరిజం గైడ్ గా తయారు కావడం.		
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. టూరిజం గైడ్ గా తయారు కావడం. 2. 3.			
Skills that will be inculcated			
1. భాషా నైపుణ్యాలు (శ్రవణం, భాషణం, పఠణం, లేఖనం) 2. భాషాంతరీకరణ నైపుణ్యం. 3. మేధోమధనం (మైండ్ మ్యాపింగ్) 4. వర్ణన నైపుణ్యం. 5. ప్రతిస్పందించడం.			
Interdisciplinary concepts that may be integrated			
1. సాంఘిక శాస్త్రాల పరిచయం. 2. భారతీయ భాషలతో పాటు విదేశీ భాషలపై పట్టు కలిగి ఉండడం. 3. గణిత శాస్త్ర పరిచయం. 4. విజ్ఞాన శాస్త్ర సాంకేతిక శాస్త్రం. 5. భూగోళ శాస్త్రం. 6. ఆర్థిక శాస్త్రం. 7. మానవాభివృద్ధి శాస్త్రం., పౌరశాస్త్రం.			
Learning Outcomes			
1.దేశాలు రాష్ట్రాల మధ్య సన్నిహిత సంబంధాలు విర్పడుట. 2. దేశాలు, రాష్ట్రాల మధ్య సన్నిహిత రాకపోకలు విర్పడుట. 3.సంస్కృతి నాగరికత, ఆచార్య వ్యవహారాలు చారిత్రక అంశాలు తెలుసుకొనుట. 4.టూరిజం ప్యాకేజీ అభివృద్ధి తలసరి ఆదాయం పెరుగుదల. 5.వివిధ శీతోష్ణస్థితిలకు తట్టుకొని జీవించడం.			
Tools/Material Needed			

1. గైడ్ గది 2. ఫోటోలు, వీడియోలు 3. కరపత్రాలు	4. నివేదికలు, రూట్ మ్యాప్ 5. డాక్యుమెంటరీలు 6. ట్రోచర్స్
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### Steps

1. ఒక ప్రసిద్ధ ప్రసిద్ధి పొందిన చారిత్రక స్థలంలో కార్యాలయం గదిని ఏర్పాటు చేయాలి.
2. సందర్శకులు సందర్శించే ప్రదేశాలు ఒక ప్లో చార్ట్ తయారు చేసుకొని పట్టిక ఆధారంగా రోడ్ మ్యాప్ ద్వారా తెలియజేయాలి.
3. సందర్శకులను సమయానికి అనుకూలంగా సంసిద్ధులుగా తయారు చేయాలి.
4. ప్రదేశాలను సందర్శించినప్పుడు అక్కడి విశిష్టతలను వివరించడం.
5. వారి వెంట ఉండి వారి ఉత్సుకత గుర్తించడం.
6. దగ్గరలో ఉన్న పురావస్తు పరిశోధన శాఖలను సందర్శింపజేయడం.
7. ఆ ప్రాంతం యొక్క చారిత్రక భౌగోళిక విషయాలను అర్థమయ్యే రీతులు చెప్పుట.
8. యాత్రికులు బసచేసిన విడిది ప్రదేశానికి సురక్షితంగా చేర్చడం.

### Precautions

1. పక్కా ప్రణాళికతో ప్రయాణం చేయాలి. ముందుగా వచ్చే ఇబ్బందులను గుర్తించి తగు జాగ్రత్తలు తీసుకోవాలి.
3. తీసుకెళ్లే ప్రదేశం గూర్చి సరైన అవగాహన కలిగి ఉండాలి.
4. వివిధ శీతోష్ణస్థితుల ఆధారంగా వారిని సరైన విధంగా, సరైన ప్రదేశంలో ఉండే విధంగా ఏర్పాటు చేయాలి.
5. వివిధ కాలాలను దృష్టిలో పెట్టుకొని ముఖ్యంగా (వేసవి, చలి మరియు వర్షాకాలం కాలం) లను ఆ ప్రదేశాన్ని దృష్టిలో పెట్టుకొని తగిన జాగ్రత్తలు తీసుకోవాలి.

### Assessment of Student Activity

1. సందర్శించే ప్రదేశంపై తగిన ప్రణాళిక కనుగుణంగా పరిశీలన చేయాలి.
2. వాతావరణ పరిస్థితులపై మరియు పరిసరాలపై ఒక సర్వే చేసి మదింపు చేయాలి.
3. అక్కడి ప్రదేశాలలో ముఖ్యంగా యాత్ర ప్రదేశాలలో నీరు ఆహారం వసతులు సరైన విధంగా ఉన్నాయా లేదా అనే ఒక ప్రశ్నావళిని తయారు చేసుకొని ఆ ప్రశ్నావళి సరైనదైతేనే దాని అమలు చేయాలి.
4. ముఖ్యంగా ఇక్కడ వచ్చేది ట్రావెల్ వెహికల్ ఫీజు 10,000 రూపాయలు అయితే, సందర్శన ఫీజు 2000 రూ. భోజన ఖర్చులు 3000 రూ అలాగే గైడ్ ఫీజు 5000 రూ కలుపుకుంటే మొత్తము 20000 వస్తుంది అందులోకి గైడ్ ఫీజు 5000 గా లాభంగా మనకు కనిపిస్తుంది.

### Reference Links

1. <https://www.researchgate.net>
2. <https://www.worldtravelguide.net>
3. <https://www.bharatskills.gov.in>
4. <https://www.ligbuides.tre.ca>

**Mahatma Gandhi National Council of Rural Education (MGNCRE)  
Department of Education, Ministry of Education, Government of India  
LESSON PLAN FORMAT**

Name of Faculty: డా. పి. కృష్ణవేణి

Class	10వ తరగతి	Subject	తెలుగు
Lesson Name	భూమిక	Duration of the Lesson	3 పీరియడ్లు
Concept(s) Covered			
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. కథలు వ్రాసి, రచయితలుగా రాణించడం.			
Skills that will be inculcated			
1. తార్కికంగా, సృజనాత్మకంగా ఆలోచించడం. 2. సృజనాత్మకంగా, ఉపాధాత్మకంగా రాయగలగటం. 3. వర్ణనాత్మకంగా రాయగలగటం. 4. ప్రతీయలను ఒకదాన్ని మరొక రూపంలోకి మార్చగలగటం.			
Interdisciplinary concepts that may be integrated			
1. చారిత్రక విషయాలు కథావస్తువుగా తీసుకోవడం. 2. పురాణాలు, ఇతిహాసాలు. 3. నవీన బోధనా పద్ధతులు, ICT Integrate. 4. తెలుగులో వ్రాసిన కథలను హిందీ, ఇంగ్లీషు భాషలలోకి భాషాంతరీకరణం చేయగలగడం.			
Learning Outcomes			
1. సామాజిక స్పృహతో కథలు రాయగలగడం. 2. సంఘటనను కూలంకుషంగా అర్థం చేసుకొని రాయగలగడం. 3. పరివర్తనకు కథలు గొప్ప ఆయుధాలుగా గుర్తిస్తారు. 4. సామాజిక అంశాలపై స్పష్టంగా, నిర్ణయంగా తెలుపకలుగుతారు.			
Tools/Material Needed			
1. వివిధ కథల పుస్తకాలు. 2. కథలు రాసే విధానంపై శిక్షణా కార్యక్రమము. 3. తెల్ల పేపర్లు.			

(PTO)



<b>Steps</b>
<ol style="list-style-type: none"> <li>1. కథలు రకాలు, విశిష్టత గురించి పూర్తి అవగాహన కల్పించాలి.</li> <li>2. విద్యార్థులను గ్రూపులుగా విభజించి కథలను సేకరించి తీసుకొనని రమ్మనాలి.</li> <li>3. కథలను వ్రాసే విధానంపై ప్రముఖ రచయితచే శిక్షణా కార్యక్రమం ఏర్పాటు.</li> <li>4. కథా వస్తువుపై పూర్తి అవగాహన కలిగించాలి.</li> <li>5. ఒక సంఘటనను తెలియజేసి దానిపై వర్ణనాత్మకంగా కథను రాయించాలి.</li> <li>6. సగం కథను వివరించి మిగతా కథను ఊహించి వ్రాయమనాలి.</li> <li>7. ఒక విషయాన్ని సంక్షిప్తంగా తెలియజేసి, దానిపై నిర్ణీత సమయంలో కథను వ్రాయించాలి.</li> <li>8. కథలను వ్రాసే పోటీలను నిర్వహించి తగిన పారితోషికం ఇవ్వాలి.</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. కథలను వ్రాసేటప్పుడు పదజాలం వాడుకలో తగిన జాగ్రత్త తీసుకోవాలి.</li> <li>2. చారిత్రక, రాజకీయ, సాంఘిక విషయాలపై కథలను వ్రాసేటప్పుడు వాస్తవాల మీదనే దృష్టి పెట్టాలి.</li> <li>3. జాతి, మతాలను కించపరిచే విధంగా రచనలు ఉండకుండా చూసుకోవాలి.</li> <li>4. వాస్తవాలను వెలుగులోకి తీసుకొని వ్రాయటానికి చేసే రచనలపై తగు జాగ్రత్తలు తీసుకోవాలి.</li> </ol>
<b>Assessment of Student Activity</b>
<ol style="list-style-type: none"> <li>1. ఏదైన ఒక సంఘటనపై వర్ణనాత్మకంగా కథను వ్రాయించి, వ్యక్తిగత మదింపు చేసి తగిన మాపనం చెయ్యాలి.</li> <li>2. ప్రతి విషయానికి ఎంత వెయిట్‌జు ఇవ్వాలి తగిన భారత్వ పట్టిక ద్వారా కేటాయించాలి.</li> </ol>
<b>Reference Links</b>
<ol style="list-style-type: none"> <li>1. <a href="https://ie.m.wikipedia.org">https://ie.m.wikipedia.org</a></li> <li>2. <a href="https://neetikathalu.wordpress.com">https://neetikathalu.wordpress.com</a></li> <li>3. <a href="https://tc.vikaspedia.en&gt;edn">https://tc.vikaspedia.en&gt;edn</a></li> </ol>

Name of Faculty: డా. జై కృష్ణయ్య

Class	9వ తరగతి	Subject	తెలుగు
Lesson Name	శతక మధురిమ	Duration of the Lesson	45 నిమిషాలు
Concept(s) Covered	మోటివేషనల్ స్పీకర్ గా రాణిస్తూ స్థిరపడటం.		
Vocation(s) or Occupation(s) that can be connected to this lesson			
1.మోటివేషనల్ స్పీకర్ గా రాణిస్తూ స్థిరపడటం. 2.			
Skills that will be inculcated			
1. భాష నైపుణ్యాల పై పట్టు కలిగి ఉండటం. 2.విద్యార్థులు యువకులలో నైపుణ్య అభివృద్ధిని పెంపొందించుట. 3. వివిధ హావభావాలను ప్రదర్శించే నైపుణ్యం కలిగి ఉండటం. 2. కమ్యూనికేషన్ స్కిల్స్ నైపుణ్యవంతంగా ప్రదర్శించుట. 4. భాష మీద పట్టు కలిగి అనర్గల ఉపన్యాసం ఇచ్చుట.			
Interdisciplinary concepts that may be integrated			
1 సాంఘిక, సామాజికల శాస్త్ర పరిచయం. 2. తత్వశాస్త్ర పరిచయం. 4. విజ్ఞాన శాస్త్ర పరిచయము. 3. మనోవిజ్ఞాన శాస్త్ర పరిచయం. 5. తార్కిక శాస్త్ర పరిచయము.6. పౌరశాస్త్ర పరిచయము.			
Learning Outcomes			
1. భాష పైపట్టు కలిగి అనర్గళంగా మాట్లాడటం. 2. ప్రతిపాదనకు వాస్తవికతను కల్పించి వ్యక్తిని ప్రభావితం చేయడం. 3. సాంఘిక నైతిక విలువలను పాటించడం. 4. వాస్తవికతకు దగ్గరగా తీసుకు కొద్దిగ దగ్గరకు తీసుకు రావడం. 5. అంతర్గత శక్తులను వెలికి తీయడం సృజనాత్మకతను ప్రదర్శించడం.			
Tools/Material Needed			
1. వేదిక 2. బల్బులు 3. కుర్చీలు		4. మైకు 5. స్పీకర్లు 6. ప్రేక్షకుల గ్యాలరీ	
Steps			
1. ప్రేరణకు సంబంధించి మంచి కథా వస్తువుని ఎన్నుకోవడం. 2. సన్నివేశానికి అనుగుణంగా సరైన కథలు చెప్పడం. 3. భావానికి అనుగుణంగా మాటలను వ్యక్తపరచడం. 4. అనుకున్న విషయం పట్ల శ్రోతలను కార్యోన్ముఖులుగా చేసే విధంగా చేయడం. 5. విద్యార్థులు యువకులను దాగివున్న అంతర్గత ఉద్దీపనను ప్రేరేపించి వారిలో కోరికను రగిలించడం. 6. ప్రేరణ చేసి బహిర్గత క్రియల ద్వారా నెరవేర్చడం. 7. కార్యక్రమం నిర్వహణలో పాలుపంచుకోవడం మొదలగునవి.			

### Precautions

1. చెప్పబోయే అంశానికి మరియు ప్రేక్షకులకు అనుకూలమైన వాతావరణ సృష్టించడం.
2. అంశం వక్కదారి పట్టకుండా చూడడం.
3. మాట్లాడేటప్పుడు వేదికపై ఎలాంటి ఒత్తిడికిలోనవ్వకుండా చూసుకోవడం.
4. అంశములు కులం, మతం, లింగ, జాతి భేద భావాలను పాటిస్తూ ఎవరిని నొప్పించకుండా చూడటం.
5. వ్యక్తులను వారిలో ఉన్న సృజనాత్మకతను వెలికి తీసి బహిర్గత వరుస్తూ వారిని ఉన్నత వ్యక్తులుగా తీర్చిదిద్దడం.

### Assessment of Student Activity

1. సన్నివేశానికి చెప్పబోయే అంశం సరైనదా కాదా అని మదింపు చేయాలి.
2. ప్రేక్షకుల ఆలోచనకు నిర్వహించే కార్యక్రమమునకు రెండు కలిసి ఒకే విధంగా ఉన్నాయా లేదా అని చూసుకోవాలి.
3. కార్యక్రమం నిర్వహణకు 15000/- అయితే వసతుల కల్పనకు 15000/- రూపాయలు అలాగే మాట్లాడే వ్యక్తికి 20000/-  
రూపాయలు మొత్తం కలిపితే 50000/- రూపాయలు వ్యక్తికి లాభం 20000/- రూపాయలు.

### Reference Links

1. <https://www.brainfanzo.com>
2. <https://www.speakerflow.com>
3. <https://www.rocketexpansion.com>
4. <https://www.publicwords.com>

Name of Faculty: డా.జె.కృష్ణయ్య

<b>Class</b>	10 వ తరగతి	<b>Subject</b>	తెలుగు
<b>Lesson Name</b>	ఎవరి భాష వాళ్లకు వినసాంపు	<b>Duration of the Lesson</b>	45 నిమిషాలు
<b>Concept(s) Covered</b>	సినీ గీతాలు రాయుట మరియు రచయితగా ఎదగడం.		
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. సినీ గీతాలు రాయుట మరియు రచయితగా ఎదగడం.			
2.			
<b>Skills that will be inculcated</b>			
1. భాషా నైపుణ్యాలలో లేఖన నైపుణ్యం మీద మంచి పట్టు కలిగి ఉండటం.			
2. పాటలలో కొత్తదనాన్ని ఎంచుకొని సృజనాత్మక నైపుణ్యం పెంపొందించుట.			
3. నవరసాలను అవసోపన పట్టి వివిధ పాటలకు అనుగుణంగా గీతాలను రచించడం.			
4. ప్రాంతీయ భాషలోని పదాలను ప్రపంచానికి తెలియపరచడం.			
5. ఊహాత్మక వర్ణన నైపుణ్యాన్ని కలిగి ఉండటం.			
<b>Interdisciplinary concepts that may be integrated</b>			
1. వివిధ ప్రాంతీయ భాషలలో అంతర్గతంగా ఉన్న భాషా సౌందర్యాన్ని వెలికి తీయడం.			
2. సామాజిక, సాంఘిక శాస్త్ర పరిచయం.			
3. తత్వశాస్త్ర పరిచయం.			
4. మనోవిజ్ఞాన శాస్త్ర పరిచయం.			
5. భూగోళ శాస్త్రం, గణితశాస్త్రం లలిత కళల పరిచయం.			
<b>Learning Outcomes</b>			
1. లేఖన నైపుణ్యం పై పట్టు కలిగి విస్తృతపరచడం.			
2. నిర్దిత విషయంపై పూర్తిస్థాయి అవగాహన పెంపొందించుకోవడం.			
3. అమూర్త భావనలకు సాధన రూపం కల్పించి విస్తృతపరచడం.			
4. ఊహాత్మక ప్రతిపాదనకు వాస్తవికతను తోడు చేసి బాహ్య ప్రపంచానికి పరిచయం చేయడం.			
5. మంచి రచయితగా గుర్తింపు పొందటం.			



Tools/Material Needed	
1. తెల్ల కాగితం 2. టేబుల్ 3. కుర్చీలు	4. పెన్ను 5. పార్కు 6. సముద్ర తీరం
Steps	
<ol style="list-style-type: none"> <li>1. పాటకు సంబంధించి కథా వస్తువుని ఎన్నుకోవడం.</li> <li>2. సన్నివేశానికి మరియు భావానికి అనుగుణంగా పాటను రాయటం.</li> <li>3. చిత్ర అవలోకనం చేసిన తర్వాత పాటకు యదార్థ రూపం కల్పించడం.</li> <li>4. రాసిన పాటలను గాయకుల చేత పాడిస్తూ యతి, ప్రాసలు పల్లవి, చరణాలకు రాగ యుక్తంగా, భావ యుక్తంగా సరిగమలను మేళవించి రాయడం.</li> <li>5. స్వర లయలకు అనుగుణంగా పాడించడం.</li> <li>6. బాగా పాడిన పాటలకు తగు సూచనలు ఇవ్వడం.</li> </ol>	
Precautions	
<ol style="list-style-type: none"> <li>1. రాయబోయే పాటకు ఒక సుందరమైన ప్రదేశాన్ని ఎంచుకోవాలి.</li> <li>2. దర్శకుల యొక్క ఊహాత్మక ప్రతిపాదనకు వాస్తవరూపం కల్పించాలి.</li> <li>3. పాట రాసేంతవరకు ఎటువంటి ఒత్తిడులకు గురికాకూడదు.</li> <li>4. రాసిన పాట జనామోదయోగ్యం ఉన్నదా లేదా చూసుకోవాలి.</li> <li>5. కులం మతం లింగ జాతి భేద భావాలను దృష్టిలో పెట్టుకొని పాటలు రాయాలి.</li> <li>6. నుడికారాలు, సామెతలు, జాతీయాలను దృష్టిలో పెట్టుకొని పాట రాయాలి.</li> <li>7. భాషలో ఉన్న అంతః సౌందర్యాన్ని సమాజానికి హితముగా బహిర్గతం చేయాలి.</li> </ol>	
Assessment of Student Activity	
<ol style="list-style-type: none"> <li>1. పాట రాయడానికి అవసరమైన దాని విభిన్న కోణాలను పరీక్షించడం.</li> <li>2. సంగీత సాహిత్యాన్ని అనుగుణంగా ఉన్నదా లేదా అని చూసుకోవడం.</li> <li>3. సంగీత ప్రియులను ఆకట్టుకునే విధంగా ఉన్నదా లేదా అని సరి చేసుకోవడం.</li> <li>4. సినిమా గీతం ఖరీదు 50000 రూపాయలు అయితే పాట పాడినందుకు 20000 రూపాయలు మరియు రచయిత పాట రాసినందుకు 50000 రూపాయలు మొత్తము 120000 వేల రూపాయలు.</li> </ol>	
Reference Links	
<ol style="list-style-type: none"> <li>1. <a href="https://www.makeuseof.com/writing-song-lyrics-best-websites/">https://www.makeuseof.com/writing-song-lyrics-best-websites/</a></li> <li>2. <a href="https://www.wikihow.com">https://www.wikihow.com</a></li> <li>3. <a href="https://www.sitepoint.com">https://www.sitepoint.com</a></li> <li>4. <a href="https://www.musicproductionhq.com">https://www.musicproductionhq.com</a></li> </ol>	

**Mahatma Gandhi National Council of Rural Education (MGNCRE)**  
Department of Education, Ministry of Education, Government of India  
**Lesson Plan Format**

Name of Faculty: డా.జె.కృష్ణయ్య

Class	10 వ తరగతి	Subject	తెలుగు
Lesson Name	కొత్తబాట	Duration of the Lesson	45 నిమిషాలు
Concept(s) Covered	మిమిక్రీ యాంకర్ గా స్థిరపడుట.		
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. మిమిక్రీ యాంకర్ గా స్థిరపడుట మరియు రాణించడం 2.			
Skills that will be inculcated			
1. భాషా నైపుణ్యాల ను ప్రాంతీయ మాండలికాలలో మాట్లాడడం. 2. నవరసాలను అవసోవన పట్టి ప్రేక్షకులను మెప్పించడం. 3. సృజనాత్మక వ్యక్తికరణం. 4. వివిధ భౌగోళిక పరిస్థితులను అవగాహన చేసుకుని సర్దుబాటు కావటం. 5. భాషాంతరీకరణ నైపుణ్యం.			
Interdisciplinary concepts that may be integrated			
1. వివిధ భాషల పరిచయం. 2. సామాజిక, సాంఘిక శాస్త్రాల పరిచయం. 3. మనోవిజ్ఞాన శాస్త్ర పరిచయం. 4. గణిత శాస్త్ర పరిచయం. 5. లలిత కళలు (చిత్రలేఖనం, నాట్యం, సంగీతం, శిల్పం, కవిత్వం) మొదలుగునవి.			
Learning Outcomes			
1 భాషా నైపుణ్యాలు శ్రవణ, భాషణ, పఠన, లేఖనములను అభివృద్ధి పరచడం. 2. భాష పై వట్టు కలిగి సందర్భానికి అనుగుణంగా ప్రసంగించుట. 3. నిర్దిత విషయంపై పూర్తిస్థాయి వట్టు కలిగి ఉండటం. 4. హావాభావాలు, హాస్య చతురతతో కూడిన నైపుణ్యాలు ప్రదర్శించుట. 5. సంపూర్ణ మూర్తిమత్వమును ప్రదర్శించుట.			

<b>Tools/Material Needed</b>	
1. అలంకరణ సామగ్రి 2. మైకు 3. కుర్చీలు,	4. వేదిక 5. ప్రేక్షకుల గ్యాలరీ 6. విద్యుత్ బల్బులు
<b>Steps</b>	
1. అంశాన్ని ఎన్నుకొనుట 2. అంశానికి తగిన జ్ఞానమును పొందుట. 3. అవగాహన చేసుకొనుట. 4. మిమిక్రీ ప్రక్రియకు అనుగుణంగా పాత్రలో లీనం కావటం. 5. వివిధ హాస్యావాలను ప్రదర్శించుట. 6. ఆశ్చర్యంతో, హాస్య చతురతతో సగటు ప్రేక్షకుడిని మెప్పించుట.	
<b>Precautions</b>	
1. సభాస్థలిని ఎంచుకోవాలి. 2. సరైన ఏర్పాట్లు చేయుట (మైకు, కుర్చీలు, స్పీకర్, బల్బులు) 3. నిర్వాహకులతో సరైన సమన్వయము ఏర్పాటు చేసుకోవాలి. 4. ఎంచుకున్న అంశాన్ని ఎటువంటి ఇబ్బందులకు గురికాకుండా ముందు జాగ్రత్తగా తనప్రదర్శనకు సమాయత్తమగుట. 5. చివరకు ప్రేక్షకులకు ఎటువంటి ఇబ్బందులు రాకుండా చూడుట.	
<b>Assessment of Student Activity</b>	
1. ఎంచుకున్న అంశం సరైనదా కదా అని సరి చేసుకోవాలి. 2. దానికి ఇతను అర్థుడా, కాదా అని తెలుసుకొనుటకు తగు మాపణం చేయాలి. 3. తరువాత ఆ కార్యక్రమం విజయవంతం అయ్యిందా లేదా అని భేరీజు వేసుకోవాలి. 4. కార్యక్రమము వెల 20000/- రూపాయలు + పనిముట్లు కు 15000/- రూపాయలు మిమిక్రీ ఖర్చు 15000/- రూపాయలు. మొత్తం 50000 /- రూపాయలు అందులో లాభం 10000 రూపాయలు.	
<b>Reference Links</b>	
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## CONCLUSION ముగింపు

విద్యార్థి విద్యార్థనలో భాగంగా తను పొందిన జ్ఞానరంగం, భావావేశ రంగం మరియు మానసిక చలనాత్మక రంగాలను సమన్వయం చేసుకుంటూ భాష వాచకాలు ద్వారా విద్యార్థి తను పొందిన అభ్యసన అనుభవాలను గుర్తుకు చేసుకుంటూ తన చుట్టూ ఉన్న వనరులను వినియోగంలోనికి తేవాలనే ఆలోచనతో తన సంస్కృతి , సాహిత్య విశేషాలను మేళవింపుతో చారిత్రక వైభవాలనూ తెలుసుకుంటూ దానితో పాటుగా ఆలోచించుట, అవగాహన చేసుకొనుట ద్వారా నూతన వస్తు వినియోగాలను, సహజవనరులు ద్వారా నవి న వస్తు అవిష్కరణ జరుగుతుంది. తద్వారా నిరంతరం వృత్తి పర నైపుణ్యాలను, జ్ఞాన పరిధిని విస్తృత పరుచుకుంటూ ఉన్నత వ్యక్తిత్వాన్ని, విశిష్ట వైఖరులను పెంపొందించుకుంటూ విద్యలో వృత్తి విద్య మరియు అనుభవ పూర్వక అభ్యసన కార్యక్రమాల ఏకీకరణ జరగాలి.

వ్యవస్థాపక బోధన, వృత్తి విద్య బోధనా అనుభవపూర్వక అభ్యసన బోధనా మరియు విద్యార్థి ఉపాధ్యాయులను సంపూర్ణ మూర్తిమత్వంతో విద్యార్థులను పరిపూర్ణ నైపుణ్యవంతం చేయడంలో సహాయపడుతుంది. ప్రతి పాఠంలో వృత్తి పర సామర్థ్యాలసాధనకు అనుగుణంగా స్థానిక వనరులను ఉపయోగించుకుంటూ విభిన్న కోణాల్లో ఆలోచించుట, సృజనాత్మక వ్యక్తీకరణ భాషా నైపుణ్యాల సాధన ద్వారా మేధోమధన ప్రక్రియల ద్వారా వృత్తి పూర్వక ప్రాజెక్ట్ పనిని పూర్తిగావించాలి.

ఇంత మంచి కార్యక్రమం నిర్వహించిన MGNCRE చైర్మన్ డా. W.G. ప్రసన్న కుమార్ గారికి మరియు కోఆర్డినేటర్ మేడమ్ శ్రీ పద్మజ జూలూరు గారికి యూనివర్సిటీ కాలేజీ అఫ్ ఎడ్యుకేషన్, ఉస్మానియా యూనివర్సిటీ ప్రెసిపాల్ రవీంద్ర నాథ్ K మూర్తి గారికి, విభాగ అధిపతి ప్రో. A రామకృష్ణ గారికి, అలాగే సీనియర్ ప్రో. T.మృణాళిని మేడమ్ గారికి, బోర్డ్ అఫ్ ఫడీస్ చైర్ పర్సన్ డా. సునీత మేడమ్ గారికి, డా.లలిత,డా.శంకర్, డా.దుర్గేశం ,డా.సుజాత,డా.ధర్మతేజ మరియు డా. మధుకర్ మరియు నా తోటి ఉపాధ్యాయ బృందానికి, నాకు ప్రత్యేక సహకారం అందించిన మా తెలుగు బోధనోపాన్యాసకులు డా. కృష్ణ వేణి మేడం గారు AMS CTE, శ్రీ రామకృష్ణ గారు MNR CTE హైదరాబాద్ గార్లకు నా ప్రత్యేక నా నమఃసుమాంజలిలు.

నమస్కారములతో....!

ఇట్లు  
మీ భవధీ యుడు.  
డా.జె.కృష్ణయ్య  
అసిస్టెంట్ ప్రొఫెసర్ (సి),  
యూనివర్సిటీ కాలేజీ అఫ్ ఎడ్యుకేషన్,  
ఉస్మానియా విశ్వవిద్యాలయం,  
హైదరాబాద్ . 007.

## ACKNOWLEDGEMENT

తేదీ 9-10 జనవరి 2023 రోజున ఉపాధ్యాయ విద్యా కళాశాల, ఉస్మానియా విశ్వవిద్యాలయం బి.ఎడ్ కాలేజ్ నందు మహాత్మా గాంధీ జాతీయ గ్రామీణ విద్యా మండలి MGNRCE, VENTLE సమన్వయ కర్త డా. వడ్డేజ జూలూరు గారు అలాగే ఈ కార్యక్రమంలో పాల్గొన్న సీనియర్ ప్రొఫెసర్ A. రామకృష్ణ విభాగాధిపతి, ప్రొఫెసర్ T. మృణాలిని గారు, ప్రిన్సిపాల్ రవీంద్ర నాథ్ K. మూర్తి గారు, బోర్డు అఫ్ స్టడీస్ చైర్ పర్సన్ డా. సునీత గారు డా. లలిత, డా. శంకర్, డా. దుర్గేశం, డా. ధర్మజేజు మరియు డా. మధుకర్ అలాగే నా తోటి ఉపాధ్యాయ మిత్ర బృందం అందరికీ హృదయ పూర్వక వందనాలు.

ఆనాటి కార్యక్రమంలో వక్తలు చేసిన ప్రసంగం పాఠం ఆహుతులను ఆకట్టుకుంది పాఠ్య ప్రణాళికలో, సిలబస్, కరికులం ఫ్రేమ్ వర్క్ లో వృత్తి విద్యను చేర్చాల్సిన అవసరం ఎంతయినా ఉన్నదని నొక్కిచెప్పారు. ఉదా: కొరియా, జపాన్, చైనా లాంటి దేశాలు అభివృద్ధి చెందడానికి కారణం వారి పాఠ్య ప్రణాళికలో వృత్తి సహిత విద్యను అందించటమే ప్రధాన కారణమని అన్నారు.

విద్యార్థి ప్రాథమిక స్థాయి నుండే వృత్తి పూర్వక విద్యను అభ్యసించినట్లయితే అందుకు జ్ఞానాంశాలు తోడైతే విద్యార్థి అనుకున్న లక్ష్యాలను నెరవేర్చుకుని పని అనుభవం ద్వారా సమాజ ఉన్నతికి పాటుపడవచ్చునని అందుకు సరైన విద్యా లక్ష్యాలు అవి సూచించే అంతర్గత విషయాల ఆధారంగా విద్యార్థిలో దాగియున్న అంతర్గత శక్తులను వికసించజేయడమే ఈ కార్యక్రమం యొక్క ప్రధాన లక్ష్యం.

ఈ ప్రాజెక్టు రచనలో విషయం సేకరణ మరియు నాకు సహకరించిన శ్రీ ఆర్ . రామకృష్ణ సీనియర్ ఉపన్యాసకులు MNR టీచర్ ఎడ్యుకేషన్ కాలేజీ కూకట్ పల్లి హైదరాబాద్ మరియు డా. పి కృష్ణవేణి సీనియర్ లెక్చరర్ AMS టీచర్ ఎడ్యుకేషన్ కాలేజీ హైదరాబాద్ గారికి ప్రత్యేక కృతజ్ఞతాభినందనలు.

డా. జె. కృష్ణయ్య  
అసిస్టెంట్ ప్రొఫెసర్ (సి)  
ఉపాధ్యాయ విద్యా కళాశాల, ఉస్మానియా విశ్వవిద్యాలయం  
హైదరాబాద్. తెలంగాణ రాష్ట్రం  
మొబైల్ : 9032697165  
ఈ మెయిల్ : krishnajias@gmail.com

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## 2. Valasakooli lesson reference links:





మనం మరల అలాంటి మనం నవ ప్రాంతాల్లోకి వెళ్లిం.

రెడ్ జింట్రిబెడ్ ప్రాజెక్టు పని

వలసకూలీ చిత్రాల్ని గీసి, వలసకూలీల ఎదుర్కొంటున్న కష్టాలను  
కవితరూపంలో వ్రాయండి. పది వాక్యాల వ్రాయాలి

ఉదా:-> ఉన్న ఊరికి భారమయ్యం  
కన్న వారికి దూరమయ్యం  
కాయకష్టం చేసేటోళ్ళం  
కనీస సౌకర్యాల లేనివాళ్ళం  
(జలా కవిత వ్రాయాలి)

అయ్యో ఎంత కష్టమోచ్చేరా నీకు  
ఎంత కష్టం ఒచ్చేరా  
ఉన్న ఊరిలో, తిందమంటే తిండి లేదు,  
వర్షం లేక పనిలేదు, వరదోలోచ్చి అన్నీ  
తుడిచిపోయే  
ఏమి చేతువు రా ఓ బడుగు కూనా ఏమి  
చేతువు రా  
చదువుకున్నా ఉద్యోగం కష్టం దొరకడం  
పొట్ట పట్టి చేతి సంచిపట్టి ఊరూరాతిరగడం  
ఎలాగ పొద్దు గడిచేనురా ఓ పల్లె పోరడా  
  
పట్టణంలో ఇల్లు కడతారు, భవనాలు కడతారు,  
బ్రిడ్జ్ కడతారు, రైళ్లు కడతారు  
  
ఇక వలస పోరా నీ ఊరు విడిచి పట్టణం దారి  
పట్టరా

3. Rangacharyatho mokhamukhi:





[https://www.google.com/imgres?imgurl=https%3A%2F%2Fi.ytimg.com%2Fvi%2FhkHwRb-Ea5E%2Fhqdefault.jpg&imgrefurl=https%3A%2F%2Fm.youtube.com%2Fwatch%3Fv%3DhkHwRb-Ea5E&tbnid=szAcu6-IMFExfM&vet=10CCYQxiAoCWoXChMI00\\_BnfPV\\_QIVAAAAAB0AAAAAEAs..i&docid=0W0xGGuKbFnmpM&w=480&h=360&itg=1&q=3.%20Rangacharyatho%20mokhamukhi%20interview%20skills&ved=0CCYQxiAoCWoXChMI00\\_BnfPV\\_QIVAAAAAB0AAAAAEAs](https://www.google.com/imgres?imgurl=https%3A%2F%2Fi.ytimg.com%2Fvi%2FhkHwRb-Ea5E%2Fhqdefault.jpg&imgrefurl=https%3A%2F%2Fm.youtube.com%2Fwatch%3Fv%3DhkHwRb-Ea5E&tbnid=szAcu6-IMFExfM&vet=10CCYQxiAoCWoXChMI00_BnfPV_QIVAAAAAB0AAAAAEAs..i&docid=0W0xGGuKbFnmpM&w=480&h=360&itg=1&q=3.%20Rangacharyatho%20mokhamukhi%20interview%20skills&ved=0CCYQxiAoCWoXChMI00_BnfPV_QIVAAAAAB0AAAAAEAs)

#### 4. Dheekshaku siddamu kandi

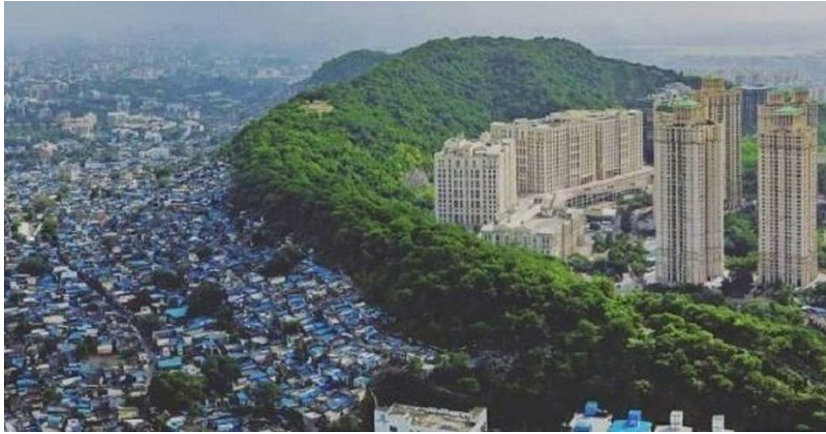




6. Vayasam lesson reference links



6. Korus lesson reference links



7. Vagbhushanam reference links:



## రచయితల వివరాలు :

1.డా.బై.కృష్ణయ్య MA(Telugu), M.Ed. M.Sc.(Psy) M.A(Phil) NET(Edn), SET(Telugu), PGDGC, Ph.D.(Edn), యూనివర్సిటీ కాలేజ్ ఆఫ్ ఎడ్యుకేషన్, ఉస్మానియా యూనివర్సిటీ, హైదరాబాద్లో అసిస్టెంట్ ప్రొఫెసర్ (C)గా పనిచేస్తున్నారు. SCERT B.Ed తెలుగు మెథడాలజీ టీచర్ ట్రైనింగ్ మాడ్యూల్ ప్రివేట్ కంటెంట్ రైటర్గా మరియు B.Ed E-మాడ్యూల్స్ కోఆర్డినేటర్గా పనిచేశారు. పండిట్ మదన్ మోహన్ మాలవీయ నేషనల్ మిషన్ ఆన్ టీచర్స్ అండ్ టీచింగ్ (PMMMNMTT), (MHRD, Govt. of India) యొక్క తెలుగు బోధన శాస్త్రము స్కూల్ ఆఫ్ ఎడ్యుకేషన్ (SOE). ఉపాధ్యాయ విద్యపై ఉద్వేగభరితమైన పరిశోధకులు, రాష్ట్ర, జాతీయ మరియు అంతర్జాతీయ స్థాయి సెమినార్లు, ఓరియంటేషన్లు, కంటెంట్, ఎన్రిచ్మెంట్ ట్రోగ్రామ్లు మరియు సర్వీస్లో ఉన్న ఉపాధ్యాయుల కోసం వర్క్‌షాప్‌లకు హాజరయ్యారు. అనేక పుస్తకాలకు సహ రచయితగా పనిచేశారు.

2.మిస్టర్. ఆర్.రామకృష్ణ MA (తెలుగు) M.Ed., M.Sc. (బోటనీ), హైదరాబాద్లోని MNR కాలేజ్ ఆఫ్ టీచర్ ఎడ్యుకేషన్లో సీనియర్ లెక్చరర్గా పని చేస్తున్నారు. తెలుగు బోధన, తత్వశాస్త్రం మరియు సమకాలీన విద్య కోసం బోధన. ఉపాధ్యాయ విద్యపై ఉద్వేగభరితమైన పరిశోధకులు, రాష్ట్ర స్థాయి సెమినార్లు మరియు జాతీయ స్థాయి సెమినార్లకు హాజరయ్యారు మరియు B.Ed కోసం E-మాడ్యూల్స్ తయారీలో చురుకుగా పాల్గొన్నారు.

3.డా.పి.కృష్ణ వేణి MA(Telugu), M.A (Pol.Sci), M.Ed., M.Phil, and Ph.D (Edn), కాలేజ్ ఆఫ్ టీచర్ ఎడ్యుకేషన్, ఆంధ్ర మహిళా సభలో లెక్చరర్గా పనిచేస్తున్నారు, రాష్ట్ర స్థాయి సెమినార్లు, జాతీయ స్థాయి సెమినార్లు నిర్వహించి ఏడేళ్లపాటు ప్రిన్సిపాల్గా పనిచేశారు. సర్వీస్లో ఉన్న ఉపాధ్యాయుల కోసం ఓరియంటేషన్లు, కంటెంట్, ఎన్రిచ్మెంట్ ట్రోగ్రామ్లు మరియు వర్క్‌షాప్‌లు. ఆమె అనేక పుస్తకాలకు సహ రచయితగా పనిచేశారు మరియు B.Ed కోసం E-మాడ్యూల్స్ తయారీలో చురుకుగా పాల్గొన్నారు.



## The Authors:

1. **Dr.J.KRISHNAIAH** M.A(Telugu), M.Ed. M.Sc.(Psy) M.A(Phil) NET(Edn), SET(Telugu), PGDGC, Ph.D.(Edn), Working as Assistant Professor (C) in University College of Education, Osmania University, Hyderabad. Worked as Content Writer for SCERT B.Ed Telugu Methodology Teacher Training Module Preparation and Coordinator of E-Modules for B.Ed. Telugu Pedagogy School of Education (SOE) of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching(PMMMNTT), (MHRD, Govt. of India). A passionate Researcher on Teacher Education, attended State, National and International level seminars, Orientations, content, Enrichment Programmes and workshops for in-service Teachers. He has co-authored for many books.

2. **Mr.R.RAMAKRISHNA** M.A (Telugu) M.Ed., M.Sc. (Botany), Working as Senior Lecturer, MNR College of Teacher Education, Hyderabad. Teaching for Telugu Pedagogy, Philosophy and Contemporary Education. A Passionate Researcher on Teacher Education, attended State level seminars and National level seminars and actively involved in the preparation of E-Modules for B.Ed.

3. **Dr.P.KRISHNA VENI** M.A(Telugu), M.A (Pol.Sci), M.Ed., M.Phil, and Ph.D (Edn), working as Lecturer, College of Teacher Education, At Andhra Mahila Sabha, O.U. Road, Hyderabad. Worked as Principal In charge for Seven years conducted State level seminars and National level seminars. Orientations, content, Enrichment Programmes and workshops for in-service Teachers. She has co-authored for many books and actively involved in the preparation of E-Modules for B.Ed.

### SELF-DECLARATION

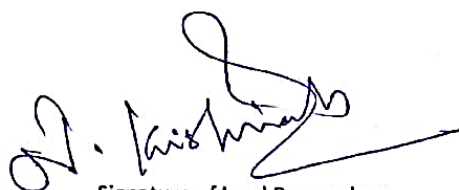
**TITLE OF THE MINOR RESEARCH PROJECT:** Integration of Vocational Education In School Education by Subject Telugu Methodology

**NAME of LEAD RESEARCHER:** Sri.Dr.J. Krishnalah

**NAMES of CO-RESEARCHERS:** 1. Sri.R. Ramakrishna  
2.Smt.Dr.P. Krishnaveni

1. I/We confirm that I/We have read, understood and agreed to the submission guidelines, policies and this submission declaration as per the MGNCRE Work Order.
2. I/We confirm that the Research Report is the authors' original work and the Research Report has not received prior publication and is not under consideration for publication elsewhere.
3. I/We confirm that the lead researcher and the co-researchers listed on the title page and in this form have contributed significantly to the work, have read the Research Report, attest to the validity and legitimacy of the content, and agree to its submission.
4. I/We confirm that the Research Report contents now submitted are not copied or plagiarized version of some other published work.
5. I/We declare that I/We have/shall not submit the material for publication in any other Journal or Magazine.
6. On behalf of all Co-Authors, I bear full responsibility for this submission.

Date: 09.03.2023.



Signature of Lead Researcher  
(Signed on behalf of all co-researchers)

**Minor Research Project Report on**  
**Integration of Vocational Education in Teacher Education**  
**by Subject Methodology**  
*English*

*Submitted By*

**Lead Researcher: Dr. Umme Salma**

*Assistant Professor, Department of Education and Training, Maulana  
Azad National Urdu University MANUU*

&

**Co-Researchers:**

**Dr. G. Madhukar**, *Assistant Professor in the Department of  
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Overall Project Coordinator from Osmania University : Dr D Sunitha, Assistant  
Professor, University College of Education, Osmania University

**Submitted To**  
**Mahatma Gandhi National Council of Rural Education**  
**(MGNCRE)**  
**Ministry of Education, Govt. of India, Hyderabad.**



**Joint Project**  
*March 2023*

## FOREWORD

Vocational education and experiential learning help the student to receive vocational experience before they complete their schooling. Vocational education has been given importance in all educational policies and the National Education Policy (NEP) 2020 has also placed a special emphasis on vocational education through the mainstreaming and integration of vocational education with general education. This will assist students to acquire the variety of skills that are required in professional life in the future. The industries also get to meet their requirement for skilled and professional workforce. The students are trained to get practical education in a professional setting, introducing the students to various vocations. Though it may be a small step, it will increase the self-confidence of the student and make him self-reliant.

I greatly appreciate the efforts of Dr. Umme Salma (Lead Researcher), Dr. G. Madhukar & Dr. Qudsia Hafeez (Co-Researchers) for creating the lesson plans integrating vocational education - English Methodology on experiential learning at the right moment. I also value the efforts of Smt. Padma Juluri (MGNCRE) and Dr. D. Sunitha (Project Coordinator). I wish them success in their effort to make vocational education and experiential learning a reality and an illuminated path to the future.

Prof. A. Ramakrishna  
Head, Dept. of Education  
Osmania University, Hyderabad.

### Contents Table

S. No	Contents
1.	Introduction
2.	Content Analysis
3.	Lesson Plan For each Class (20 plans)
4.	Conclusion
5.	Acknowledgments
6.	Annexure
7.	Self-declaration

## 20 Lesson Plan Details

S.No	Class	Lesson Name	Vocational Lesson Name	Author Name
1.	10th	1. Personality Development, A. Attitude is Altitude	Mini Surfing Board	Dr. Umme Salma
2.	10th	1. Personality Development, B. Every Success Story is also a Story of Great Failures	Toy Lamp	Dr. Umme Salma
3.	10th	1. Personality Development, B. Every Success Story is also a Story of Great Failures	Micky Mouse Craft	Dr. Umme Salma
4.	10th	2. Wit and Humour, sub topic: C. The Brave Potter	Decorative Pot	Dr. Umme Salma
5.	10th	3. Human Relations, sub-topic: C. The Never-Never Nest	Bird Nest	Dr. Umme Salma
6.	10th	3. Human Relations, sub-topic: C. The Never-Never Nest	Pom-Pom Keychain	Dr. Umme Salma
7.	9th	5. Disasters, Sub-topic: A. A Havoc of Flood	Boat with Cardboard	Dr. Umme Salma
8.	9th	8. Travel and Tourism, sub topic: B. Father Returning Home (Poem)	Toy House	Dr. Umme Salma
9.	10th	5. Social Issues, sub topic: A. The Storeyed House (Part – I) B. The Storeyed House (Part –II)	Interior Decorators – Wall Art	Dr. Qudsia Hafeez
10.	10th	5. Social Issues, sub topic: A. The Storeyed House (Part – I) B. The Storeyed House (Part –II)	Tea Maker	Dr. Qudsia Hafeez
11.	10th	6. Bio-Diversity, sub topic: A. Environment	Socially Useful Productive Works (SUPW)/Recycling NGO works' Vocation, Making of a Recycled Notepad.	Dr. Qudsia Hafeez
12.	10th	6. Bio-Diversity, sub topic: A. Environment	Recycling Plastic Buckets into Flower Pots	Dr. Qudsia Hafeez
13.	10th	8. Human Rights, Sub topic: C. What Is My Name? – Decorative Item Designers	Decorative Item Designers'	Dr. Qudsia Hafeez
14.	10th	8. Human Rights, Sub topic: C. What Is My Name?	Home Décor – Making of Flower Vase	Dr. Qudsia Hafeez
15.	9th	The Snake and the Mirror	Mirror Frame (Wood or Plastic)	Dr. G. Madhukar
16.	9th	True Height	Wool Sweaters/Witty Socks	Dr. G. Madhukar
17.	9th	Swami is Expelled from School	Book binding/Jute Bag Making/Making Dusters	Dr. G. Madhukar
18.	9th	What is Man without Beasts	Eco friendly Ganesha/Wood Animal/Beads Chart/Glass Model	Dr. G. Madhukar
19.	9th	A Long Walk to Freedom	Nursery Plantation/School Garden/Leaf Art	Dr. G. Madhukar
20.	9th	The Accidental Tourist	Photo Paining/Paintings/Mehendi	Dr. G. Madhukar

## **Introduction**

MGNCRE - Sanctioned & Awarded the MGNCRE Action Research for Integrating Vocational Education in four classes i.e., 9-12 classes in Subject Methodology – Language English. English prose stories and anecdotes are interesting to read and provide valuable lessons applicable to individual's daily life. They depict social, economic, and political scenarios of the time. In the present work class 9 and 10 English subject books, and Integrated Vocational Education, every concept is focused on different theme such as Personality Development, Wit and Humour, Human Relations, Disasters, Travel and Tourism, Social Issues, Bio-Diversity and Human Rights. The fundamental concepts of each chapter have been identified and the related knowledge is consolidated, attitudinal changes and skill aspects expected from students are mentioned and vocational scopes are identified and applied. Skills of entrepreneurship, money management and marketing aspect are the major learning points of these activities. A total of 20 vocational educational lesson plans are framed in English language methodology. In each lesson occupation and vocation has been identified, the skills that can be inculcated in students such as receptive skills and productive skills of the language and learning skills such as communication skills, critical thinking, collaborative and creativity skills are identified. The language teaching is integrated with other interdisciplinary subjects. The materials required for each activity are provided. Safety precautions for students to safely complete the activity are elucidated. Student assessment is prepared which can be used by teachers to assess the learning outcomes of the students. This MGNCRE action research project has taken a novel and comprehensive approach to integrate vocational education into the teaching of English language, assisting students in gaining the skills and experiential learning they will need in the future. Moreover, vocational education can aid students in acquiring crucial life skills. Employers place a great value on these skills, and they are necessary for success in any field. By giving children vocational training, schools may give them these essential skills, enhancing their employability and chances of success.



### Content Analysis

S. No	Class	Topic	Sub-Topic	Vocation(s) or Occupation(s) that can be connected to this lesson	Name
1	10th	1. Personality Development	A. Attitude is Altitude Pg. 3, 4	Art and Craft worker, Making Mini Surfing Board, Counsellors visiting to different schools. Motivational speakers. Creation of adaptive devices.	Dr. Umme Salma
2	10th	1. Personality Development	B. Every Success Story is also a Story of Great Failures P. 13, 14, 20	Light bulb decoration, Carpenter-Dry Branches Showpiece Cardboard table lamp, Making Snow globe with fuse bulb, Cartoonist Play write Story writer Dramatist Lion King cartoon Cinderella (paper doll) Alice in Wonderland Painting	Dr. Umme Salma
3	10th	1. Personality Development	C. I will do it Pg. 24	Technology using activities, Photo recordings and presenting in sequence	Dr. Umme Salma
4	10th	2. Wit and Humour	A. The Dear Departed -I Pg. 41	Script writer, dramatist, Mask making, Dialogue writer, Caption Making, Add making.	Dr. Umme Salma
5	10th	2. Wit and Humour	Study Skills Pg. 64	First-Aid Work, Health Counsellor	Dr. Umme Salma
6	10th	2. Wit and Humour	C. The Brave Potter, Pg. 66.	Pot maker, Amusing and instructive fable writer, Mimic, comedian, Drama writer, Rope or Jute crafts, Tiger and cave craft, Camp craft	Dr. Umme Salma
7	10th	3. Human Relations	A. The Journey Pg. 77	Recorded stories can upload to YouTube, Labour work picture collection-NGO	Dr. Umme Salma
8	10th	3. Human Relations	C. The Never-Never Nest Pg. 90	Skit play/script writer, making Pom-Pom Keychain Counselor Toy Piano craft Making Furniture Craft Toy Car craft Keychain maker Refrigerator technician Musician	Dr. Umme Salma
9	10th	Film and Theatre	A. Rendezvous with Ray P. 101	Portrait making, writing biographies of local eminent people, translation of their works.	Dr. Umme Salma
10	10th	Film and	B. Maya	Remix in songs, Hidden story creation in	Dr. Umme


S. No	Class	Topic	Sub-Topic	Vocation(s) or Occupation(s) that can be connected to this lesson	Name
		Theatre	Bazar Pg. 115	the same film	Salma
11	10th	Film and Theatre	C. A. Tribute Pg. 126	Photo exhibition, Anchoring, writing about forgotten people in Newspapers.	Dr. Umme Salma
12	9th	5. Disasters	A. A Havoc of Flood	disaster management agents, voluntary agents, local boat man, bullock carts, Helicopter pilot, Paramedical personals and Grocery suppliers.	Dr. Umme Salma
13	9th	8. Travel and Tourism	B. Father Returning House (Poem)	Toy train, Tea pot craft, Toy house, Painting, Frame making using Motivational quotes/ Stanza and sonnet. Wall-Hanging using quotes	Dr. Umme Salma
14	9th	6. Freedom	A. A Long Walk to Freedom	Tricolour Badge, Story writer Motivational speaker Tricolour symbols Tricolour paper flower	Dr. Umme Salma
15	10 <sup>th</sup>	Social Issues	The Storeyed House – II, Pg. 150	Architecture Designers, Masons, Repairing workers, Event Planners, Stage Decorators, Interior Designers, Devotional Singers	Dr. Qudisia Hafeez
16	10 <sup>th</sup>	Social Issues	The Storeyed House – II, Pg. 151	Tea Maker, Counsellors	Dr. Qudisia Hafeez
17	10 <sup>th</sup>	Bio-diversity	Environment, Pg. 175	Interview Preparation Trainers	Dr. Qudisia Hafeez
18	10 <sup>th</sup>	Bio-diversity	Environment, Pg. 176	Radio Jockey (RJ)	Dr. Qudisia Hafeez
19	10 <sup>th</sup>	Bio-diversity	Environment Pg. 177	Foresters, Tree Planters, Farming, Conservationist, SUPW Works, Recycling - NGO works	Dr. Qudisia Hafeez
20	10 <sup>th</sup>	Bio-diversity	Environment Pg. 179	Environmental Volunteers, Campaigners, Environmentalists, Environmental Activists	Dr. Qudisia Hafeez
21	10 <sup>th</sup>	Nation & Diversity	My Childhood Pg. 208	Seed Entrepreneurship, Seed Collector and Seller, Newspaper Distributor	Dr. Qudisia Hafeez
22	10 <sup>th</sup>	Nation & Diversity	My Childhood Pg. 209	Priesthood, Transportation Business, Tour Guide, Catering Contractor	Dr. Qudisia Hafeez
23	10 <sup>th</sup>	Nation & Diversity	Unity in Diversity Pg. 210	Tribal Dancers, Classical Dancers, Props, and	Dr.

<b>S. No</b>	<b>Class</b>	<b>Topic</b>	<b>Sub-Topic</b>	<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>	<b>Name</b>
		Diversity	Diversity in India Pg 226	Choreographer, Script Writers, Directors, Musicians, Theatre Artists, Dramatists, Sculptor	Qudsia Hafeez
24	10 <sup>th</sup>	Human Rights	What Is My Name? 258	Home Decorators, Decorative Item Designers	Dr. Qudsia Hafeez
25	10 <sup>th</sup>	Human Rights	What Is My Name? Pg, 263	Translators, Interpreters	Dr. Qudsia Hafeez
26	9 <sup>th</sup>	The Snake and the Mirror	Creative Expression	Mirror Frame (Wood or Plastic)	Dr. G. Madhukar
27	9 <sup>th</sup>	True Height	Athlete/Sports Person	Wool Sweaters/Witty Socks	Dr. G. Madhukar
28	9 <sup>th</sup>	Swami is Expelled from School	Story Boarding	Book binding/Jute Bag Making/Making Dusters	Dr. G. Madhukar
29	9 <sup>th</sup>	What is Man without Beasts	Environmental Education	Eco friendly Ganesha/Wood Animal/Beads Chart/Glass Model	Dr. G. Madhukar
30	9 <sup>th</sup>	A Long Walk to Freedom	Civil Rights	Nursery Plantation/School Garden/Leaf Art	Dr. G. Madhukar
31	9 <sup>th</sup>	The Accidental Tourist	Study Tour/Excursion	Photo Paining/Paintings/Mehendi	Dr. G. Madhukar

## Lesson-Wise Plans for Each Class (20)

### Lesson Plan 1

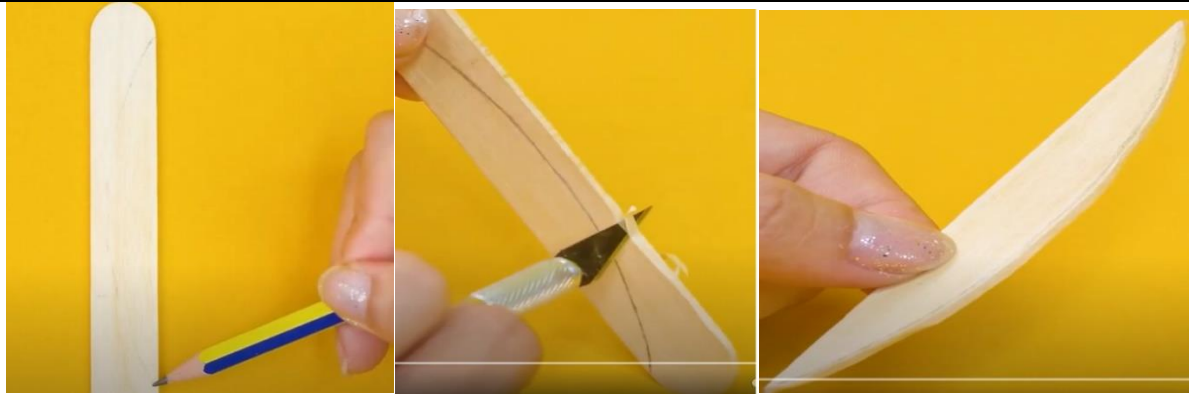
**Name of Faculty: Dr. Umme Salma**

Class	10 <sup>th</sup> Class	Subject	English
Lesson Name	1. Personality Development	Duration of the Lesson	3 periods (2 hours and 15 minutes)
Concept(s) Covered		A. Attitude is Altitude  Achieving success, overcoming all hard ships and disabilities	
Vocation(s) or Occupation(s) that can be connected to this lesson			
<p>In the lesson, Personality Development, the sub topic is A. Attitude is Altitude, where the people have achieved success in their lives overcoming all their hard ships and disabilities. Nick Vujicic is a role model for others due to his admirable traits of faith, willpower, and confidence. He was born with no limbs and that does not stop him from achieving success. He plays football and golf, swims, and surfs despite having only torso. Nick's feat of performing 360-degree spins earned him a spot on the cover of Surfer magazine. His story is an inspiration to many of the youngsters. In this context the following vocations can be introduced.</p> <ul style="list-style-type: none"><li>• Counsellors visiting to different schools.</li><li>• Motivational speakers.</li><li>• Creation of adaptive devices.</li><li>• Creation of miniatures to commemorate his achievements like mini surfing board and boat.</li></ul> <p><b>This lesson plan is for ‘Mini Surfing Board’ making, by using ice cream sticks. Vocation can be connected to Local Art and Craft Work Skills -NSDC Skill Sector “Construction”.</b></p>			
			
Skills that will be inculcated			
Literacy skills:			
<ul style="list-style-type: none"><li>• Students will improve the information literacy skill of conceptual understanding of A. Attitude is Altitude (Achieving success, overcoming all hard ships and disabilities).</li><li>• Student will improve their media literacy by surfing more about Nick Vujicic and his achievements.</li></ul>			
Learning Skills:			
<ul style="list-style-type: none"><li>• Student will develop the language skills, like listening and speaking while interacting in context of making mini surfing board with students and teacher.</li></ul>			

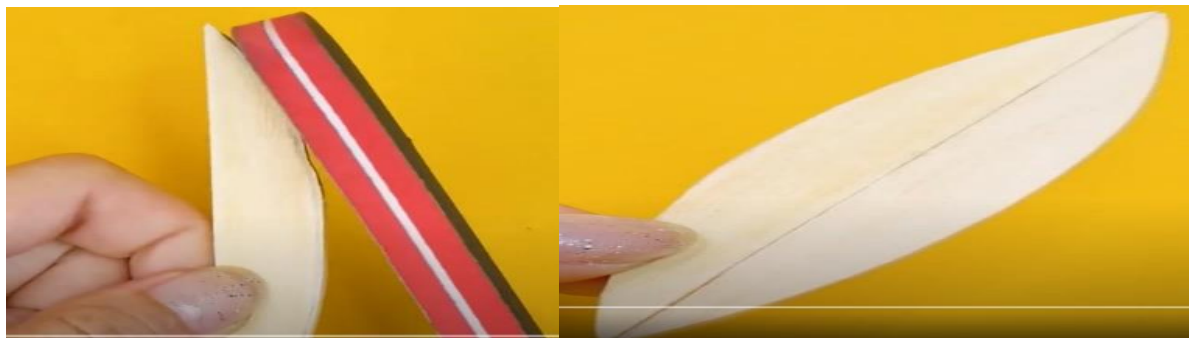
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<ul style="list-style-type: none"> <li>• Student will develop critical thinking skills by understanding the lesson and applying it to their communication abilities.</li> <li>• Students will improve their Listening, Speaking, Reading and Writing (LSRW) skills.</li> <li>• Students will work in collaboration in making mini surfing board, and developing interpersonal and creative skills.</li> <li>• Students will develop their entrepreneurship skills by selling the Mini Surfing Board.</li> <li>• Student will improve his presentation skill while presenting and item of inspiration like Mini Surfing Board.</li> </ul> <p><b>Life Skills:</b></p> <ul style="list-style-type: none"> <li>• Students, while working in collaboration in making a mini surfing board, will develop leadership skills, team management, to be flexible, take initiative, be social and emotional adaptability.</li> </ul>	
<b>Interdisciplinary concepts that may be integrated</b>	
<ul style="list-style-type: none"> <li>• Mathematics concept; Surface Areas and Volumes 3 D Shapes Money Commercial Mathematics Mensuration Ratio and Proportion Measurement.</li> <li>• Social Studies; Manufacturing Industries.</li> </ul>	
<b>Learning Outcomes</b>	
<ul style="list-style-type: none"> <li>• Students will remember, understand, and get inspired and motivated by great personalities.</li> <li>• Students will make a Mini Surfing Board to remember the achievement of Nick Vujicic.</li> <li>• Students will improve his presentation skill while presenting and item of inspiration like mini surfing board.</li> <li>• Students will sell Mini Surfing Board.</li> <li>• 5. Students will assess profit of the product.</li> </ul>	
<b>Tools/Material Needed</b>	
<ul style="list-style-type: none"> <li>• Ice cream sticks (Rs. 5/-)</li> <li>• Knife cutter (Rs. 10/-)</li> <li>• Sand Paper (Rs. 5/-)</li> <li>• Pencil</li> <li>• Fevi-kwik Gel (For Metal, Rubber, Leather, Wood &amp; Plastic, 2 g) (Rs. 20/-)</li> </ul>	<ul style="list-style-type: none"> <li>• 6. Scissors (1)</li> <li>• 7. 6 Acrylic Paints with Paintbrush 5ml (Rs. 15/-)</li> <li>• 8. Plastic Cover (Rs. 2/-)</li> </ul>
<b>Steps</b>	
<p><b><u>Pre-Activity:</u></b></p> <ol style="list-style-type: none"> <li>1. On previous day, teacher will instruct the students to bring the required material to make Mini Surfing Board.</li> </ol> <p><b><u>Activity:</u></b></p> <ol style="list-style-type: none"> <li>1. Teacher will instruct the following steps to make the Mini Surfing Board.</li> </ol>	



2. Take two ice-cream sticks, and draw a curve using pencil as shown in the picture. And cut the curve by using cutter. (teacher supervision).
3. Similarly take two pairs of ice cream sticks and repeat the previous steps.



4. Use the sand paper and file to make the edges smooth.
5. Join the sticks together by using fevicol.
6. Join each stick to its pair to form three different surfing boards.



7. Color the surfing board by using different colours. Paper tape can be used for smooth edges.
8. Paste the paper tape diagonally, colour pink on one side, let it dry.
9. After drying, remove the tape, now again stick tape on the dried pink colour. Leave on 1 cm gap and paste another tape diagonally. Now take purple colour and fill the 1 cm gap, let it dry.
10. Repeat till end of the board and color with different colors as shown above.



<p>11. Take ice cream sticks and draw 3 small triangles for each surfing board and cut it by using the cutter. In total you will be having 9 triangles.</p> <p>12. Colour the triangles black by using small brush.</p> <p>13. Stick the three triangles each on one corner of each surfing board with fevi-kwick to make the tails of the surfing boards.</p> <p>14. Finally, you will have 3 surfing boards. Now pack these surfing boards in transparent cover.</p> <p><b>Post-Activity:</b></p> <ol style="list-style-type: none"> <li>1. Students will make a set of three attractive Mini Surfing Boards.</li> <li>2. Students will sell the set in the school mela or nearby market for Rupees 120/-</li> <li>3. Students will calculate the profit of the product sold in the market.</li> </ol>
<p><b>Precautions</b></p> <ul style="list-style-type: none"> <li>• Read the complete instruction first, then proceed with the procedure.</li> <li>• Teacher supervision is required while working with Knife Cutter to cut the curves of the ice cream sticks.</li> <li>• Student should use the sand paper appropriately to smooth the edges.</li> <li>• Student should apply the fevi-kwick carefully while making the tails of the surfing boards.</li> <li>• Student should apply different colors neatly to the board.</li> <li>• Students should properly attach the colored triangles to the surfing boards.</li> <li>• Students should properly wrap the set of mini surfing boards in the transparent cover in an attractive manner.</li> </ul>
<p><b>Assessment of Student Activity</b></p> <p>Teacher will assess the students by using Rubrics, which will have 10 components, each component is assessed for 5 marks. Therefore, total marks will be 50.</p> <ol style="list-style-type: none"> <li>1. Collection of materials (5 marks)</li> <li>2. Use of cutter to make the curves - (5 marks)</li> <li>3. Coloring of the surfing board - (5 marks)</li> <li>4. Use of cutter to make the triangles- (5 marks)</li> <li>5. coloring neatly to the triangles - (5 marks)</li> <li>6. Pasting the triangles - (5 marks)</li> <li>7. Aesthetic look of the set - (5 marks)</li> <li>8. Creativity in set - (5 marks)</li> <li>9. Being responsible – (5 marks)</li> <li>10. Presentation of the set - (5 marks)</li> </ol>
<p><b>Reference Links</b></p> <ol style="list-style-type: none"> <li>1. Mini surfboard, <a href="https://www.youtube.com/watch?v=IEvwSHgl9YE">https://www.youtube.com/watch?v=IEvwSHgl9YE</a></li> </ol>





## Lesson Plan 2

**Name of Faculty: Dr. Umme Salma**

Class	10 <sup>th</sup> Class	Subject	English
Lesson Name	1. Personality Development	Duration of the Lesson	3 periods (2 hours and 15 minutes)
Concept(s) Covered		B. Every Success Story is also a Story of Great Failures  To overcome the setback, one needs courage and trust.	
Vocation(s) or Occupation(s) that can be connected to this lesson			
In the lesson, Personality Development, the subtopic is B. Every Success Story is also a Story of Great Failures, Abraham Lincoln served as President of the United States, and achieving such a lofty position in life was no simple feat. After New York Times editorial questioned the Wright Brothers' judgment, they were able to fly successfully. Despite their difficulties, Colonel Sanders, Walt Disney, Thomas Edison, and Henry Ford all found success. American businessman and inventor Thomas Edison, created numerous innovations in the production of electric power, mass communication, sound recording, and motion pictures. So, the following vocations can be connected. <ul style="list-style-type: none"><li>• Light bulb decoration</li><li>• Cardboard table lamp</li><li>• Snow globe with fuse bulb</li></ul> <b>This lesson plan is for creating “Toy Lamp” using Electric Circuit System. Innovating Energy Based Appliances - Vocation can be connected to Local Art and Craft Work Skills - NSDC Skill Sector ‘Electronics’.</b>			
Skills that will be inculcated			
<b><u>Literacy skills:</u></b> <ul style="list-style-type: none"><li>• Students will improve the information literacy skill of conceptual understanding of B. Every Success Story is also a Story of Great Failures; student learn to overcome the setback, and one need courage and trust and thus created the Toy Lamp.</li><li>• Student will improve their media literacy by surfing more about discovering new things and generating innovative ideas.</li></ul> <b><u>Learning Skills:</u></b> <ul style="list-style-type: none"><li>• Student will develop the language skills, like listening and speaking skills while interacting about context of making Toy Lamp with students and teacher.</li><li>• Student will develop critical thinking skills by understanding the lesson and applying it to their communication abilities.</li><li>• Students will improve their Listening, Speaking, Reading and Writing (LSRW) skills.</li><li>• Students will work in collaboration in making Toy Lamp, and developing interpersonal and innovative skills.</li><li>• Students will develop their entrepreneurship skills by selling the Toy Lamp.</li><li>• Student will improve his presentation skill while presenting Toy Lamp.</li></ul> <b><u>Life Skills:</u></b> <p>Students, while working in group for making toy lamp will develop leadership skills, team management, to be flexible, take initiative, be social and emotional adaptability.</p>			
Interdisciplinary concepts that may be integrated			
Mathematics concept, Surface Areas and Volumes 3-D Shapes Money Commercial			

Mathematics and Measurement.

- Social Studies; Manufacturing Industries.
- Economics; Expenditure and Income.
- Physical Science; Electric Current and its Effects.

### Learning Outcomes

- Student will remember, understand, and apply the knowledge to make Toy Lamp.
- Students will make Toy Lamp.
- Students will sell Toy Lamp.
- Students will assess profit of the sold product.

### Tools/Material Needed

<ul style="list-style-type: none"><li>• Electric Circuit System</li></ul> Battery (Rs. 30/-) Small bulb (Rs. 5/-) Switch (Rs. 15/-) Wire set (Rs. 10/-) <ul style="list-style-type: none"><li>• Paper Glass, medium size (Rs. 2/-)</li></ul>	<ul style="list-style-type: none"><li>• Colour paper/ transparent paper(Rs. 2/-)</li><li>• Scissors</li><li>• Pencil</li><li>• Tape (Rs. 5/-)</li><li>• Stapler</li></ul>
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### Steps

#### Pre-Activity:

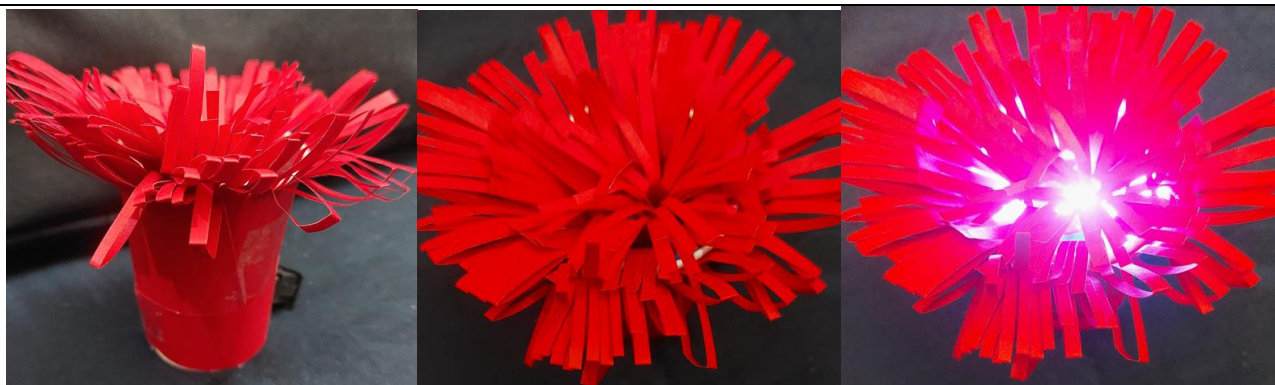
1. On previous day, teacher will instruct the students to bring the required material to make Toy Lamp.

#### Activity:

1. Take a colour paper. Red and yellow are preferred colors for the lamp.
2. Fold the paper in half, lengthwise.
3. Draw a horizontal line one inch from the long edge opposite the fold. This line is just a guide for cutting.



4. Cut the first slit, starting from the folded edge, cut a straight line about an inch from one short edge, all the way up to the horizontal line.
5. Cut more slits, continue to cut more straight lines about 1 inch apart until you reach the opposite short edge of the paper. Remember that the horizontal line marks the point where you stop cutting each straight line.
6. Decorate the folded part with glitter.



7. Take a medium size paper glass.
8. Make a hole in the glass, pass the wire through the whole.
9. Keep the switch outside of the glass.
10. Place the battery in the glass and fix the small bulb by using wire set. And secure the battery and bulb with tape.
11. Stapler the decorated paper to the glass neatly.
12. You can decorate the glass with golden beads.

#### **Post Activity:**

1. Students will make a decorative Toy Lamp.
2. Students will sell the Toy Lamp in the school Mela or nearby market for Rupees 150/-
3. Students will calculate the profit of the product sold in the market.

#### **Precautions**

- Fold the colour paper properly.
- Make proper cuttings.
- Stick the colour paper neatly to the paper glass.
- Fix the electric circuit system properly.

#### **Assessment of Student Activity**

The teacher will grade the students, using rubrics, which include 10 components and each component receives a score of 5, for a total of 50 points.

1. Collecting complete material – (5 marks)
2. Cutting the paper – (5 marks)
3. Fixing the electric circuit system properly – (5 marks)
4. Stapling the colour paper to the paper glass – (5 marks)
5. Decoration of Toy Lamp with glitter – (5 marks)
6. Creativity – (5 marks)
7. Team work – (5 marks)
8. Aesthetic to look – (5 marks)
9. Display of the product – (5 marks)
10. Presentation – (5 marks)

#### **Reference Links**

1. <https://www.firstpalette.com/craft/paper-lantern.html>

### Lesson Plan 3

Name of Faculty: Dr. Umme Salma

Class	10 <sup>th</sup> Class	Subject	English
Lesson Name	1. Personality Development	Duration of the Lesson	4 periods (3 hour)
Concept(s) Covered		B. Every Success Story is also a Story of Great Failures  To overcome the setback, one need courage and trust.	
Vocation(s) or Occupation(s) that can be connected to this lesson			
<p>In the lesson, Personality Development, the subtopic is B. Every Success Story is also a Story of Great Failures, Abraham Lincoln served as President of the United States, and achieving such a lofty position in life was no simple feat. After New York Times editorial questioned the Wright Brothers' judgement, they were able to fly successfully. Despite their difficulties, Colonel Sanders, Walt Disney, Thomas Edison, and Henry Ford all found success. Walt Disney made various innovations to the creation of cartoons. In this context the following vocations can be connected.</p> <ul style="list-style-type: none"><li>• Cartoonist</li><li>• Play write</li><li>• Story writer</li><li>• Dramatist</li><li>• Lion King cartoon</li><li>• Cinderella (paper doll)</li><li>• Alice in Wonderland Painting</li></ul> <p><b>This lesson plan is for ‘Micky Mouse Craft’, by using color paper. Vocation can be connected to Local Art and Craft Work Skills -NSDC Skill Sector “Construction”.</b></p>			
Skills that will be inculcated			
<b><u>Literacy skills:</u></b> <ul style="list-style-type: none"><li>• Students will improve the information literacy skill of conceptual understanding of B. Every Success Story is also a Story of Great Failures (to overcome the setback, one need courage and trust) and will create Micky Mouse Craft.</li><li>• Student will improve their media literacy by surfing how the Micky Mouse as a craft is presented in different manners.</li></ul>			
<b><u>Learning Skills:</u></b> <ul style="list-style-type: none"><li>• Students will develop the language skills, like listening and speaking skills while interacting about context of making Micky Mouse craft with students and teacher.</li><li>• Students will develop critical thinking skills by understanding the lesson and applying it to their communication abilities.</li><li>• Students will work in collaboration in making Micky Mouse craft, and developing interpersonal and creative skills.</li><li>• Students will develop their entrepreneurship skills by selling the Micky Mouse craft.</li><li>• students will improve their creative skills while creating Micky Mouse craft.</li><li>• students will improve his presentation skill while presenting Micky Mouse craft.</li></ul>			
<b><u>Life Skills:</u></b> <ul style="list-style-type: none"><li>• Students will develop leadership qualities, learn to work in team, and be flexible to social and economical needs.</li></ul>			

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- Student will take initiative to present their craft in a most appealing manner.

### **Interdisciplinary concepts that may be integrated**

- Mathematics concept; Surface Areas and Volumes 3 D Shapes Money Commercial Mathematics Mensuration Ratio and Proportion Measurement.
- Social Studies (Environment)
- Economics (Expenditure and Income)

### **Learning Outcomes**

- Student will remember, understand, and apply the knowledge to make Micky Mouse Craft.
- Students will make Micky Mouse Craft.
- Students will sell Micky Mouse Craft.
- Students will assess profit of the sold product.

### **Tools/Material Needed**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Red color paper (6 sheets =Rs. 12 )</li> <li>• Black color paper (2 sheets = Rs. 4)</li> <li>• Round sticks 3</li> <li>• Scissors</li> <li>• 5. Pencil</li> </ul> | <ul style="list-style-type: none"> <li>• Fevicol (1 small bottle = Rs. 10)</li> <li>• Plate</li> <li>• Glass</li> <li>• Glitter</li> <li>• Ribbon (Rs. 5/-)</li> </ul> |
|--|--|

### **Steps**

#### **Pre-Activity:**

1. On previous day, teacher will instruct the students to bring the required material to make Micky Mouse Craft.

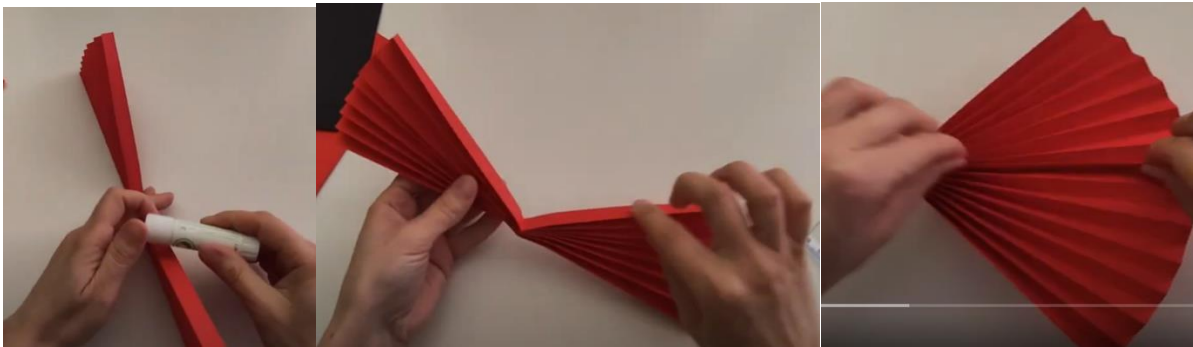
#### **Activity:**







1. Take a red colour sheet, fold it 1 cm inside and 1 cm outside, repeat till end of the sheet. You will get zig zag structure. Make similar 4 zigzag structures in total.



2. Fold each zig zag structure into half and paste it by fevicol, you will get fan like structure. Similarly, prepare three more fans in total you will have 4 fans.



3. Join all 4 fans to make a circle by using fevicol, as given in the picture above.



4. Now take a black sheet, take a medium size round plate and trace the outline to make the face of Micky Mouse.
5. Use a glass to trace to make two circles on the black sheet.
6. Cut them out attach it towards the edges of the circle to form the ears of the Micky Mouse. you will get face of Micky Mouse.
7. Take white paper and cut out two ovals of same size for the eyes of the Micky Mouse. Also paste smaller ovals in the middle of ovals to complete the eye.
8. Take pink coloured glaze paper to make lips of the Micky Mouse, cut a semi-circle, part for the lips.

9. Trim the straight edge of the semi-circle. Use black paper and cut it as a pattern to paste on



that trimmed edge. Refer to the picture above.



10. Paste the Micky Mouse face on circle fan.

11. Take another sheet cut small circle.

12. Take a small ribbon and fold it and paste to the small circle to make a tag as shown in the picture.

13. Now paste the tag at the back side of the Micky Mouse.

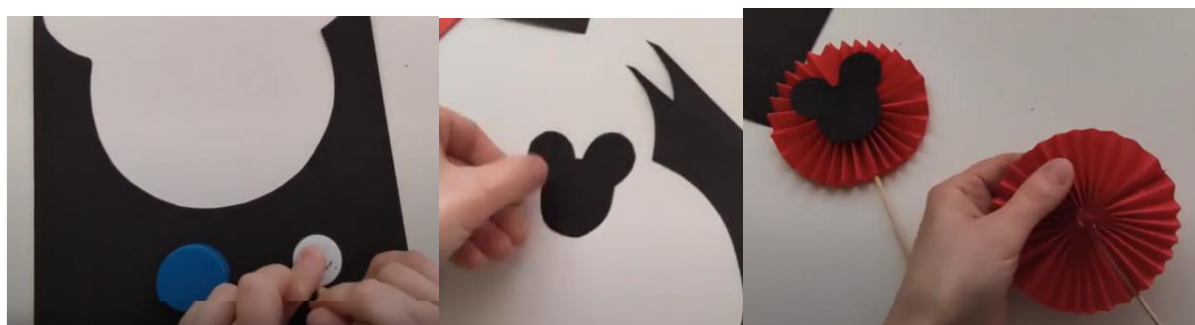
14. Decorate the Micky Mouse with ribbon, glitter and buttons etc.



15. Similarly make three more small Micky Mouse measuring 10 cm each.



16. Now make three small fan circles, pasting only two fans together. For this, you need 6 fans to make 3 circles



17. Now take black sheet, cut the face of Micky Mouse as instructed earlier. Use smaller measurements to fit on smaller fans.



18. Paste the Micky Mouse face on the small fan on one side and take a small stick and paste it on circle as shown in the picture, paste the small circle at the top of it.

19. Decorate it with ribbon and glitter.

20. Finally, you will have one big Micky Mouse face and three small Micky Mouse faces.

#### **Post Activity:**

1. Students will make an attractive Micky Mouse.
2. Students will sell the set in the school mela or nearby market for Rupees 99/-
3. Students will calculate the profit of the product sold in the market.

#### **Precautions**

- Take accurate measurements while measuring the paper.
- Make proper cuttings.
- Stick the paper neatly.
- Precautions to be taken while handling rubber adhesive.

#### **Assessment of Student Activity**

The teacher will grade the students, using rubrics, which include 10 components and each component receives a score of 5, for a total of 50 points.

11. Collecting complete material – (5 marks)
12. Making zig zag structure – (5 marks)
13. Joining fans to make a big circle – (5 marks)
14. Pasting the Micky Mouse face on big circle – (5 marks)
15. Pasting the Micky Mouse face on the small fan – (5 marks)
16. Decoration of the Micky Mouse with ribbon and glitter – (5 marks)
17. Team work – (5 marks)
18. Aesthetic to look – (5 marks)
19. Display of the product – (5 marks)
20. Presentation – (5 marks)

#### **Reference Links**

1. <https://www.youtube.com/watch?v=rvPfBwKG4BQ>

### Lesson Plan 4

Name of Faculty: Dr. Umme Salma

Class	10 <sup>th</sup>	Subject	English
Lesson Name	2. Wit and Humour	Duration of the Lesson	3 periods (2 hours and 15 minutes)
Concept(s) Covered		C. The Brave Potter  Creating something from the basic	
Vocation(s) or Occupation(s) that can be connected to this lesson			
In this lesson, Wit and Humour, the sub topic C. The Brave Potter, it is a folktale that illustrates how a common potter rose to fame and became a general in the King's army. So, the vocation can be Pot maker, Amusing and instructive fable writer, Mimic, comedian, Drama writer, Rope or Jute crafts, Tiger and cave craft, Camp craft. <b>This lesson plan is for making ‘Decorative Pot’. The title of the lesson provided the idea of a ‘Decorative Pot’. Vocation can be connected to Art Work-Pottery Designing/ Designing on Many Social Sciences Themes, NSDC Skill Sector (Pottery) Council.</b>			
Skills that will be inculcated			
<b><u>Literacy skills:</u></b> <ul style="list-style-type: none"><li>Students will develop the information literacy skill of conceptual understanding of C. The Brave Potter (creating something from the basic) and will create Decorative Pots.</li><li>Students will improve their media literacy by surfing more about witty or humorous fables.</li></ul>			
<b><u>Learning Skills:</u></b> <ul style="list-style-type: none"><li>Students will develop the language skills, like listening and speaking skills while interacting about context of making decorative pot with students and teacher.</li><li>Students will develop critical thinking skills by understanding the lesson and applying it to their communication abilities.</li><li>Students will work in collaboration in making decorative pots, and developing creative skills.</li><li>Students will develop their entrepreneurship skills by selling the decorative pots with plants.</li><li>Students will improve his presentation skill while presenting the decorative pot with plant.</li></ul>			
<b><u>Life Skills:</u></b> <ul style="list-style-type: none"><li>1. Students, when making decorative pot will develop leadership skills, organizational skills, team management skills, to be flexible, take initiative, be social and emotional adaptability.</li></ul>			
Interdisciplinary concepts that may be integrated			
<ul style="list-style-type: none"><li>Mathematics concept; Surface Areas and Volumes 3 D Shapes Money Commercial Mathematics.</li><li>Science; Sustainable Management of Natural Resources.</li><li>Social Studies; Manufacturing Industries.</li></ul>			
Learning Outcomes			
<ul style="list-style-type: none"><li>Students will remember, understand, and apply the knowledge in creating decorative pots with plants by using earthen pots and colours.</li><li>Students will make Decorative Pot.</li><li>Students will sell Decorative Pot.</li></ul>			

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- Students will assess profit of the product.

### **Tools/Material Needed**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Small earthen pot (Rs. 5)</li> <li>• Colour set with brush (Rs. 15/-)</li> <li>• Black marker (Rs. 5/-)</li> <li>• Golden metallic paint (Rs. 30/-)</li> <li>• 5. white colour or wall putty (Rs. 10/-)</li> </ul> | <ul style="list-style-type: none"> <li>• Soil and small stones</li> <li>• Money plant or any small plant</li> </ul> |
|---|---|

### **Steps**

#### **Pre-Activity:**

1. On previous day, teacher will instruct the students to bring the required material to make Decorative Pot.

#### **Activity:**

1. Take a small earthen pot.



2. Wash it with water, when it is half dry, apply white acrylic paint or wall putty (small bottle). Let it dry completely.
3. Create random lines with permanent marker on the pot.



4. Take pink colour, fill in random area. Let it dry.
5. Now mix white colour to make it lighter and colour randomly. Let it dry.
6. Add some more white colour, make it more lighter pink and colour the remaining area. Let it dry.
7. After dry highlight black lines with golden metallic paint. Let it dry.
8. Now fill the pot with soil. Take a small plant (money plant/ aloe-vera plant/ jade plant/ snake plant/ Ajwan plant). And plant it and cover the pot with more soil.
9. Cover the surface of the pot with stones and pebbles.
10. The similar pot can be used for artificial plants.

#### **Post Activity:**

1. Students will make a Decorative Pot.
2. Students will sell the Decorative Pot in the school Mela or nearby market for Rupees 120/-
3. Students will calculate the profit of the product sold in the market.

### **Precautions**

- Follow the steps carefully.



- Apply the acrylic paint on pot when it half dry.
- Mix the colours accordingly.
- Allow the pot to dry.
- Paint neatly.
- Highlight the metallic paint neatly.

### Assessment of Student Activity

The teacher will grade the students, using rubrics, which include 10 components and each component receives a score of 5, for a total of 50 points.

1. Washing the pot with water - (5 marks)
2. Apply white acrylic paint or wall putty - (5 marks)
3. Creating random lines with permanent marker - (5 marks)
4. Colouring neatly - (5 marks)
5. Highlighting black lines with golden metallic paint - (5 marks)
6. Fill the pot with soil - (5 marks)
7. Planting a small plant (money plant/ aloe-vera plant) - (5 marks)
8. Covering the pot with more soil - (5 marks)
9. Covering the surface of the pot with stones and pebbles - (5 marks)
10. Presentation of the Decorative Pot - (5 marks)

### Reference Links

<https://www.youtube.com/watch?v=JTWoUOvLdZQ>

<https://www.youtube.com/watch?v=4qf5VE53oHk>

Metalic paint: <https://www.eshwarshop.com/products/copy-of-fevicryl-soft-colors-gold-silver-powder-colors>

<https://www.youtube.com/watch?v=hHpsEDZHucs>



### Lesson Plan 5

Name of Faculty: Dr. Umme Salma

Class	10 <sup>th</sup> Class	Subject	English
Lesson Name	3. Human Relations	Duration of the Lesson	4 periods (3 hour)
Concept(s) Covered		C. The Never-Never Nest This play is incredibly humorous and emphasizes how crucial effective money management is to live a happy life.	
Vocation(s) or Occupation(s) that can be connected to this lesson			
In this lesson, Human Relations, the sub topic C. The “Never-Never Nest” by Cedric Mount is a one-act play about a young couple named Jack and Jill. They frequently purchase items in installments. They do not own any thing. From this lesson the following vocations can be connected;			
<ul style="list-style-type: none"><li>• Skit play/script writer</li><li>• Counselor</li><li>• Toy Piano craft</li><li>• Making Furniture Craft</li><li>• Toy Car craft</li><li>• Keychain maker</li><li>• Refrigerator technician</li><li>• Musician</li></ul>			
This lesson plan is for making the ‘Bird Nest’ Craft. The title of the lesson provided the idea of a ‘bird nest’. Vocation can be connected to Waste Management skill – Green Skill.			
Skills that will be inculcated			
<u>Literacy skills:</u>			
<ul style="list-style-type: none"><li>• Students will develop the information literacy skill of conceptual understanding of C. The Never-Never Nest - the play is incredibly humorous and emphasizes how crucial effective money management is to live a happy life and will create Bird Nest using coconut fibres.</li><li>• Student will improve their media literacy by surfing more about witty or humorous fables.</li></ul>			
<u>Learning Skills:</u>			
<ul style="list-style-type: none"><li>• Students will develop the language skills, like listening and speaking skills while interacting about context of making Bird Nest with students and teacher.</li><li>• Students will develop the language skills, like reading and writing skills when asked the students to read the paragraph form the text and reflect on the text in the form of writing.</li><li>• Students will develop critical thinking skills by understanding the lesson and applying it to their communication abilities.</li><li>• Students will work in collaboration in making Bird Nest, and developing interpersonal and creative skills.</li><li>• Students will develop their entrepreneurship skills by selling the Bird Nest.</li><li>• Students will improve his presentation skill while presenting the Bird Nest.</li></ul>			
<u>Life Skills:</u>			
<ul style="list-style-type: none"><li>• Students when making bird nest using coconut husk fibres, will develop leadership skills, organizational skills, team management skills, flexibility and initiative skills as well as social and emotional skills.</li></ul>			
Interdisciplinary concepts that may be integrated			

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- Mathematics concept; Surface Areas and Volumes 3 D Shapes Money Commercial Mathematics.
- Economics; Expenditure and Income.
- Science; Sustainable Management of Natural Resources.
- Social Studies; Waste management, Resources and Development – Sustainable Development -Geography and Economics.

### Learning Outcomes

- Students will remember, understand, and learn money management skills.
- Students will make a Bird Nest out of the waste by recycling and reusing.
- Students will improve his presentation skill while presenting Bird Nest.
- Students will make Bird Nest with coconut husk fibre.
- Students will sell Bird Nest.
- Students will calculate profit of the product after sold.

### Tools/Material Needed

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|---|---|
| <ul style="list-style-type: none"> <li>• Coconut husk fibre</li> <li>• Chart or notebook hard cover (Rs. 10)</li> <li>• Fevicol/glue (1 small bottle= Rs. 10/-)</li> <li>• Scissors</li> <li>• Cotton (Rs. 17/-)</li> <li>• 6. Needle and thread</li> </ul> | <ul style="list-style-type: none"> <li>• Stapler</li> <li>• Feathers (Hen or any bird)</li> <li>• Red sketch pen</li> <li>• Black Bindi (2)</li> <li>• Pencil &amp; Scale</li> <li>• Medium size plate</li> </ul> |
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### Steps

#### Pre-Activity:

1. On previous day, teacher will instruct the students to bring Coconut husk fibre, Chart or notebook hard cover, Fevicol/glue, Scissors, Cotton, Needle and thread, Stapler, Feathers (Hen or any bird), Red sketch pen, Black Bindi, Pencil & Scale and Medium size plate.

#### Activity:

1. Take a chart sheet or note book cover.



2. Draw two parallel curves in shape of an arch (about 6 inches).
3. Cut the parallel curves.
4. Between the parallel curves in the centre, draw “U” and cut it, this forms the door of a tent.





5. Take some coconut husk fibre, loosen it pulling the fibre apart.
6. Now apply fevicol on the arch and stick coconut husk fibres. Let it dry.
7. Trim out the edges to get a smooth finishing.
8. Tuck the fibres with the help of needle and brown thread, (it can be skipped).



9. Join the arch together in a shape of a tent.
10. Join the sides, using the stapler.
11. Cut the extra fibres.

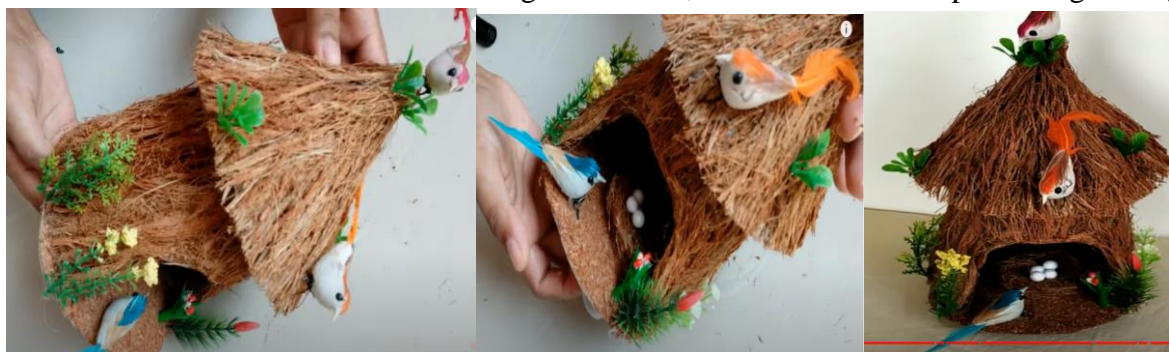


12. Take another chart sheet or notebook cover, take a medium size plate to trace the circle and cut the circle.
13. Cut a triangle as shown in the picture.
14. Apply fevicol and stick coconut fibres.
15. Trim the edges for smooth finishing.
16. Join the edges using the stapler, you will get a cone shaped cap.



17. Take a chart sheet or notebook cover, cut for the base with the help of prepared tent. Trace it and cut for the base.
18. Take some coconut husk powder, stick to the circle with the help of fevicol.
19. Attach the tent to the base by using fevikwik.
20. Now attach the cone on the top of the tent it makes the roof.

21. Decorate the bird nest with artificial flowers, leaves, glitters and ribbon etc.
22. Make a small nest with remaining husk fibres, stick cotton balls representing bird eggs.



23. Place the small nest inside the bird nest
24. To make the bird, take some cotton and make a lemon size cotton ball. Make a pea size cotton ball.
25. Stick the pea size cotton ball on top of the lemon size cotton ball as head.
26. Take two black bindi stickers and stick in the head to make eyes.
27. Make a small cone with paper, colour it red and stick it for beak.
28. Take six to eight feathers (hen feather can be used), if required colour the feathers.
29. Stick two feathers at back side to make tail.
30. Stick two to three small feathers on the body of the bird.
31. Stick two feathers on the both the side of the bird.
32. Repeat the same procedure to make two more birds. In total make four birds.
33. Stick two birds on the bird nest and one in front the entrance of the nest and one is inside the nest near the eggs.
34. This bird nest can be hanged by inserting jute rope on the top of the bird nest.

### **Post Activity:**

1. Students will make an attractive Bird Nest.
2. Students will sell the set in the school mela or nearby market for Rupees 99/-
3. Students will calculate the profit of the product sold in the market.

### **Precautions**

- carefully measure while measuring and cutting.
- Properly stick the coconut husk fibres.
- Properly stick the feathers on the bird.
- Avoid over decoration or glitter to the bird nest.

### **Assessment of Student Activity**

When creating a Bird Nest, out of the coconut husk fibres, teacher will use rubrics to grade the students on the 10 criteria listed below. Each parameter receives a score of 5, total of 50.

1. Collection of complete material – (5 marks)
2. Preparing the tent of the bird nest – (5 marks)
3. Attaching the tent to the base – (5 marks)
4. Fixing the roof of the bird nest – (5 marks)
5. Placing the small nest – (5 marks)
6. Pasting the two cotton balls for the preparation of bird – (5 marks)
7. Sticking the feathers on the cotton birds – (5 marks)
8. Sticking the Bindi to form eyes– (5 marks)
9. Sticking red colored cone for the beak – (5 marks)
10. Presentation of the product – (5 marks)

### Reference Links

1. <https://www.youtube.com/watch?v=PLh2JP5Avvo>
2. <https://www.youtube.com/watch?v=W8eJjNroZ6I&t=327s>
3. Cotton: <https://www.netmeds.com/non-prescriptions/jaycot-absorbent-cotton-wool-i-p-20-gm>

## Lesson Plan 6

**Name of Faculty: Dr. Umme Salma**

<b>Class</b>	<b>10<sup>th</sup> Class</b>	<b>Subject</b>	English
<b>Lesson Name</b>	<b>3. Human Relations</b>	<b>Duration of the Lesson</b>	2 periods (1 and 1/2 hour)
<b>Concept(s) Covered</b>		C. The Never-Never Nest This play is incredibly humorous and emphasizes how crucial effective money management is to living a happy life.	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
In this lesson, Human Relations, the sub topic C. The “Never-Never Nest” by Cedric Mount is a one-act play about a young couple named Jack and Jill. They frequently purchase items in installments. They do not own any thing. From this lesson the following vocations can be connected; <ul style="list-style-type: none"><li>• Skit play/script writer</li><li>• Counselor</li><li>• Toy Piano</li><li>• Making Furniture Craft</li><li>• Toy Car</li><li>• Bird Nest</li><li>• Refrigerator technician</li><li>• Musician</li></ul> <b>This lesson plan is for ‘Pom-Pom Keychain’. Vocation can be connected to Manufacturing - Handicrafts NSDC Skill Sector.</b>			
<b>Skills that will be inculcated</b>			
<b><u>Literacy skills:</u></b> <ul style="list-style-type: none"><li>• Students will improve the information literacy skill of conceptual understanding of C. The Never-Never Nest. This play is incredibly humorous and emphasizes how crucial effective money management is to living a happy life and will create Pom-Pom Keychain.</li><li>• Students will improve their media literacy by surfing how the Pom-Pom Keychain can be made in different manner.</li></ul> <b><u>Learning Skills:</u></b> <ul style="list-style-type: none"><li>• Students will develop the language skills, like listening and speaking skills while interacting about context of making Pom-Pom Keychain with students and teacher.</li><li>• Students will develop critical thinking skills by understanding the lesson and applying it to their communication abilities.</li><li>• Students will work in collaboration in making Pom-Pom Keychain, and developing interpersonal and creative skills.</li><li>• Students will develop their entrepreneurship skills by selling the Pom-Pom Keychain.</li><li>• students will improve their creative skills while making Pom-Pom Keychain.</li><li>• students will improve his presentation skill while presenting Pom-Pom Keychain.</li></ul> <b><u>Life Skills:</u></b> <ul style="list-style-type: none"><li>• Students work in group while making Pom-Pom Keychain, will develop leadership qualities, learn to work in team, and be flexible to social and economical needs.</li></ul>			

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- Students will take initiative to present their craft in a most appealing manner.

### **Interdisciplinary concepts that may be integrated**

- Mathematics concept; Surface Areas and Volumes, Money Commercial Mathematics and Measurement.
- Economics; Expenditure and Income.
- Science; Woollen materials.
- Social Studies; Manufacturing Industries.

### **Learning Outcomes**

- Students will remember, understand, and apply the knowledge to make Pom-Pom Keychain.
- Students will make Pom-Pom Keychain.
- Students will sell Pom-Pom Keychain.
- Students will calculate profit of the product.

### **Tools/Material Needed**

- Woollen thread (1 yarn Rs. 10/- )
- Key Ring Lots (Rs. 26/- ), it can be distributed in the class. It may cost only Rs. 2/- per student.
- Scissors
- Googly Eyes (10-piece packet Rs. 10/-) it can be distributed in the class. It may cost only Rs. 2/- per student.
- Fevicol (1 small bottle=Rs. 5/-)

### **Steps**

#### **Pre-Activity:**

1. On previous day, teacher will instruct the students to bring the required material to make Pom-Pom Keychain.

#### **Activity:**

1. Take a woollen thread.
2. Cut around twenty inches of it and keep aside.



3. Wrap the woollen thread, around the three fingers, make nearly hundred rolls.
4. Cut the thread after making the roll.
5. Tie the beginning of the thread and end of the thread.



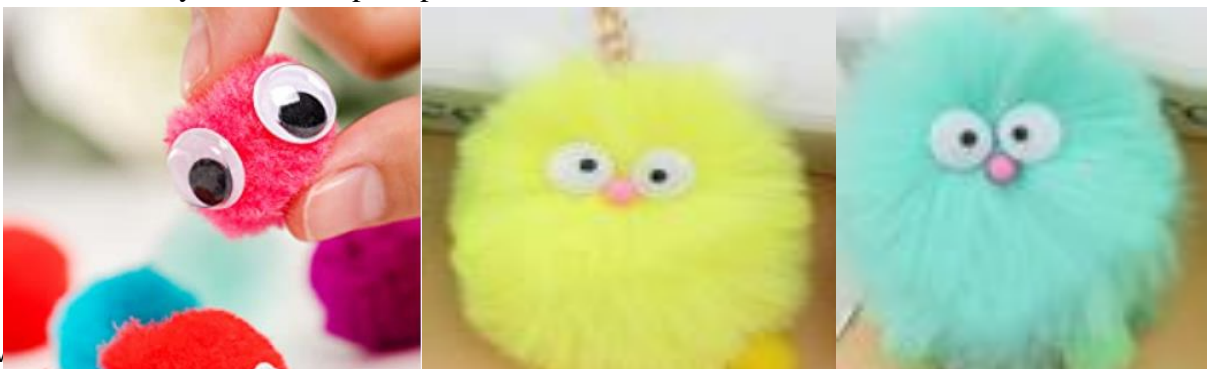
6. Remove the roll from the hand and tie with the woollen thread kept aside.
7. Tie it very tightly.
8. Now take sissors and cut the loops carefully.



9. Shake it you will get uneven pom-pom.
10. Trim the uneven pom-pom neatly.
11. Trim the pom-pom till you get nice, round smooth pom-pom.



12. Take the keychain to fix with pom-pom.
13. Fix the keychain to the pom-pom.



14. Take the googly eyes to stick the pom-pom.
15. Stick the googly eyes on the pom-pom by using fevicol neatly.

#### **Post Activity:**

1. Students will make a beautiful Pom-Pom Keychain.
2. Students will sell the Pom-Pom Keychain in the school Mela or nearby market for Rupees 50/-
3. student will estimate the profit of the sold product.

#### **Precautions**

- Take care while rolling the woolen thread.
- Take care while trimming the woolen thread.
- Take care while sticking the google eyes on the pom-pom.

#### **Assessment of Student Activity**

The teacher will grade the students, using rubrics, which include five components and each component receives a score of 10, for a total of 50 points.

1. Collection of the materials completely - (10 marks)
2. Making the roll of woolen thread - (10 marks)
3. Trimming the pom-pom neatly - (10 marks)
4. Sticking the googly eyes neatly - (10 marks)
5. Presentation of the product - (10 marks)

#### **Reference Links**

1. Pom-Pom Keychain: <https://www.youtube.com/watch?v= 7NKOIqVxHA>
  2. Key ring lots: <https://www.etsy.com/in-en/listing/1361542772/key-ring-lots-metal-key-ring-solid-key?>
- Googly Eyes big packet (Rs. 24/- ): <https://www.eshwarshop.com/products/copy-of-sponge-brush-4-in-1>
- Googly Eyes 10 pices pack (Rs. 10/- ): <https://www.indiamart.com/maa-enterprisesmumbai/googly-eyes>



## Lesson Plan 7

**Name of Faculty: Dr. Umme Salma**

Class	9 <sup>th</sup> Class	Subject	English
Lesson Name	5. Disasters	Duration of the Lesson	4 periods (3 hour)
Concept(s) Covered		A. A Havoc of Flood Disaster management and its preparedness	
Vocation(s) or Occupation(s) that can be connected to this lesson			
In this lesson, A havoc of flood, the vocations can be connected to this lesson are, disaster management agents, voluntary agents, local boat man, bullock carts, Helicopter pilot, Paramedical personals and Grocery suppliers.			
This lesson plan is for making “Boat with Cardboard”, it can be connected to Local Art and Craft Work Skills, Handicrafts – NSDC Skill Sector (Construction).			
Skills that will be inculcated			
<b><u>Literacy skills:</u></b> <ul style="list-style-type: none"><li>Students will improve the information literacy skill of conceptual understanding of A. A Havoc of Flood, learn disaster management and its preparedness and will create a Boat with Cardboard.</li><li>Students will improve their media literacy by surfing how a boat with cardboard is prepared in different manner.</li></ul>			
<b><u>Learning Skills:</u></b> <ul style="list-style-type: none"><li>Students will develop the language skills, like listening and speaking skills while interacting about context of making Boat with Cardboard with students and teacher.</li><li>Students will develop critical thinking skills by understanding the lesson and applying it to their communication abilities.</li><li>Students will work in collaboration in making the Boat with Cardboard, and developing interpersonal and creative skills.</li><li>Students will develop their entrepreneurship skills by selling the Boat with Cardboard.</li><li>Students will improve their creative skills while creating Boat with Cardboard.</li><li>Students will improve his presentation skill while presenting Boat with Cardboard.</li></ul>			
<b><u>Life Skills:</u></b> <ul style="list-style-type: none"><li>Students work in group while making boat using cardboard, will develop leadership qualities, learn to work in team, and be flexible to social and economical needs.</li><li>Students will take initiative to present their Boat with Cardboard in a most appealing manner.</li></ul>			
Interdisciplinary concepts that may be integrated			
<ul style="list-style-type: none"><li>Mathematics concept; Surface Areas and Volumes 3 D Shapes Money Commercial Mathematics Mensuration Ratio and Proportion Measurement.</li><li>Science; Sustainable Management of Natural Resources.</li><li>Social Studies; Art and Crafts.</li></ul>			
Learning Outcomes			
<ul style="list-style-type: none"><li>Student will remember, understand, and apply the knowledge to make a Boat with Cardboard.</li><li>Students will make Boat with Cardboard.</li></ul>			

- Students will sell Boat with Cardboard.
- Students will assess profit of the sold product.

### Tools/Material Needed

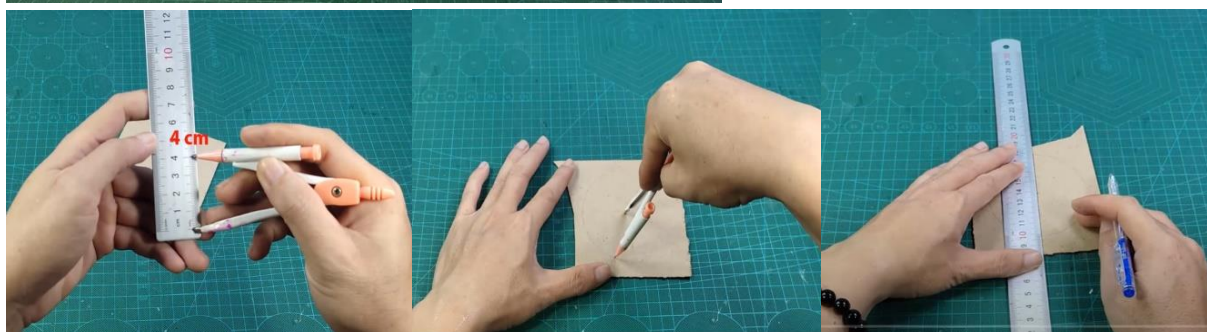
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| <ul style="list-style-type: none"> <li>• Cardboard (Rs. 40 )</li> <li>• Fevi-kwik Gel (For Metal, Rubber, Leather, Wood &amp; Plastic, 2 g) (Rs. 20/-)</li> <li>• Round pointed sticks</li> <li>• 4. Scale</li> </ul> | <ul style="list-style-type: none"> <li>• Pencil</li> <li>• Scissors</li> <li>• 7. Colour set with brush (Rs. 15/-)</li> </ul> |
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### Steps

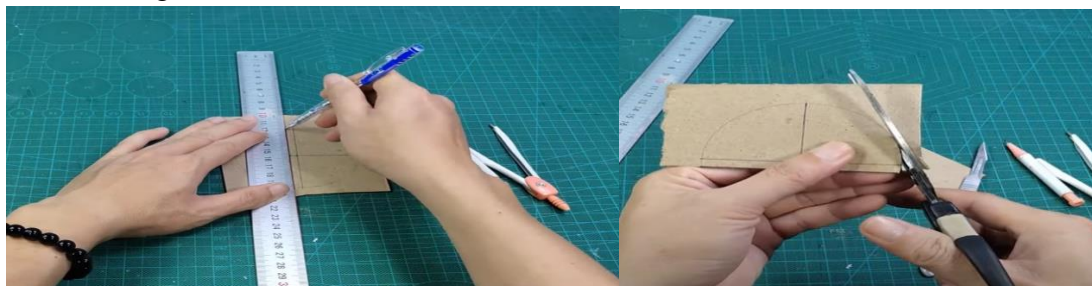
#### Pre-Activity:

1. On previous day, teacher will instruct the students to bring the required material to make Boat with Cardboard.

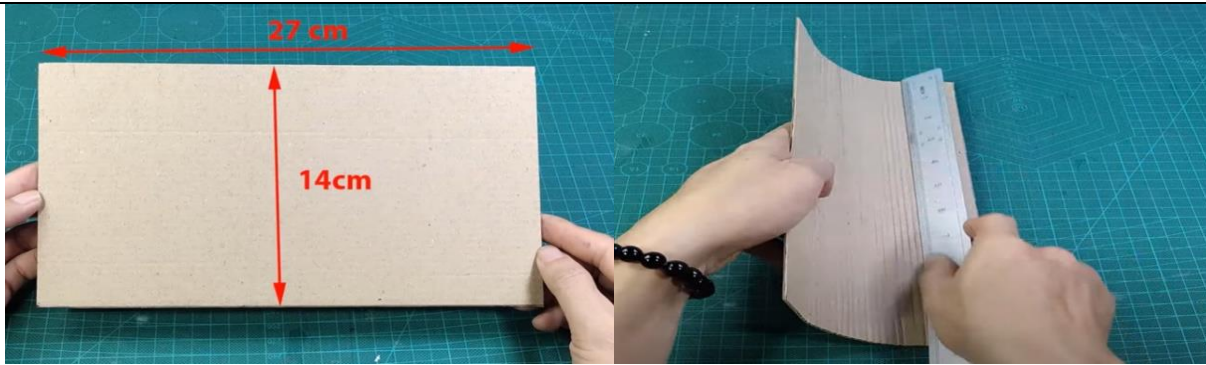
#### Activity:



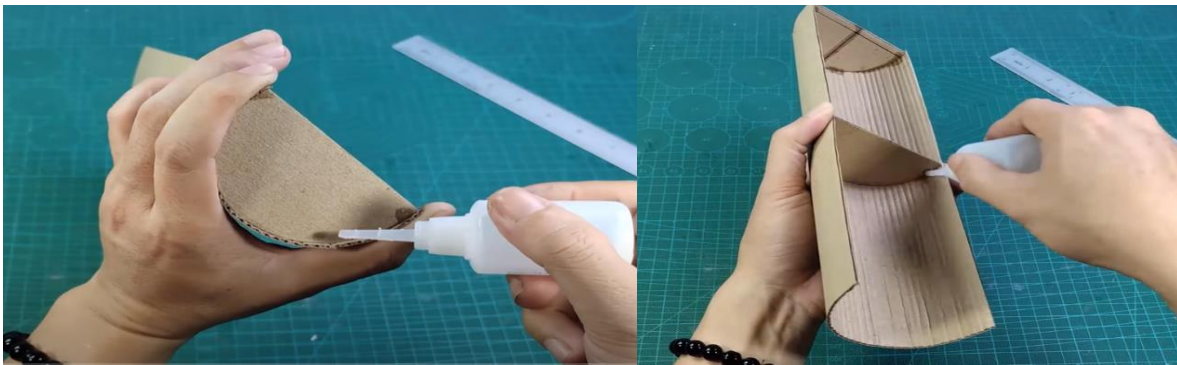
1. Take a cardboard sheet, measure the 4 cm radius with compass cut it in circle shape by using the scissors.



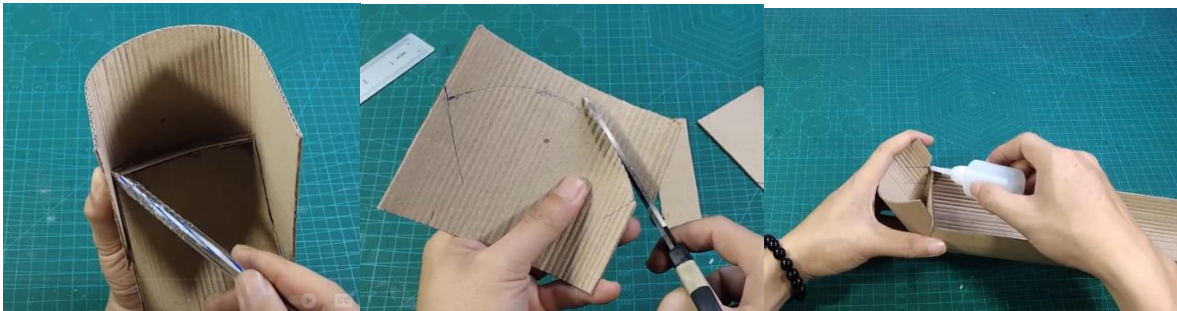
2. Draw a vertical line, centre of the circle and draw another vertical line beside the first line with a distance of 0.5 cm, and cut it from this line.
3. Similarly cut another circle.



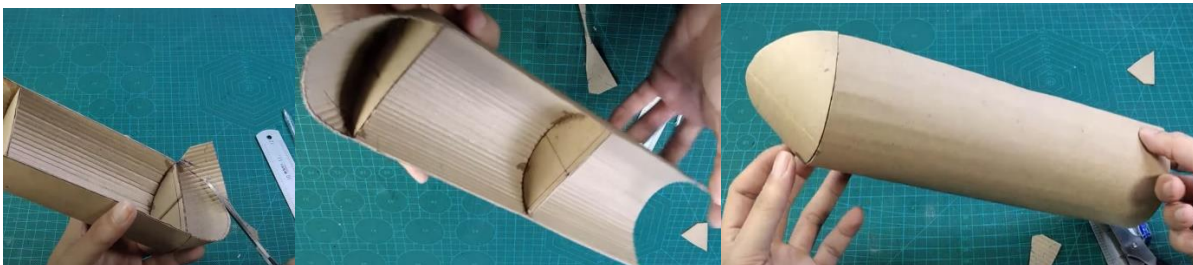
4. Take a card board and cut it in rectangle shape (14 cm length and 27 cm breadth).
5. And then make the vertical lines on this rectangular shape cardboard by using scale to make the cardboard soft.



6. Fold the rectangle and paste the semicircle with the fevicol at the folded side of rectangle edge.
7. Paste another semicircle at the centre of the rectangle.

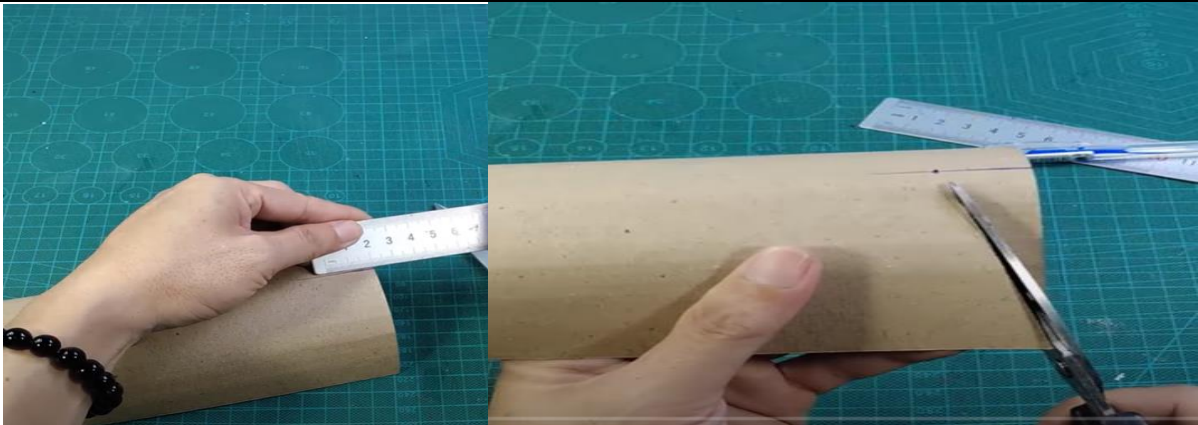


8. Take a piece of cardboard and hold it at the corner of the pasted semicircle and draw the line. Cut the cardboard from drawn line and paste it.



9. Cut the upper side of pasted corner into the round shape.





10. Measure 2 cm by using a scale at the another end of the ship and point it, then cut it in v shape.



11. At the cut side, paste a sheet to cover it and cleanly cut remaining extra sheet from the back side of pasted sheet.



12. Take a sheet to cover the top of the ship and paste it on its top, and cleanly cut remaining extra sheet after pasting the top.

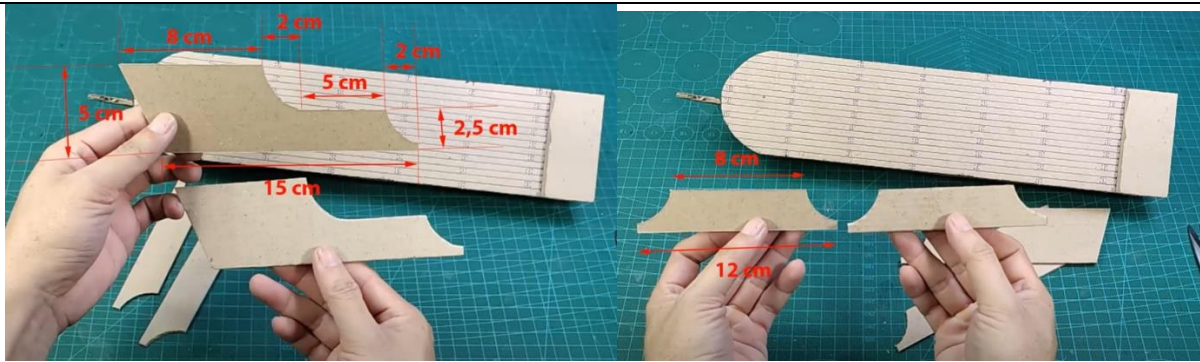
13. Cut out a small rectangle from the remaining cardboard and paste it at the edge of the ship.

14. Take a strip of cardboard and paste it at the bottom of ship in its centre vertically.



15. Take two small pieces of cardboard paste it at each side of the ship.



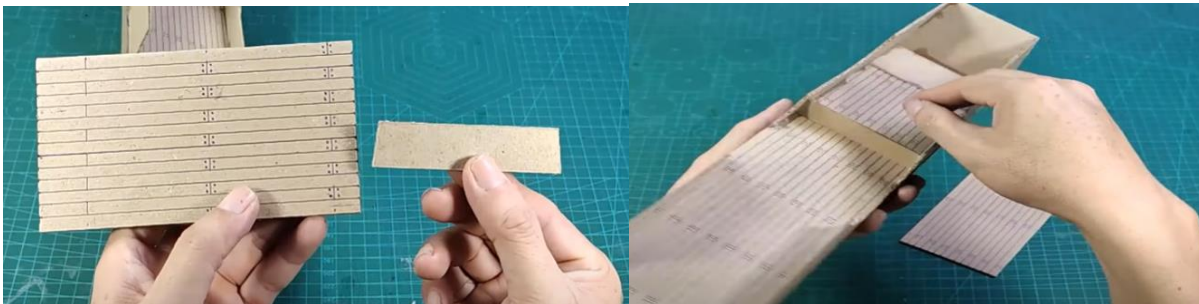


16. Cut four pieces of cardboard in two pairs, first pair is bigger and second is smaller. As shown in picture above.



17. Paste the two similar shapes opposite to each other at both ends of the ship.

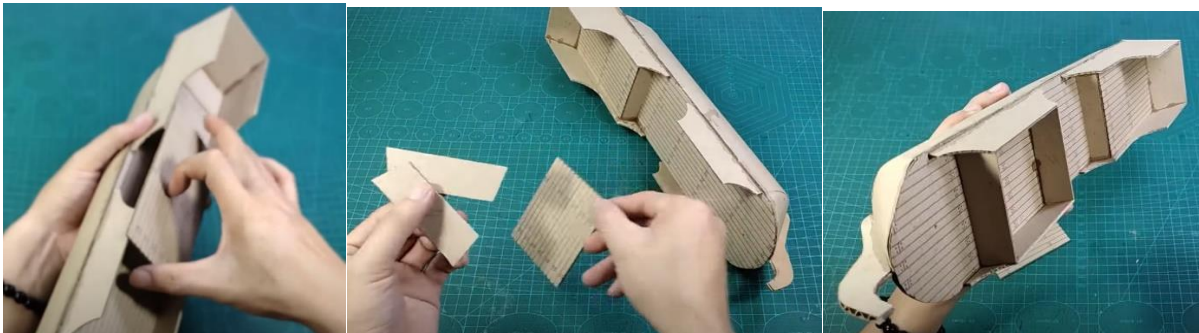
18. Take a piece of card board and paste at the corner part of the ship and cut its extra part from the sides.



19. For preparing the decks, we need to prepare rectangular boxes of three different sizes.

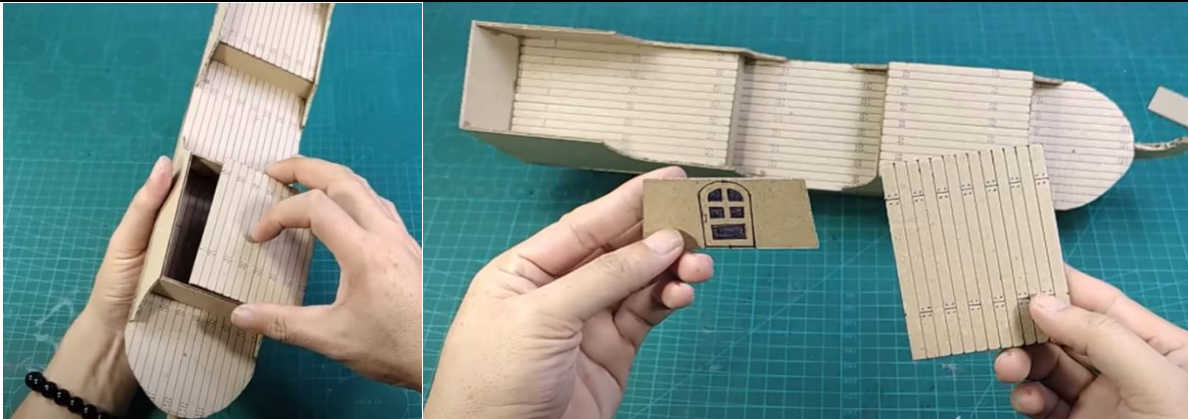
20. Cut out a rectangle and a stripe (half inch) from the cardboard.

21. Paste it one side of ship as shown in the picture above.



22. Take a rectangle shaped cardboard sheet and paste two small stripes on opposite sides of the square as shown to make a deck on the other side. Paste it on the front side to make a deck.





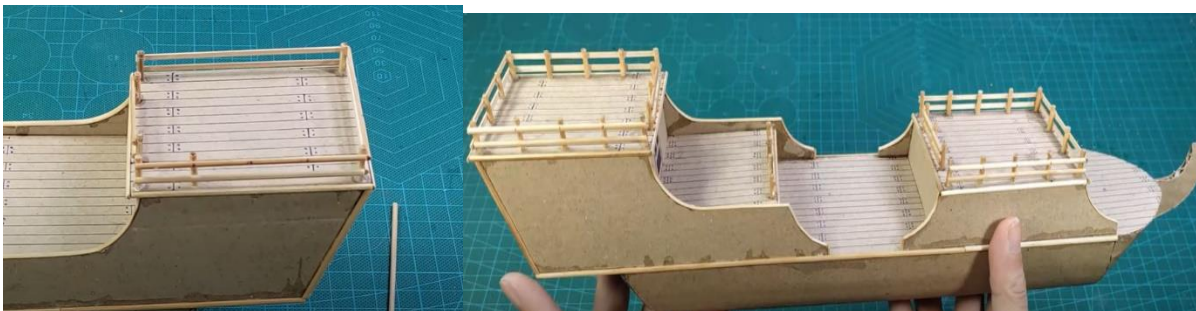
23. Take a piece of cardboard about the size of the deck to make its roof and a small piece to make a small door for the deck as shown above.



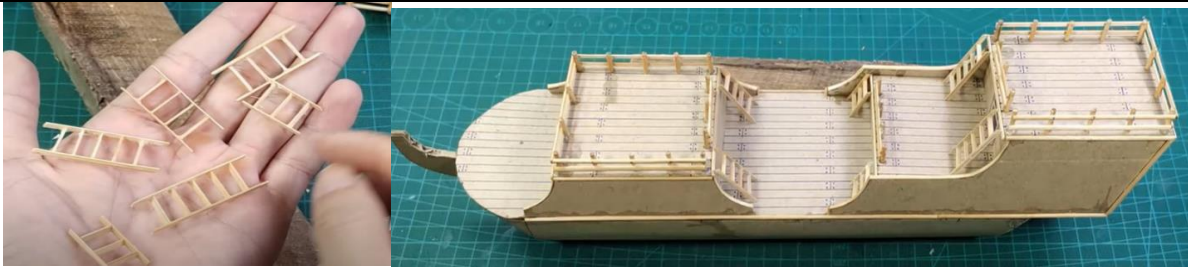
24. Now paste the roof on the top of the deck and paste the door in the front.



25. Take pointed round sticks, slit them into two using cutter.



26. Continue pasting them in such a manner that they form the four sided railing of the decks. Begin pasting at the corner of the decks.



27. Now, make the ladders for decks and roof by taking two similar size sticks hold them parallel and paste the small sticks between the parallel sticks as shown above.

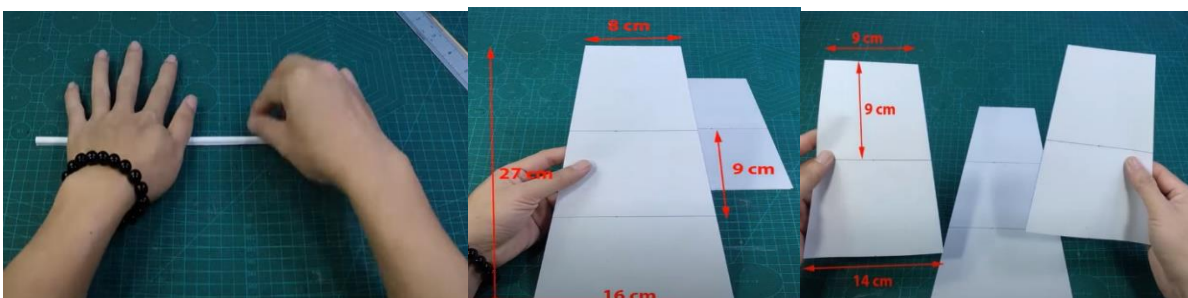
28. Place them at appropriate places near the decks.



29. Make similar ladders of larger size for the sides of the ship and paste them on either sides.



30. Now for making the stand, take a rectangular piece of cardboard and two similar shaped small pieces and paste the small pieces of cardboard on either sides. Place the ship on the stand.



31. Take a paper and roll it tightly to make a pillar, prepare 3 pillars and colour it (brown colour)

32. Make a trapezium with length as 27 cm, one side's breadth 16 cm and the other side 8 cm as shown in the above picture.

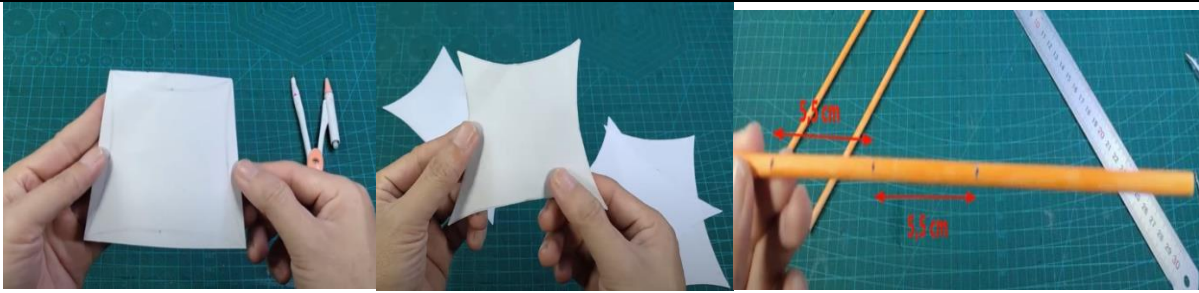
33. Mark the trapezium using a scale at intervals of 9 cm each. There will be three partitions in total.

34. Cut the trapezium neatly at these three points.

35. Make two trapeziums of 18 cm length, one side's breadth is 14 cm and another is 9 cm.

36. As similar to the previous step, cut these trapeziums into two at 9 cm. thus you have four trapezium of length 9 cm each.





37. Draw curves at the edges of trapezium to shape them as sails, refer to picture above.

38. Use the previously prepared and coloured sticks in this step at intervals of 5.5 cm, make four holes in the sticks.



39. Place the slitted sticks in these holes which were made in the previous step to form a antina like structur. In total you will be making three structures.

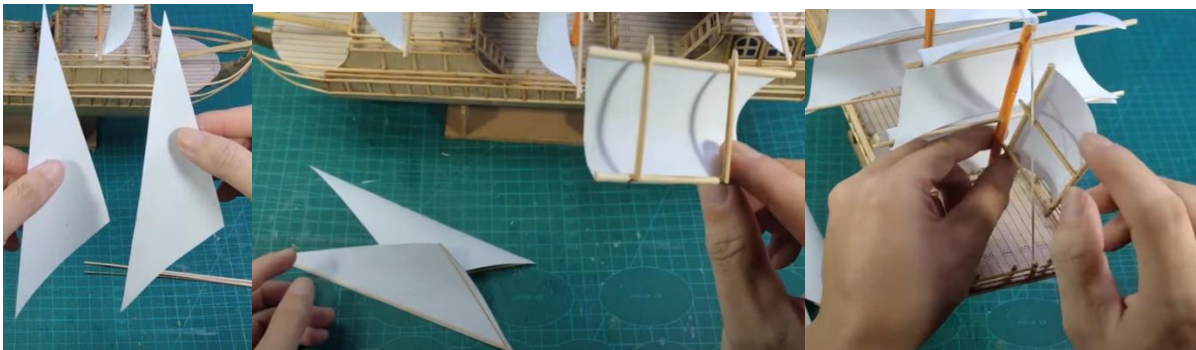
40. Paste the sails (trapeziums) accordingly on this antina like structure. Refer to the above picture.



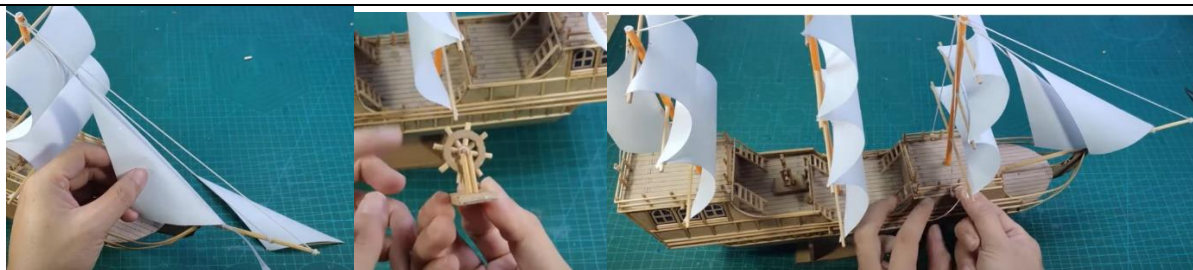
41. Place these sails as follows; 1. Sail in the centre of the ship and remaining ones at each of the centre placed sail.

42. Tie threads that begin from back side of the sail, passing through top of the sails. Bring the thread tie it at the front side of the ship.

43. Place a round stick at the front of the ship and also tie two threads from the front to the first sail.



44. Cut out two triangles from the paper and paste it on the front threads. Refer the above picture.



45. To provide stability to the sails, tie threads from each of the decks railing to the top of the sail.

46. Place a wheel at the center of the ship.



47. Colour the boat to make it more attractive.

### **Post-activity:**

1. Students will make an appealing boat with cardboard.
2. Students will sell the boat in the school mela or nearby market for Rupees 180/-
3. Students will estimate the profit of the sold product.

### **Precautions**

- Teacher supervision is required while slitting the sticks with knife.
- Take accurate measurements while measuring.
- Make proper holes and cuttings.
- Precautions to be taken while handling rubber adhesive.

### **Assessment of Student Activity**

The teacher will grade the students, using rubrics, which include 10 components and each component receives a score of 5, for a total of 50 points.

1. Collecting complete material – (5 marks)
2. Team work – (5 marks)
3. Following the steps – (5 marks)
4. Accurate measurement – (5 marks)
5. Accurate cutting – (5 marks)
6. Neat and clean sticking – (5 marks)
7. Creativity – (5 marks)
8. Aesthetic to look – (5 marks)
9. Display of the product – (5 marks)
10. Presentation – (5 marks)

### **Reference Links**

1. <https://www.youtube.com/watch?v=1LSvnzJjHNO>

## Lesson Plan 8

**Name of Faculty: Dr. Umme Salma**

Class	9 <sup>th</sup> Class	Subject	English
Lesson Name	8. Travel and Tourism	Duration of the Lesson	4 periods (3 hour)
Concept(s) Covered		B. Father Returning House (Poem)  A Dramatic Monologue	
Vocation(s) or Occupation(s) that can be connected to this lesson			
In this lesson, Travel and Tourism, the sub topic B. Father Returning House (poem) by Dilip Chitre depicts the alienated man returning house from work. This man's child is the poem's speaker. The speaker sees his father and paints a picture of a lonely man who leads a routine existence and is overburdened with obligations. So, the vocations can be Toy train, Tea pot craft, Toy house, Painting, Frame making using Stanza and sonnet. <b>This lesson plan is for making Toy House with cardboard. it can be connected to Local Art and Craft Work Skills, Handicrafts – NSDC Skill Sector (Construction).</b>			
Skills that will be inculcated			
<b><u>Literacy skills:</u></b> <ul style="list-style-type: none"><li>Students will improve the information literacy skill of conceptual understanding of B. Father Returning House (Poem) comprehend dramatic monologue and will make a Toy House.</li><li>Students will improve their media literacy by surfing how a Toy House is created in different manner.</li></ul> <b><u>Learning Skills:</u></b> <ul style="list-style-type: none"><li>Student will develop the language skills, like listening and speaking skills while interacting about context of making Toy House with students and teacher.</li><li>Students will develop critical thinking skills by understanding the lesson and applying it to their communication abilities.</li><li>Students will work in collaboration in making Toy House, and developing interpersonal and creative skills.</li><li>Students will develop their entrepreneurship skills by selling the Toy House.</li><li>students will improve their creative skills while creating Toy House.</li><li>students will improve his presentation skill while presenting Toy House.</li></ul> <b><u>Life Skills:</u></b> <ul style="list-style-type: none"><li>Students work in group while making toy house, will develop leadership qualities, learn to work in team, and be flexible to social and economical needs.</li><li>Students will take initiative to present their Toy House in a most appealing manner.</li></ul>			
Interdisciplinary concepts that may be integrated			
<ul style="list-style-type: none"><li>Mathematics concept; Surface Areas and Volumes 3 D Shapes Money Commercial Mathematics Mensuration Ratio and Proportion Measurement.</li><li>Science; Sustainable Management of Natural Resources.</li><li>Social Studies; Art and Crafts.</li></ul>			
Learning Outcomes			
<ul style="list-style-type: none"><li>Students will remember, understand, and apply the knowledge to make Toy House.</li><li>Students will make Toy House.</li><li>Students will sell Toy House.</li></ul>			

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- Students will assess profit of the product sold.

### Tools/Material Needed

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Cardboard (Rs. 40 )</li> <li>• Color set with small brush (Rs. 15)</li> <li>• Fevikiwik (Rs. 20/-)</li> <li>• Scale</li> <li>• 5. Pencil</li> </ul> | <ul style="list-style-type: none"> <li>• Fevicol (1 small bottle = Rs. 10)</li> <li>• Scissors (1)</li> <li>• Cutter</li> </ul> |
|--|---|

### Steps

#### Pre-Activity:

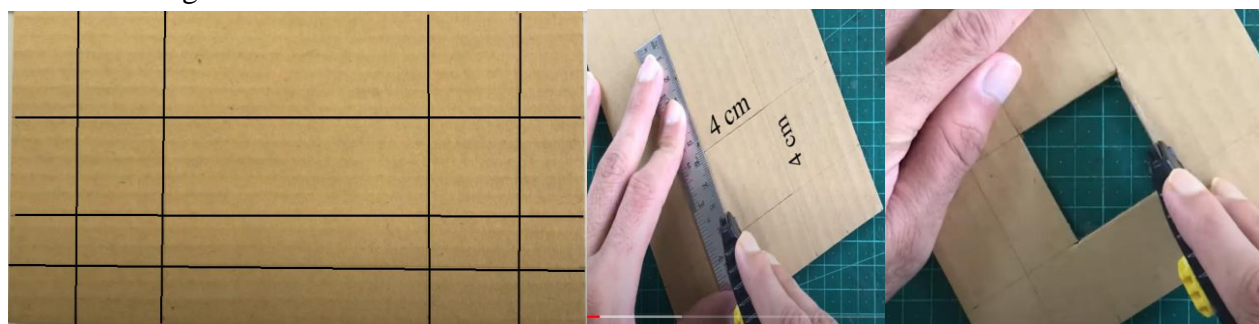
1. On previous day, teacher will ask the students to bring cardboard, color set with small brush, Fevikiwik, Fevicol, cutter and other required materials.

#### Activity:

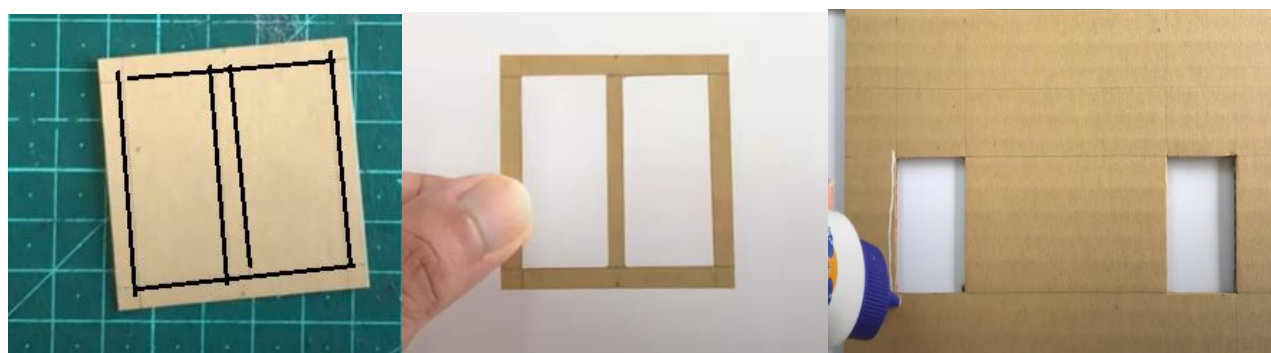
1. Take cardboard, scale and pencil to cut the cardboard in rectangular shape.



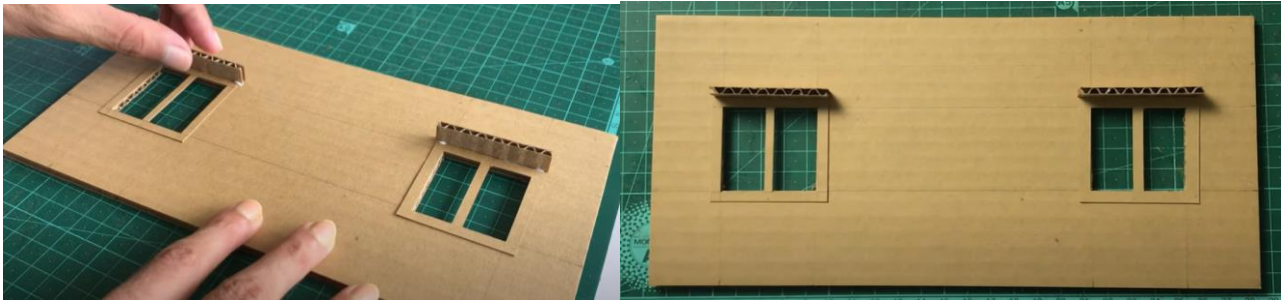
2. Cut the rectangular cardboards of 26 cm length and 13 cm width.
3. Mark points at the width of the card board at 4.5 cm, 4 cm and 6 cm either ends of the rectangle.



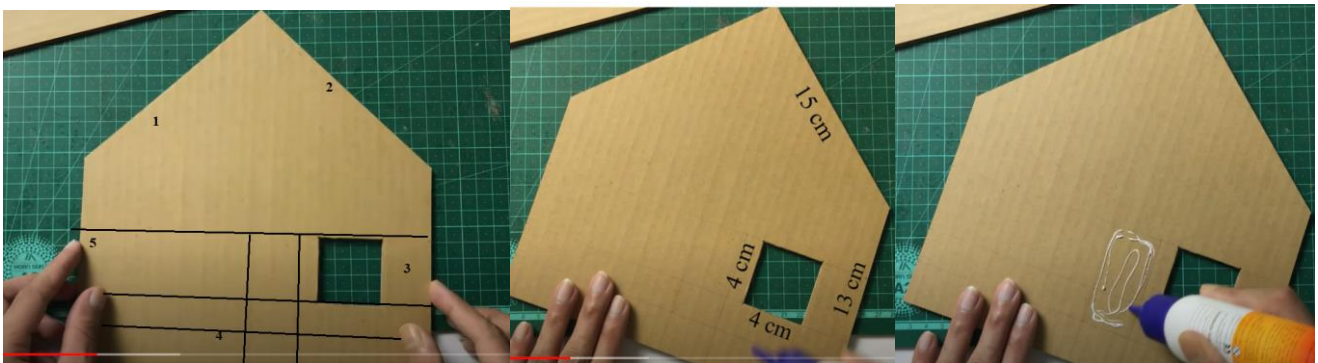
4. Join the opposite marks, marked in the previous step.
5. Mark points along the length of the cardboard and mark out 3 cm, and 7 cm by keeping the edge of the scale at one end and repeat it at the other end on the same edge.
6. Repeat the same steps along the opposite edge.
7. Join vertically the 3 cm points and 7 cm marked points. Thus, you will have two sets of parallel lines on each shorter edge of the rectangle.
8. Cut out 4x4 square from the middle of parallel lines. Repeat it for the another set of parallel lines to form the windows of the house.



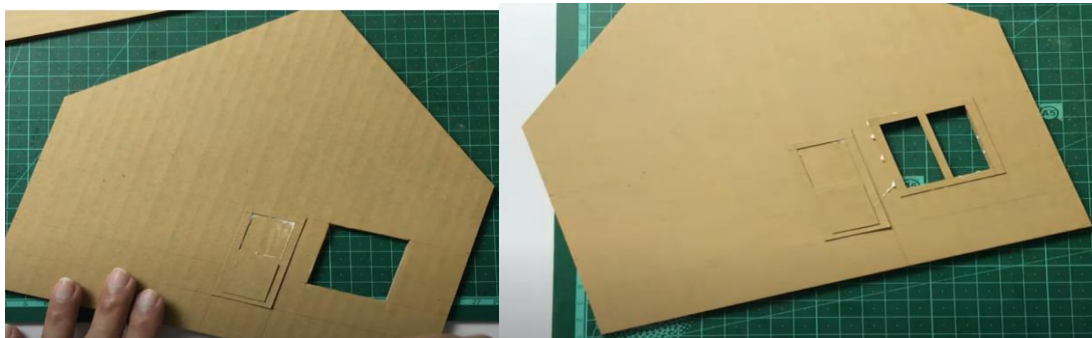
9. On a smaller cardboard piece, use the square, we cut to draw, now draw a bigger square leaving half a cm margin around the square.



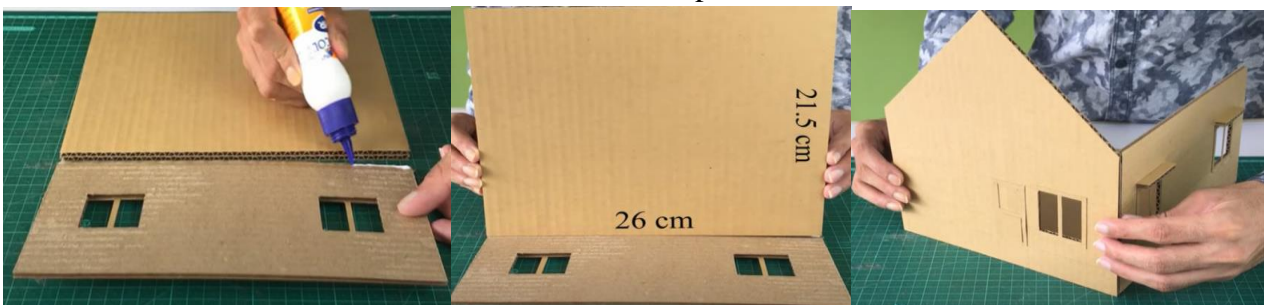
10. In the middle of the smaller cardboard draw parallel lines to from the window. Cut them neatly and fix it on the bigger 29x16 cm cardboard to from the outside of the window. Repeat the same for another window.
11. Paste a small strip of cardboard on top of the window (similar to the real windows to prevent rainfall coming in the house).



12. Draw a pentagon on a cardboard with the triangular edges (sides 1 & 2) length as 15 cm and the sides (3 & 5) the width of pentagon is 13 cm; the base will be 21.5. cut out this pentagon.
13. Cut out a 4x4 piece from the pentagon we cut in the previous step, towards the right side of the pentagon.



14. Use a thin cardboard to cut a small rectangle to form the door of the house. Paste it beside the window (previous step).
15. Cover this window also as instructed in the step 8.



16. Cut out a 26x21.5 cm rectangle, from the base of the house.



17. Paste the larger cardboard (12x13 cm) used in the first step along the length of the cardboard in previous step.



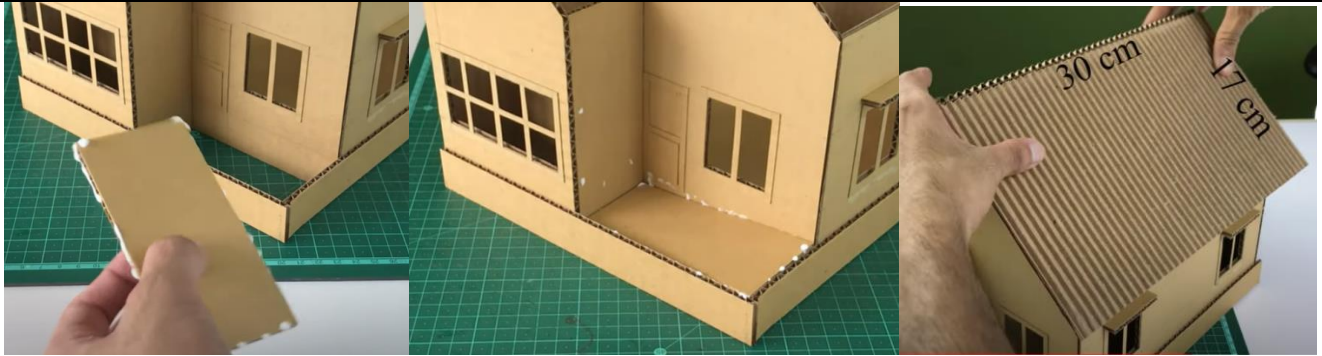
18. Paste the pentagon like structure on the shorter edge of the rectangle in step 12.  
 19. Join the cardboards prepared in step 16 & 17 using fevikwik.  
 20. Use the second cardboard prepared with the windows to form the walls of the house.  
 21. Prepare a similar pentagon like structure using instructions in step 12. This time the door will not be present.  
 22. Fix it to the house to form the backside of the house.



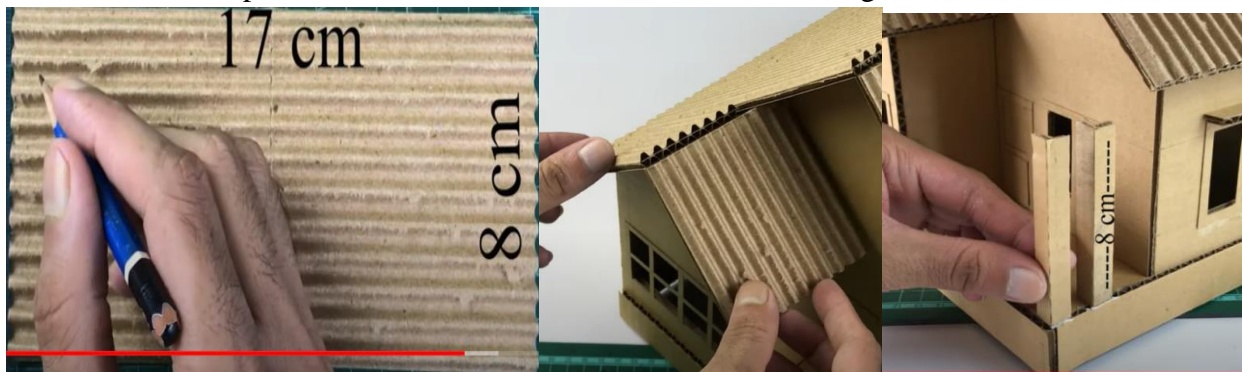
23. Cut another pentagon like structure with length 13 cm width 11 cm.  
 24. Mark a (10x4 cm) rectangle on the pentagon towards the 11 cm edge, cut it out.  
 25. Use thin cardboard to form a window grill like structure to cover the window.  
 26. Use a small cardboard piece to cut out two rectangles of 13 cm length and 5 cm width.  
 27. Paste the two rectangles with fevikwik to the pentagon prepared in the step 21.



28. Fix this structure on the front of the house beside the door.  
 29. Take a 2 cm strip and fix on the structure pasted in the earlier step.  
 30. Take a strip as similar to the previous step, fix it on the other side of the house.



31. Take measurement of the space left empty near the door, cut out a rectangle of the same measurement to form the entrance of the house.
32. Cut out two rectangles of 30 cm length and 17 cm width.
33. Paste these rectangles along the 30 cm edge and hold it such the rough end is seen outside.
34. Fix it on the top of the house to form the roof of the house using fevikwik.

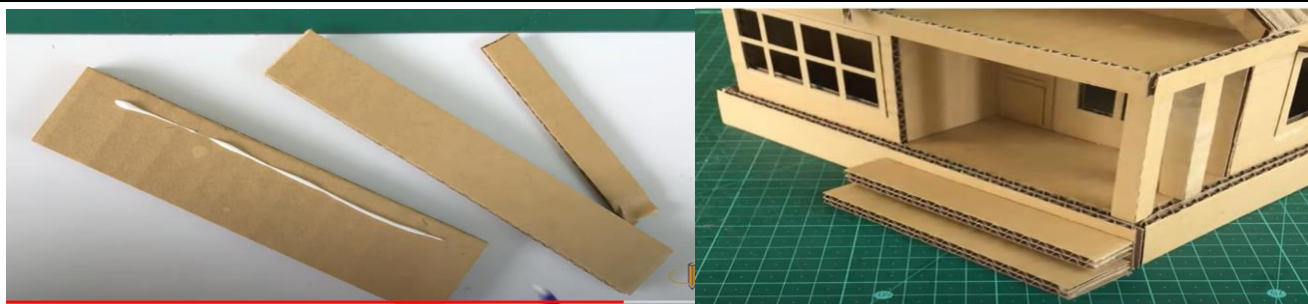


35. Take a smaller piece of cardboard of length 17 cm and breadth 8 cm, cut lightly in the middle of the piece carefully so that it doesn't divide the cardboard.
36. Mark points at 2 cm on one partition and remove that tag like piece from the cardboard.
37. Fix this piece on the top of smaller room like place in the house.
38. Join 1 cm width, 8 cm length of two strips to from two pillars and fix them on the empty end of the house near the door (right side) edge of the house.



39. Cut out a L-shaped structure, where the vertical line of the "L" is 1 cm thick in width, but the horizontal is rectangle like piece. The total length of this piece is 21.5 cm.
40. Fix it on the pillar and paste it to the small room which has been fixed to house.
41. Make railing using 1 cm width strip to fix around the previous L shaped structure on both sides.





42. Make steps to enter into the house take two same sized strips and a small strip to form the gap between the two stairs. Paste the smaller strip in between the two longer strips to make the stairs.

43. Paste these steps in front of the house near the pillars.



44. Use thin brown paper to cover the edges on the big and small roofs.

45. Colour it uses different colours of your choice.

### Post Activity:

1. Students will make a Toy House.
2. Students will sell the Toy House in the school mela or nearby market for Rupees 170/-
3. Students will calculate the profit of the product sold in the market.

### Precautions

- Teacher supervision is required.
- While measuring, take precise measurements.
- Make accurate cuts.
- When using rubber adhesive, use caution.

### Assessment of Student Activity

The teacher will grade the students based on rubrics that have 10 components and each component score is 5, for a total of 50 points.

1. Gathering complete material (5 marks)
2. Team work - (5 marks)
3. Carrying out the steps - (5 marks)
4. Reliable measurement (5 marks)
5. Precise cutting (5 marks)
6. Orderly and tidy sticking (5 marks)
7. Coloring neatly – (5 marks)
8. Aesthetic appearance (5 marks)
9. Display of the product – (5 marks)
10. Presentation – (5 marks)



### Reference Links

1. <https://www.youtube.com/watch?v=rYo2BCAavys>

## Lesson Plan 9

**Name of Faculty: Dr. Qudsia Hafeez**

<b>Class</b>	10 <sup>th</sup> Class	<b>Subject</b>	English
<b>Lesson Name</b>	5. Social Issues	<b>Duration of the Lesson</b>	3 periods (135 minutes)
<b>Concept(s) Covered</b>		A. The Storeyed House (Part – I) B. The Storeyed House (Part –II) Interior Decorators – Wall Art	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
<p>In this lesson, Social Issues, the sub-topics A. The Storeyed House (Part - I) and B. The Storeyed House (Part – II) are the two sub-topics describing about the Dalit man named Bayaji who himself constructs a storeyed house with his retirement savings. So, the vocations such as Masons, Repairing Workers, can be connected. The sub-topic A. The Storeyed House (Part - I) describes Bayaji counseling his children for the need of a storeyed house, hence the vocation Counselor can be connected here. The sub-topic B. The Storeyed House (Part - II) depicts the traditional housewarming ceremony; for which vocations like Event Planners/Event Managers, Stage Decorators, Musicians/Devotional Singers, and Tea Maker can be connected. Further, in this sub-topic, the storeyed house is described with regard to its construction and decoration of first storey, so the vocations like Interior Designers/Interior Decorators, can be connected. Hence, the following vocations are listed-</p> <ul style="list-style-type: none"> <li>○ Masons/Repairing Workers</li> <li>○ Event Planners/Event Managers</li> <li>○ Stage Decorators</li> <li>○ Interior Designers/Interior Decorators</li> <li>○ Musicians/Devotional Singers</li> <li>○ Counselor</li> <li>○ Tea Maker</li> </ul>			
<p><b>This lesson plan is for ‘Interior Decorators’ Vocation. It can be connected to Handicrafts and Carpet Sector Skill Council.</b></p>			





## Skills that will be inculcated

### I Literacy Skills-

1. Students will develop the information literacy skill of conceptual understanding of A. The Storeyed House (Part – I), B. The Storeyed House (Part –II), and Interior Decorator – Making of Wall Art.

### II Learning Skills-

1. Students will develop the communication skill of listening and speaking skills while discussing/interacting about the context of A. The Storeyed House (Part – I), B. The Storeyed House (Part –II), and Interior Decorator – Making of Wall Art.
2. Students will develop the communication skill of reading and writing skills, and critical thinking skills based on the content of the lesson while comprehending the lesson.
3. Students will develop the receptive skills (L, R) and productive skills (S, W) of the language.
4. Students will work in small teams in making of the wall art.

### III Life Skills-

1. Students when working in a group will develop life skills like leadership skills, team work skills, flexibility and initiation skills, social & emotional skills, and productivity skills on the context.

<b>Interdisciplinary concepts that may be integrated</b>	
1. The concept of ‘Interior Decoration’ can be interrelated with chapter 11 ‘Areas’ from Mathematics subject of class 9 <sup>th</sup> . 2. This concept can be connected with chapter 10 ‘Soil Pollution’ from Biology subject of class 9 <sup>th</sup> . 3. This concept can be interrelated with chapter 3 ‘Production and Employment’ and chapter 11 ‘Sustainable Development with Equity’ from Social Sciences subject of class 10 <sup>th</sup> . 4. This concept of ‘Interior Decoration – making of wall art using old CDs’ can be connected with chapter 6 ‘Bio-Diversity’ under the sub-topic ‘Environment’ from English subject of class 10 <sup>th</sup> . 5. This concept can be interrelated with chapter 10 ‘Natural Resources’ from Biology subject of class 10 <sup>th</sup> .	
<b>Learning Outcomes</b>	
1. Students will remember, understand, and apply the knowledge of A. The Storeyed House (Part – I), B. The Storeyed House (Part –II), and Interior Decorator – Making of Wall Art. 2. Students will be able to make a Wall Art using CDs. 3. Students will be able to sell the product. 4. Students will assess the profit of the product sold.	
<b>Tools/Material Needed</b>	
1. Old DVDs – 7 in number 2. Old Foam board or Cardboard piece of 30x40 cm or 11.8x15.7 inches. 3. Scissors for Rupees 100/- 4. Pencil or Pen or Black Sketch Pen or Marker Pen for Rupees 10/- 5. Black color chart sheet for Rupees 20/-	6. Pidilite Multi-Purpose Allfix Clear & Non-Staining Adhesive (20ml) for Rupees 35/- 7. White paper or Notebook paper
<b>Steps</b>	
<b>I Pre-activity-</b> 1. Teacher will instruct the students to work in groups of 5 students each or in pairs. 2. Teacher will instruct the students in each group to bring the required materials to make the Wall Art. 3. Teacher will inculcate recycling spirit among students by instructing the students to make use of already available old leftover recycled material found in their homes instead of purchasing any new material items. 4. Teacher will instruct the students on how to make a Wall Art and ask students to create their own attractive Wall Art and decorate it as they like.	
<b>II Activity-</b> 1. Students will take a white paper and fold it into half and with the help of a pencil will draw a leaf oval shape outline at the folded paper and cut it from the half folded paper so as to make size of 3.5X7cm or 1.37X2.75 inches leaf cut-out paper. 2. Students will use scissors to cut out the leaf and place the paper cut leaf size on the DVD and with the help of a marker, mark an outline shape of that paper cut leaf on the DVD surface. 3. Students will cut the DVD surface in the shape of a leaf and similarly cut many such leaf cut-out shapes by using many DVDs as required. In one DVD, four leaf cut-out can be made. Then, neatly trim the leaf cut-out edges for a clear finish look. 4. Students will also cut a round circle of 2cm diameter from the DVD. 5. Students will cover the cardboard with black color chart sheet using Pidilite Multi-Purpose Allfix Clear & Non-Staining Adhesive.	

6. Now students will first attach the round circle cut-out piece towards the bottom right side of the cardboard and then around it will attach leaf cut-out pieces in a form of a flower using Pidilite Multi-Purpose Allfix Clear & Non-Staining Adhesive.

7. Similarly, all leaf-cut-outs will be arranged beautifully in an alternate leaf shape set and attached to the cardboard using Pidilite Multi-Purpose Allfix Clear & Non-Staining Adhesive.

### III Post-activity-

1. Students will make an attractive Wall Art piece.

2. Students will sell the product in the school market or any nearby market for Rupees 250/-

3. Students will calculate the profit of the product sold in the market. For example, 2 Wall Art Pieces sold for rupees 500/-, will make a profit of rupees 335/-; which is the maximum cost price earned for making one Wall Art Piece in rupees 165/-, hence profit is earned by making Wall Art Piece.

### Precautions

1. Students should be advised to wear hand gloves while carrying out the activity.

2. Students should be aware of and be careful that CD discs cannot be divided because it is made up of only one layer, so it should be boiled for few minutes to make it softer and easier to cut. Whereas, DVDs can be divided into two parts as they contain two layers. DVDs should also be boiled for few minutes and then placed in cold water and then cotton dry it. Later insert a sharp knife and gently separate the two layers of the DVD discs.

3. Students should neatly make the Wall Art piece.

4. During the activity, students should be very careful while using Pidilite Multi-Purpose Allfix Clear & Non-Staining Adhesive, to not to touch the adhesive by bare hands and not to smudge the adhesive on the surface and not to overuse the adhesive.

5. Students should ensure to fix all the items used properly and tightly while making Wall Art Piece.

### Assessment of Student Activity

1. Students can be asked to present their activity through photo documentation which includes Pre-activity, Activity, and Post-activity.

### Reference Links

1. *DIY Room Décor/ CD wall art ideas/ Easy recycled project*

<https://www.youtube.com/watch?v=Fn6jBUR1aXM>

2. *2020 Latest CD Craft Ideas – Waste CD/DVD Peacock Wall Hanging Craft*

[https://www.youtube.com/watch?v=aa3CGs98\\_50](https://www.youtube.com/watch?v=aa3CGs98_50)

3. *Best home decoration ideas by old CD/ Best out of waste old CD/ DIY room décor/ Wall hanging craft*

<https://www.youtube.com/watch?v=ScnRj3TVjsY>

4. *How to cut CDs & DVDs/ How to cut CD easily at home/ Old CD/DVD crafts/ recycle crafts/ CD crafts*

[https://www.youtube.com/watch?v=7DNXH\\_JT15A](https://www.youtube.com/watch?v=7DNXH_JT15A)

5. *4 Ways of Cutting CD and DVD/ How to Cut CD/ Easy CD Cutting Tutorial*

<https://www.youtube.com/watch?v=salHYVxy7Pw>

6. *DIY CD Recycle*

<https://www.youtube.com/watch?v=m2sLFXdztyA&t=250s>

7. *Google Images of Wall Art Making using CDs*

<https://www.google.com/search?q=using+cd+for+making+peacock+wall+art&tbm=isch&chips=q:using+cd+for+making+peacock+wall+art,from:imgsrcid=504440NWwG48%3D&hl=en&sa=>

[X&ved=2ahUKEwjOqsqVuqD9AhXnndgFHbOpC1IQ4lYoBXoECAEQLA&biw=1903&bih=9](#)



## Lesson Plan 10

**Name of Faculty: Dr. Qudsia Hafeez**

<b>Class</b>	10 <sup>th</sup> Class	<b>Subject</b>	English
<b>Lesson Name</b>	5. Social Issues	<b>Duration of the Lesson</b>	2 periods (90 minutes)
<b>Concept(s) Covered</b>		A. The Storeyed House (Part – I) B. The Storeyed House (Part –II) Tea Maker	

### **Vocation(s) or Occupation(s) that can be connected to this lesson**

In this lesson, Social Issues, the sub-topics A. The Storeyed House (Part - I) and B. The Storeyed House (Part – II) are the two sub-topics describing about the Dalit man named Bayaji who himself constructs a storeyed house with his retirement savings. So, the vocations such as Masons, Repairing Workers, can be connected. The sub-topic A. The Storeyed House (Part - I) describes Bayaji counseling his children for the need of a storeyed house, hence the vocation Counselor can be connected here. The sub-topic B. The Storeyed House (Part - II) depicts the traditional housewarming ceremony; for which vocations like Event Planners/Event Managers, Stage Decorators, Musicians/Devotional Singers, and Tea Maker can be connected. Further, in this sub-topic, the storeyed house is described with regard to its construction and decoration of first storey, so the vocations like Interior Designers/Interior Decorators, can be connected. Hence, the following vocations are listed-

- Masons/Repairing Workers
- Event Planners/Event Managers
- Stage Decorators
- Interior Designers/Interior Decorators
- Musicians/Devotional Singers
- Counselor
- Tea Maker

**This lesson plan is for ‘Tea Maker’ Vocation. It can be connected to Food Industry Capacity & Skill Initiative.**







## Skills that will be inculcated

### I Literacy Skills-

1. Students will develop the information literacy skill of conceptual understanding of A. The Storeyed House (Part – I), B. The Storeyed House (Part –II), and Tea Making.

### II Learning Skills-

1. Students will develop the communication skill of listening and speaking skills while discussing/interacting about the context of Tea Making with other students and teacher.
2. Students will develop the communication skill of reading and writing skills, and critical thinking skills based on the content of the lesson while comprehending the lesson.
3. Students will develop the receptive skills (L, R) and productive skills (S, W) of the language.
4. Students will work in small teams in making tea, thus developing collaboration and creativity skills.

### III Life Skills-

1. Students when working in small teams in making tea, will develop life skills like leadership skills, team work skills, flexibility and initiation skills, social & emotional skills, and productivity skills on the context.

## Interdisciplinary concepts that may be integrated

1. The concept of ‘Tea Making’ can be interrelated with chapter 1 ‘Matter around us’, chapter 6 ‘Is matter pure?’ and chapter 11 ‘Heat’ from Physical Science subject of class 9<sup>th</sup>.

<p>2. The concept of ‘Tea Making’ can be connected to chapter 6 ‘Agriculture in India’ and chapter 10 ‘Prices and Cost of Living’ from Social Studies subject of class 9<sup>th</sup>.</p> <p>3. This concept can be connected to chapter 3 ‘Production and Employment’ from Social Sciences subject of class 10<sup>th</sup>.</p>	
<b>Learning Outcomes</b>	
<p>1. Students will remember, understand, and apply the knowledge of Tea Making.</p> <p>2. Students will be able to make tea.</p>	
<b>Tools/Material Needed</b>	
<p>1. Tea Powder – 50 gm for Rupees 15/-</p> <p>2. Milk – 500 ml for Rupees 28/-</p> <p>3. Water – 100 ml</p> <p>4. Sugar – 60 gm for Rupees 18/-</p>	<p>5. Teakettle or Tea pot or Tea vessel</p> <p>6. Cooking Stove</p> <p>7. Tea cups, each cup of 70 ml</p> <p>8. Tea sieve or tea strainer</p> <p>9. Tea thermoflask (optional)</p>
<b>Steps</b>	
<p><b>I Pre-activity-</b></p> <p>1. Teacher will instruct the students to work in groups of 5 students each.</p> <p>2. Teacher will instruct students to wear appropriate protective clothing or kitchen apron for safety in the preparation of tea.</p> <p>3. Teacher will instruct the students to make use of school kitchen and under the supervision of school cook/caretaker to use the cooking stove.</p> <p>4. Teacher will ask the students to bring the required materials for preparing tea, except the cooking stove.</p> <p><b>II Activity-</b></p> <p>1. Students will take 500 ml of milk and add 100 ml of water, 50 gm of tea powder, and 60 gm of sugar into a tea vessel.</p> <p>2. Students will work in a group under the supervision of school cook/caretaker and keep the teakettle/tea pot/tea vessel on the cooking stove and keep the flame to low medium.</p> <p>3. Students will stir all the ingredients and mix well and keep it to low medium flame till it brews well for 20 to 25 minutes.</p> <p>4. Students should check when the tea is bubbling; not to spill out or overflow it.</p> <p>5. When the tea is cooked properly and the aroma of tea is emerging out, switch off the flame.</p> <p>6. Filter the tea using fine pored tea sieve/strainer into the tea cups of 70 ml each.</p> <p><b>III Post-activity-</b></p> <p>1. Students will prepare 8 cups of tea (approximately each cup of 70 ml) with the used quantity of ingredients.</p> <p>2. Students will sell the product in the school market or any nearby market for rupees 15/- for each cup of tea.</p> <p>3. Students will calculate the profit of the product sold in the market. For example, 8 cups sold each for rupees 15/-, will make rupees 120/-; which is the maximum cost price earned for making tea with the ingredients purchased for Rupees 61/-.</p>	
<b>Precautions</b>	
<p>1. Students should be advised to wear proper protective clothing like kitchen apron, while carrying out the activity.</p> <p>2. Students should be careful while working with the cooking stove and be under the supervision of school cook/caretaker to use the cooking stove.</p> <p>3. Students should be careful when the tea is bubbling; not to spill out or overflow it.</p>	

4. Students should not spill out tea when using fine pored tea sieve/strainer when filtering the tea in the cups.
5. Students should be careful while holding the teakettle/tea pot/tea vessel in one hand and with the other hand holding the tea sieve/strainer; properly and tightly and at a proper height while filtering the tea in the cups.

### Assessment of Student Activity

1. Students can be asked to present their activity through photo documentation which includes Pre-activity, Activity, and Post-activity.

## Reference Links

1. *Milk Tea Recipe*  
<https://foodviva.com/tea-recipes/milk-tea-recipe/>
2. *How to make Indian Tea (with Milk)*  
<https://www.youtube.com/watch?v=VxbOGd5UX40>
3. *How to Make Indian Milk Tea*  
<https://www.wikihow.com/Make-Indian-Milk-Tea>
4. *Google Images of Indian Milk Tea*  
[https://www.google.com/search?q=indian+milk+tea+&tbm=isch&ved=2ahUKEwjOyYag2pL9AhV6yaACHRUOBPcQ2-cCegQIABAA&oq=indian+milk+tea+&gs\\_lcp=CgNpbWcQAzIFCAAQgAQyBQgAEIAEMgYIABAHEB4yBAGAEb4yBggAEAgQHjIGCAAQCBAeMgYIABAIEB4yBwgAEIAEEBgyBwgAEIAEEBgyBwgAEIAEEBg6BAGAEEM6CAGAEAgQBxAeUKIMWLk1YPk9aABwAHgAgAGLAYgBqAqSAQQxMS4zmAEAoAEBqgELZ3dzLXdpei1pbWfAAQE&scient=img&ei=tkjqY86WGVqSg8UPIZyOuA8&bih=969&biw=1920](https://www.google.com/search?q=indian+milk+tea+&tbm=isch&ved=2ahUKEwjOyYag2pL9AhV6yaACHRUOBPcQ2-cCegQIABAA&oq=indian+milk+tea+&gs_lcp=CgNpbWcQAzIFCAAQgAQyBQgAEIAEMgYIABAHEB4yBAGAEb4yBggAEAgQHjIGCAAQCBAeMgYIABAIEB4yBwgAEIAEEBgyBwgAEIAEEBgyBwgAEIAEEBg6BAGAEEM6CAGAEAgQBxAeUKIMWLk1YPk9aABwAHgAgAGLAYgBqAqSAQQxMS4zmAEAoAEBqgELZ3dzLXdpei1pbWfAAQE&scient=img&ei=tkjqY86WGVqSg8UPIZyOuA8&bih=969&biw=1920)

## Lesson Plan 11

**Name of Faculty:** Dr. Qudsia Hafeez

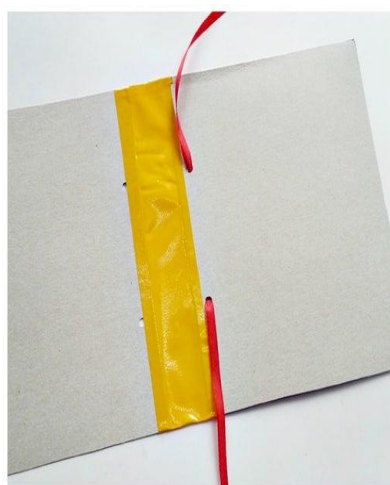
<b>Class</b>	10 <sup>th</sup> Class	<b>Subject</b>	English
<b>Lesson Name</b>	6. Bio-Diversity	<b>Duration of the Lesson</b>	3 periods (135 minutes)
<b>Concept(s) Covered</b>		A. Environment – SUPW/Recycling NGO works- Recycled Notepad	

### **Vocation(s) or Occupation(s) that can be connected to this lesson**

In this lesson, Bio-Diversity, the sub-topic A. Environment is described in the form of an interview, with Wangari Maathai, Environmental Activist and Nobel Prize winner with Nippon Hoso Kyokai (NHK) Radio (Japan); so the vocations such as Interview preparation trainers, Radio Jockey can be connected. The context of this sub-topic A. Environment explains about the importance of people being self-reliant; vocations like Foresters, Tree planters, Farming can be connected. In the context of sustainable management of resources; SUPW, Recycling NGO vocations can be connected. Further with regard to creating a peaceful environment and people fighting for their rights; vocations such as Environmental Volunteers/Campaigners, Conservationist/Environmentalists/Environmental Activists can be connected. Hence, the following vocations can be listed-

1. Interview preparation trainers
2. Radio Jockey
3. Foresters/Tree planters/Farming
4. SUPW/Recycling NGO works
5. Environmental Volunteers/Campaigners
6. Conservationist/Environmentalists/Environmental Activists

**This lesson plan is for ‘Socially Useful Productive Works (SUPW)/Recycling NGO works’ Vocation, Making of a Recycled Notepad. It can be connected to Skill Council for Green Jobs.**







## Skills that will be inculcated

### I Literacy Skills-

1. Students will develop the information literacy skill of conceptual understanding of Environment and SUPW/Recycling NGO works.

### II Learning Skills-

1. Students will develop the communication skill of listening and speaking skills while discussing/interacting about the context of Environment with other students and teacher.
2. Students will develop the communication skill of reading and writing skills, and critical thinking skills based on the content of the lesson while comprehending the lesson.
3. Students will develop the receptive skills (L, R) and productive skills (S, W) of the language.
4. Students will work in groups in making of a recycled notepad, thus developing collaboration and creativity skills.

### III Life Skills-

1. Students when working in groups in making of a recycled notepad, will develop life skills like leadership skills, flexibility and initiation skills, social & emotional skills, and productivity skills on the context.

<b>Interdisciplinary concepts that may be integrated</b>	
1. The concept of ‘Socially Useful Productive Works (SUPW)/Recycling NGO works’ can be connected with chapter 10 ‘Soil Pollution’ from Biology subject of class 9 <sup>th</sup> . 2. This concept can be interrelated with chapter 10 ‘Natural Resources’ from Biology subject of class 10 <sup>th</sup> . 3. This concept can be interrelated with chapter 3 ‘Production and Employment’ and chapter 11 ‘Sustainable Development with Equity’ from Social Sciences subject of class 10 <sup>th</sup> .	
<b>Learning Outcomes</b>	
1. Students will remember, understand, and apply the knowledge of Socially Useful Productive Works (SUPW)/Recycling NGO works in Making of a Recycled Notepad. 2. Students will be able to make a recycled notepad. 3. Students will be able to sell the product. 4. Students will assess the profit of the product sold.	
<b>Tools/Material Needed</b>	
1. Old Notebooks Leftover Blank Papers 2. Scissors for Rupees 20/- 3. 2 Binder Clips for Rupees 10/- or any old Cloth Clips 4. JustKraft A4 Cardstock Paper - Brown for Rupees 12/- or any old Shoe box Carton Cardboard or any Package Cardboard or any old hospital files cardboard paper or any used invitation/wedding card cardstock paper 5. Any thick Decorative Paper or any Color Chart Paper for Rupees 5/- or any old paper shopping bags brown paper or old leftover books covering brown sheet paper or old calendar sheets	6. Pencil or Pen for Rupees 10/- 7. Kangaroo Stapler No.10 for Rupees 50/- and its pins for Rupees 12/- or paper tags or file tags or old colorful ribbons 8. Fevicol MR White Adhesive – PVA Glue, used in Handicrafts, Arts, Crafts, Homes & Offices (45g) for Rupees 25/- 9. Small Paint Brush for Rupees 10/- or any old toothbrush 10. Kangaroo Paper Punch for Rupees 50/- or old nail
<b>Steps</b>	
<b>I Pre-activity-</b> 1. Teacher will instruct the students to work in groups of 5 students each. 2. Teacher will instruct the students in each group to bring the required materials to make a recycled Notepad. 3. Teacher will inculcate recycling spirit among students by instructing the students to make use of already available old leftover recycled material found in their homes instead of purchasing any new material items. 4. Teacher will instruct the students on how to make a recycled Notepad and ask students to create their own Notepad.	
<b>II Activity-</b> 1. Students will first collect all the leftover blank papers from their old notebooks. 2. Students will make a stack of 15-20 papers and cut them equally of one size with the help of a ruler or scissors for preparing a notepad. 3. Students will now mark the cardstock paper size as that of the papers size with the help of pencil or pen and then cut the cardstock paper with scissors accordingly which acts as a notepad backing. 4. Students will now arrange all the papers evenly backed by cardstock paper and clip it with 2 binder clips or old cloth clips on either side of the stack to keep it in hold. 5. Students with the help of a small paint brush or old toothbrush will apply a layer of PVA glue to	

the edges surface of the papers. Once the glue dries, again another layer of glue is applied.

6. Alternatively, the students can also staple the bunch of papers along with the cardstock paper horizontally on the top part using stapler or make two holes of 5 inches apart using paper puncher or nail, on the top and tag it using paper tag or file tag or old colorful ribbon. If tagging is done, then the front covering sheet of notepad should also be tagged along together and the notepad is ready.

7. After stapling the bunch of papers along with the cardstock paper; use any thick decorative paper or colorful chart paper or brown paper or calendar sheet is taken, which acts as a notepad front covering. Then it is cut accordingly with the size of the papers used in the notepad and keeping the length of the chart paper increased so as to get folded covering the edges of the notepad papers and covering the upper 1 inch part of the cardstock behind.

8. This notepad front covering is pasted with the help of PVA glue covering 1 inch part of the cardstock behind and folding it to cover the edges of the notepad papers and pasting it 1 inch in the front upper part of the notepad.

9. After leaving it to dry for some time, the front covering notepad sheet is opened and slowly turned back to make a mark of the folding up to the glued part.

### III Post-activity-

1. Students will successfully make a recycled notepad using already available recycled material.
2. Students will sell the product in the school market or any nearby market for Rupees 30/-
3. Students will calculate the profit of the product sold in the market. For example, 10 Recycled Notepads sold for rupees 30/- each, will make rupees 300/-; which is the maximum cost price earned for making 10 Recycled Notepad in rupees 55/-.

### Precautions

1. Students should be careful while working with sharp tools like Scissors, Stapler, and Paper Puncher or Nail whenever necessary.
2. During the activity, students should be careful while using Fevicol MR White Adhesive – PVA Glue, to not to touch the adhesive by bare hands and not to smudge the adhesive on the surface and not to overuse the adhesive.

### Assessment of Student Activity

1. Students are assessed on following 3 parameters in Making of a Recycled Notepad. Each parameter is assessed for 10 marks, summing up to total 30 marks.
  - (a) Proper Use of Material/Items – 10 marks
  - (b) Functionality of the Recycled Notepad – 10 marks
  - (c) Aesthetic Look of the Recycled Notepad – 10 marks

### Reference Links

1. *DIY A Simple Notepad*  
<https://www.youtube.com/watch?v=JAIBqnDUq0s>
2. *DIY NoteBook, Reuse Old Notebook, Creative Ideas to Reuse Old Notebook, Journal, Scrapbook*  
[https://www.youtube.com/watch?v=f\\_jh-zRPBQo](https://www.youtube.com/watch?v=f_jh-zRPBQo)
3. *How To Create Your Own Notepads from Recycled Paper – DIY Crafts Tutorial - Guidacentral*  
<https://www.youtube.com/watch?v=bcmasnWnOLw>
4. *DIY Notepads, Very easy + Printable Patterns!*  
<https://www.youtube.com/watch?v=vFsB5zXilRk>
5. *DIY Mini Pocket Notebook*  
<http://www.cremedelacraft.com/2012/06/diy-mini-notebook-from-cereal-box.html>
6. *DIY Notebooks and notepads: Reuse leftover notepad paper*



<https://www.cucicucicoo.com/2017/05/diy-books-notepads-reuse-leftover-notebook-paper/>

7. *How to Make Recycled Paper Notepads – Stationery Crafts*

<https://www.auntannie.com/Stationery/Notepads/>

8. *Google Images of Making a Recycled Notepad*

[https://www.google.com/search?q=making+a+recycled+notepad&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjMjfnj2Ij9AhVstmMGHbHwDngQ\\_AUoAXoECAEQAw&biw=1920&bih=969&dpr=1#imgsrc=feex\\_x3DGWTJvM](https://www.google.com/search?q=making+a+recycled+notepad&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjMjfnj2Ij9AhVstmMGHbHwDngQ_AUoAXoECAEQAw&biw=1920&bih=969&dpr=1#imgsrc=feex_x3DGWTJvM)

9. *Top 20 Recycling Games and Activities For Kids*

[https://www.momjunction.com/articles/recycling-activities-and-games-for-kids\\_00397175/](https://www.momjunction.com/articles/recycling-activities-and-games-for-kids_00397175/)

## Lesson Plan 12

**Name of Faculty:** Dr. Qudsia Hafeez

<b>Class</b>	10 <sup>th</sup> Class	<b>Subject</b>	English
<b>Lesson Name</b>	6. Bio-Diversity	<b>Duration of the Lesson</b>	3 periods (135 minutes)
<b>Concept(s) Covered</b>		A. Environment – Environmental Volunteers – Recycling Plastic Buckets into Flower Pots	

### **Vocation(s) or Occupation(s) that can be connected to this lesson**

In this lesson, Bio-Diversity, the sub-topic A. Environment is described in the form of an interview with Wangari Maathai, Environmental Activist and Nobel Prize winner with Nippon Hoso Kyokai (NHK) Radio (Japan); so the vocations such as Interview preparation trainers, Radio Jockey can be connected. The context of this sub-topic A. Environment explains about the importance of people being self-reliant; vocations like Foresters, Tree planters, Farming can be connected. In the context of sustainable management of resources; SUPW, Recycling NGO vocations can be connected. Further with regard to creating a peaceful environment and people fighting for their rights; vocations such as Environmental Volunteers/Campaigners, Conservationist/Environmentalists/Environmental Activists can be connected. Hence, the following vocations can be listed-

1. Interview preparation trainers
2. Radio Jockey
3. Foresters/Tree planters/Farming
4. SUPW/Recycling NGO works
5. Environmental Volunteers/Campaigners
6. Conservationist/Environmentalists/Environmental Activists

**This lesson plan is for ‘Environmental Volunteers’ Vocation, Recycling Plastic Buckets. It can be connected to Skill Council for Green Jobs.**







## **Skills that will be inculcated**

### **I Literacy Skills-**

1. Students will develop the information literacy skill of conceptual understanding of Environment and Environmental Volunteers.

### **II Learning Skills-**

1. Students will develop the communication skill of listening and speaking skills while discussing/interacting about the context of Environment with other students and teacher.
2. Students will develop the communication skill of reading and writing skills, and critical thinking skills based on the content of the lesson while comprehending the lesson.
3. Students will develop the receptive skills (L, R) and productive skills (S, W) of the language.
4. Students will work in groups in recycling plastic buckets into flower pots, thus developing collaboration and creativity skills.

### **III Life Skills-**

1. Students when working in pairs in recycling plastic buckets into flower pots, will develop life skills like leadership skills, flexibility and initiation skills, social & emotional skills, and productivity skills on the context.

## **Interdisciplinary concepts that may be integrated**

1. This concept can be interrelated with chapter 4 ‘Environment’ from English subject of class 9 <sup>th</sup> . 2. This concept can be interrelated with chapter 11 ‘Areas’ from Mathematics subject of class 9 <sup>th</sup> . 3. This concept can be connected with chapter 10 ‘Soil Pollution’ from Biology subject of class 9 <sup>th</sup> . 4. This concept can be interrelated with chapter 10 ‘Natural Resources’ from Biology subject of class 10 <sup>th</sup> . 5. This concept can be interrelated with chapter 3 ‘Production and Employment’ from Social Sciences subject of class 10 <sup>th</sup> .	
<b>Learning Outcomes</b>	
1. Students will remember, understand, and apply the knowledge of recycling plastic buckets into flower pots. 2. Students will be able to recycle plastic buckets into flower pots. 3. Students will be able to sell the product. 4. Students will assess the profit of the products sold.	
<b>Tools/Material Needed</b>	
1. Abro Spray Paints 400 ml for Rupees 98/- 2. Old Buckets 3. Old Newspapers 4. <a href="#">Self-Adhesive Masking Tape for Rupees 25/-</a> 5. <a href="#">Sharp Nail for rupees 10/- and Hammer or heavy stone</a>	6. Any other old household items like ribbons, lace, beads, plastic bottle caps, glitter powder, colorful tape, etc. can be used for decoration, according to its availability by the students. 7. Pidilite Multi-Purpose Fevikwik Gel One Drop Instant Adhesive (2g) for Rupees 20/-
<b>Steps</b>	
<b>I Pre-activity-</b> 1. Teacher will instruct the students to work in pairs. 2. Teacher will instruct students to wear appropriate protective clothing and gloves for working for recycling plastic buckets into flower pots. 3. Teacher will instruct the students to bring the required materials needed. 4. Teacher will ask the students to clean and dry the old plastic buckets before recycling them to remove the dust and dirt. 5. Teacher will inculcate recycling spirit among students by instructing the students to make use of already available old leftover recycled material found in their homes instead of purchasing any new material items. 6. Teacher will instruct the students on how to recycle plastic buckets into flower pots and decorate it as they like.	
<b>II Activity-</b> 1. Students will bring old buckets and make drainage holes at the bottom with <a href="#">sharp nail and hammer</a> . 2. If students want to color the bucket with two different colors, then students with the help of newspaper and masking tape will cover the part of the bucket which is not needed to be painted in a particular color. 3. Students will paint the rest of the part of the bucket which is uncovered with spray paint of their chosen color. 4. After drying for 15-20 minutes, students will remove the newspaper and then cover the newspaper to the part of the bucket which is already painted and then paint the other side of the bucket with another color of choice using spray paint.	

5. If students want to color the bucket with only one color then there is no need to use newspaper and masking tape.
6. After a period of 15-20 minutes, when the paint has settled and dried, the students will decorate the bucket with old household items like ribbons, lace, beads, plastic bottle caps, glitter powder, colorful tape, etc. which can be used for decoration, according to its availability by the students.
7. Students will attach the decorative items to the bucket with the help of Pidilite Multi-Purpose Fevikwik Gel One Drop Instant Adhesive.

### III Post-activity-

1. Students will make attractive and decorated recycled plastic buckets into flower pots.
2. Students will sell the product in the school market or any nearby market for Rupees 300/-
3. Students will calculate the profit of the product sold in the market. For example, 1 recycled plastic bucket will be sold for rupees 300/-, will make a profit of rupees 150/-; which is the maximum cost price earned for recycling plastic bucket into flower pot in rupees 153/-, hence 5 such recycled plastic flower pots sold each for rupees 300/- will make rupees 1500/-

## Precautions

1. Students should be advised to wear proper protective clothing and hand gloves, boots while carrying out the activity.
2. Students should make sure the durability of Plastic buckets used to recycle them into flower pots.
3. Students should be extremely careful while working with nail and hammer for making holes at the bottom of the plastic bucket.
4. Students should be careful with the use of spray paints and not to waste them by overusing them.
5. During the activity, students should be very careful while using Pidilite Multi-Purpose Fevikwik Gel One Drop Instant Adhesive, to not to touch the adhesive by bare hands and not to smudge the adhesive on the surface and not to overuse the adhesive.
6. Students should take care that whatever decorative items are used should be fixed properly and neatly.
7. Students should be instructed to not to overdo the decoration on the recycled plastic flower pots; that may later peel off or fall apart.

## Assessment of Student Activity

1. Students can be asked to present their activity through photo documentation which includes Pre-activity, Activity, and Post-activity.

## Reference Links

- 1. Amazing Plant Pots Ideas, Recycle Plastic Bucket into Beautiful Pots for Small Garden*
- <https://www.youtube.com/watch?v=bmhEc8GnaZM>
- 2. DIY Colorful Flower Pots Garden from Recycled Plastic Bottles Beautiful Ideas*
- <https://www.youtube.com/watch?v=DHff13UEPGs>
- 3. Google Images of Recycling Plastic Buckets into Pots*
- [https://www.google.com/search?q=how+to+recycle+plastic+buckets+into+pots+pinterest&tbm=isch&ved=2ahUKEwjWo934oKf9AhVXHbcAHfO1C1kQ2-cCegQIABAA&oq=how+to+recycle+plastic+buckets+into+pots+pinterest&gs\\_lcp=CgNpbWcQA1C1CNBvSFWCrG2gAcAB4AIAIBXyBAASAQQwMC4wMAEAgAEBgqELZ3dzLXdpei1pbWfa](https://www.google.com/search?q=how+to+recycle+plastic+buckets+into+pots+pinterest&tbm=isch&ved=2ahUKEwjWo934oKf9AhVXHbcAHfO1C1kQ2-cCegQIABAA&oq=how+to+recycle+plastic+buckets+into+pots+pinterest&gs_lcp=CgNpbWcQA1C1CNBvSFWCrG2gAcAB4AIAIBXyBAASAQQwMC4wMAEAgAEBgqELZ3dzLXdpei1pbWfa)



[AQE&sclient=img&ei=MQ\\_1Y5bHJ9e63LUP8-uuyAU&bih=912&biw=1920#imgrc=Nf3spMYUQXpfNM](https://www.amazon.in/Adhesive-Masking-Crafts-Carpenters-Painters/dp/B0B4FL19T9/ref=asc_df_B0B4FL19T9/?tag=googleshopdes-21&linkCode=df0&hvadid=544849247445&hvpos=&hvnetw=g&hvrnd=10849248929984200689&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9062167&hvtargid=pla-1728522934220&psc=1)

**4. Self-Adhesive Masking Tape for Arts & Crafts, Carpenters & Painters / Set of 1 Roll of 18mm X 20 Mtr**

[https://www.amazon.in/Adhesive-Masking-Crafts-Carpenters-Painters/dp/B0B4FL19T9/ref=asc\\_df\\_B0B4FL19T9/?tag=googleshopdes-21&linkCode=df0&hvadid=544849247445&hvpos=&hvnetw=g&hvrnd=10849248929984200689&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9062167&hvtargid=pla-1728522934220&psc=1](https://www.amazon.in/Adhesive-Masking-Crafts-Carpenters-Painters/dp/B0B4FL19T9/ref=asc_df_B0B4FL19T9/?tag=googleshopdes-21&linkCode=df0&hvadid=544849247445&hvpos=&hvnetw=g&hvrnd=10849248929984200689&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9062167&hvtargid=pla-1728522934220&psc=1)

**5. Canvazo Masking Tape**

[https://canvazo.com/products/canvazo-masking-tape?variant=41113943834812&currency=INR&utm\\_medium=product\\_sync&utm\\_source=google&utm\\_content=sag\\_organic&utm\\_campaign=sag\\_organic&gclid=EAIaIQobChMInYWk4Lyn\\_QIVNpJmAh1q8wMyEAYYBiABEgKa1vD\\_BwE](https://canvazo.com/products/canvazo-masking-tape?variant=41113943834812&currency=INR&utm_medium=product_sync&utm_source=google&utm_content=sag_organic&utm_campaign=sag_organic&gclid=EAIaIQobChMInYWk4Lyn_QIVNpJmAh1q8wMyEAYYBiABEgKa1vD_BwE)

**6. How to Put Holes in a Plastic Bucket**

[https://www.ehow.com/how\\_5724150\\_put-holes-plastic-bucket.html](https://www.ehow.com/how_5724150_put-holes-plastic-bucket.html)

### Lesson Plan 13

Name of Faculty: Dr. Qudsia Hafeez

<b>Class</b>	10 <sup>th</sup> Class	<b>Subject</b>	English
<b>Lesson Name</b>	8. Human Rights	<b>Duration of the Lesson</b>	3 periods (135 minutes)

**Concept(s) Covered** C. What Is My Name? – Decorative Item Designers

**Vocation(s) or Occupation(s) that can be connected to this lesson**

In this lesson, Human Rights, the sub-topic C. What Is My Name? contains the vocations like, Decorators and Decorative Item Designers related to the context of the story of a woman who swabs her entire house spotlessly clean, arranging all things in an orderly fashion and decorating her house by drawing multi-colored muggulu designs. Hence, the following vocations can be listed-

1. Decorators
2. Decorative Item Designers
3. Translators
4. Interpreters

**This lesson plan is for ‘Decorative Item Designers’ as a Vocation. It can be connected to Handicrafts and Carpet Sector Skill Council.**







## **Skills that will be inculcated**

### **I Literacy Skills-**

1. Students will develop the information literacy skill of conceptual understanding of What Is My Name?

### **II Learning Skills-**

1. Students will develop the communication skill of listening and speaking skills while discussing/interacting about the context of making pen stand using old CD and plastic bottle with other students and teacher.
2. Students will develop the communication skill of reading and writing skills, and critical thinking skills based on the content of the lesson while comprehending the lesson.
3. Students will develop the receptive skills (L, R) and productive skills (S, W) of the language.
4. Students will work in groups in making of pen stand using old CD and plastic bottle, thus developing collaboration and creativity skills.

### **III Life Skills-**

1. Students when working in groups in making of pen stand using old CD and plastic bottle, will develop life skills like leadership skills, flexibility and initiation skills, social & emotional skills, and productivity skills on the context.

## **Interdisciplinary concepts that may be integrated**

1. This concept of 'Decorative item designers – making of pen stand using old CD and plastic bottle' can be connected with chapter 6 'Bio-Diversity' under the sub-topic 'Environment' from English subject of class 10<sup>th</sup>.
2. This concept can be connected with chapter 10 'Soil Pollution' from Biology subject of class 9<sup>th</sup>.
3. This concept can be interrelated with chapter 10 'Natural Resources' from Biology subject of class 10<sup>th</sup>.
4. This concept can be interrelated with chapter 3 'Production and Employment' and chapter 11 'Sustainable Development with Equity' from Social Sciences subject of class 10<sup>th</sup>.

## **Learning Outcomes**

1. Students will remember, understand, and apply the knowledge of Decorative Item Designers in Making of Pen Stand using old CD and Plastic Bottle.
2. Students will be able to make a pen stand using old CD and plastic bottle.

3. Students will be able to sell the product. 4. Students will assess the profit of the product sold.	
<b>Tools/Material Needed</b>	
1. Old CD/DVD 2. Recycled/Old Plastic Bottle 3. Utility Knife Cutter or Box Cutter for Rupees 20/- 4. Pencil or Pen or Black Sketch Pen or Marker Pen for Rupees 10/-	5. Pidilite Multi-Purpose Fevikiwik Gel One Drop Instant Adhesive (2g) for Rupees 20/- 6. Any other old household items like ribbons, lace, beads, old vase flowers, glitter powder, colorful paper, colorful tape, etc. can be used for decoration, according to its availability by the students.
<b>Steps</b>	
<b>I Pre-activity-</b> 1. Teacher will instruct the students to work in groups of 5 students each or in pairs. 2. Teacher will instruct the students in each group to bring the required materials to make a Pen Stand. 3. Teacher will inculcate recycling spirit among students by instructing the students to make use of already available old leftover recycled material found in their homes instead of purchasing any new material items. 4. Teacher will instruct the students on how to make a Pen Stand and ask students to create their own attractive Pen Stand and decorate it as they like.	
<b>II Activity-</b> 1. Students will bring an old CD/DVD and place it flat with shiny surface facing upwards. CD can be used as it is or for decorative purpose, it can be covered with a colorful paper or any other decorative item using Pidilite Multi-Purpose Fevikiwik Gel One Drop Instant Adhesive as per students wish or creativity. 2. Students will take a recycled/old plastic bottle and mark a dotted line with the help of a pen or black marker pen from where they decide to cut the plastic bottle according to the size and shape of the Pen Stand they wish to make. 3. Students will make deep incision first in the plastic bottle with the help of a utility knife cutter or box cutter and then cut across the dotted line marked on the plastic bottle and divide the plastic bottle into two parts. 4. Students will use any one part of the plastic bottle, either the top mouth part or the bottom/base part of the plastic bottle to make a Pen Stand. 5. Students will apply Pidilite Multi-Purpose Fevikiwik Gel One Drop Instant Adhesive on the center part surface of the CD and also to the surface of the part of plastic bottle to be glued to the CD. Here, students can use the top mouth part of the plastic bottle along with its cap to be glued to the CD; alternatively the bottom/base part can also be used to attach with the CD. Students can use any one part of the plastic bottle and make their Pen Stand. 6. Students can now decorate their Pen Stand with Washi Tape or Sparkle Tape or any Decorative Tape and stick it to the edges of the plastic bottle and wherever required creatively as per their wish. Additionally, any other old items like lace, ribbons, beads, old vase flowers, glitter powder, color paper etc. can also be used for decoration, according to its availability by the students. These items can be tied or stuck to the CD or plastic bottle using Pidilite Multi-Purpose Fevikiwik Gel One Drop Instant Adhesive as per students creativity.	
<b>III Post-activity-</b> MGNCRE	
Action Research Project - Osmania University Hyderabad	

<ol style="list-style-type: none"> <li>1. Students will make an attractive and decorated Pen Stand.</li> <li>2. Students will sell the product in the school market or any nearby market for Rupees 100/-</li> <li>3. Students will calculate the profit of the product sold in the market. For example, 1 Pen Stand sold for rupees 100/-, will make a profit of rupees 50/-; which is the maximum cost price earned for making one Pen Stand in rupees 50/-, hence 5 Pen Stands sold each for rupees 100/- will make rupees 500/-</li> </ol>
<b>Precautions</b> <ol style="list-style-type: none"> <li>1. Students should be advised to wear hand gloves while carrying out the activity.</li> <li>2. Students should make sure that Plastic bottle used should withstand the purpose of functioning as a Pen Stand.</li> <li>3. Students should be extremely careful while working with Utility Knife Cutter or Box Cutter to cut the plastic bottle.</li> <li>4. During the activity, students should be very careful while using Pidilite Multi-Purpose Fevikiwik Gel One Drop Instant Adhesive, to not to touch the adhesive by bare hands and not to smudge the adhesive on the surface and not to overuse the adhesive.</li> <li>5. Students should properly attach the plastic bottle to the CD surface.</li> <li>6. Students should be instructed to not to overdo the decoration while making a Pen Stand; that later the extra decoration may peel off or fall apart.</li> <li>7. Students should take care that whatever decorative items are used should be fixed properly and neatly.</li> </ol>
<b>Assessment of Student Activity</b> <ol style="list-style-type: none"> <li>1. Students are assessed on following 5 parameters in Making of Pen Stand using old CD and Plastic Bottle. Each parameter is assessed for 10 marks, summing up to total 50 marks. <ol style="list-style-type: none"> <li>(a) Cutting of the Plastic Bottle – 10 marks</li> <li>(b) Attaching the Plastic Bottle part to the CD – 10 marks</li> <li>(c) Proper Use of Decorative Items – 10 marks</li> <li>(d) Functionality of the Pen Stand – 10 marks</li> <li>(e) Aesthetic Look of the Pen Stand – 10 marks</li> </ol> </li> </ol>
<b>Reference Links</b> <ol style="list-style-type: none"> <li>1. Plastic Bottle Craft Idea/Pen Stand Using By Waste Bottle And CD/DIY Pen Stand <a href="https://www.youtube.com/watch?v=VLF84pJil-8">https://www.youtube.com/watch?v=VLF84pJil-8</a></li> <li>2. How To Make a Pen Stand using Waste Bottle &amp; CD – Recycled Bottle Crafts <a href="https://www.youtube.com/watch?v=olFbEScpqBA">https://www.youtube.com/watch?v=olFbEScpqBA</a></li> <li>3. Easy Pen Stand with Waste bottle and DVD/How to make/JK Arts 998 <a href="https://www.youtube.com/watch?v=ay3YqktQQzs">https://www.youtube.com/watch?v=ay3YqktQQzs</a></li> <li>4. How to Make a Pencil Holder from a Water Bottle <a href="https://www.wikihow.com/Make-a-Pencil-Holder-from-a-Water-Bottle">https://www.wikihow.com/Make-a-Pencil-Holder-from-a-Water-Bottle</a></li> <li>5. Easy Pen Stand with Waste bottle and DVD <a href="https://www.dideo.ir/v/yt/cpnzsNuQ_dI/easy-pen-stand-with-waste-bottle-and-dvd-best-out">https://www.dideo.ir/v/yt/cpnzsNuQ_dI/easy-pen-stand-with-waste-bottle-and-dvd-best-out</a></li> <li>6. How to Cut Plastic <a href="https://www.wikihow.com/Cut-Plastic">https://www.wikihow.com/Cut-Plastic</a></li> <li>7. Google Images of Pen Stand using old CDs and Plastic Bottles <a href="https://www.google.com/search?q=pen+stand+using+old+cds+and+plastic+bottles+images&amp;oq=&amp;aqs=chrome.2.69i59i450l8.287735325j0i15&amp;sourceid=chrome&amp;ie=UTF-8">https://www.google.com/search?q=pen+stand+using+old+cds+and+plastic+bottles+images&amp;oq=&amp;aqs=chrome.2.69i59i450l8.287735325j0i15&amp;sourceid=chrome&amp;ie=UTF-8</a></li> </ol>


8. *Top 20 Recycling Games and Activities For Kids*


[https://www.momjunction.com/articles/recycling-activities-and-games-for-kids\\_00397175/](https://www.momjunction.com/articles/recycling-activities-and-games-for-kids_00397175/)

## Lesson Plan 14

**Name of Faculty: Dr. Qudsia Hafeez**

<b>Class</b>	10 <sup>th</sup> Class	<b>Subject</b>	English
<b>Lesson Name</b>	8. Human Rights	<b>Duration of the Lesson</b>	3 periods (135 minutes)
<b>Concept(s) Covered</b>		C. What Is My Name? – Home Decorators – Home Décor – Making of Flower Vase	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
In this lesson, Human Rights, the sub-topic C. What Is My Name? contains the vocations like, Decorators and Decorative Item Designers related to the context of the story of a woman who swabs her entire house spotlessly clean, arranging all things in an orderly fashion and decorating her house by drawing multi-colored muggulu designs. Hence, the following vocations can be listed-			
<div>1. Home Decorators</div> <div>2. Decorative Item Designers</div> <div>3. Translators</div> <div>4. Interpreters</div>			
<b>This lesson plan is for ‘Home Decorators’ as a Vocation. It can be connected to Handicrafts and Carpet Sector Skill Council.</b>			









### **Skills that will be inculcated**

#### **I Literacy Skills-**

1. Students will develop the information literacy skill of conceptual understanding of What Is My Name?

#### **II Learning Skills-**

1. Students will develop the communication skill of listening and speaking skills while discussing/interacting about the context of making flower vase using old CDs and with other students and teacher.
2. Students will develop the communication skill of reading and writing skills, and critical thinking skills based on the content of the lesson while comprehending the lesson.
3. Students will develop the receptive skills (L, R) and productive skills (S, W) of the language.
4. Students will work in groups in making of flower vase using old CDs, thus developing collaboration and creativity skills.

#### **III Life Skills-**

1. Students when working in groups in making of flower vase using old CDs, will develop life skills like leadership skills, flexibility and initiation skills, social & emotional skills, and productivity skills on the context.

### **Interdisciplinary concepts that may be integrated**

1. This concept of 'Home Decorators – making of flower vase using old CDs' can be connected



<p>with chapter 6 ‘Bio-Diversity’ under the sub-topic ‘Environment’ from English subject of class 10<sup>th</sup>.</p> <p>2. This concept can be connected with chapter 10 ‘Soil Pollution’ from Biology subject of class 9<sup>th</sup>.</p> <p>3. This concept can be interrelated with chapter 10 ‘Natural Resources’ from Biology subject of class 10<sup>th</sup>.</p> <p>4. This concept can be interrelated with chapter 3 ‘Production and Employment’ and chapter 11 ‘Sustainable Development with Equity’ from Social Sciences subject of class 10<sup>th</sup>.</p> <p>5. This concept can also be interrelated with chapter 11 ‘Areas’ and chapter 12 ‘Circles’ from Mathematics subject of class 9<sup>th</sup>.</p>	
<b>Learning Outcomes</b>	
<p>1. Students will remember, understand, and apply the knowledge of Home Decorators in Making of Flower Vase using old CDs.</p> <p>2. Students will be able to make a Flower Vase using old CDs.</p> <p>3. Students will be able to sell the product.</p> <p>4. Students will assess the profit of the product sold.</p>	
<b>Tools/Material Needed</b>	
<p>1. Old CDs/DVDs – 8 in number</p> <p>2. Old Carton Cardboard piece</p> <p>3. Scissors for Rupees 100/-</p> <p>4. Pencil or Pen or Black Sketch Pen or Marker Pen for Rupees 10/-</p> <p>5. A4 Silver Sheet for Rupees 20/-</p>	<p>6. Pidilite Multi-Purpose Allfix Clear &amp; Non-Staining Adhesive (20ml) for Rupees 35/-</p> <p>7. Any other old household items like ribbons, lace, beads, old vase flowers, glitter powder, colorful paper, colorful tape, etc. can be used for decoration, according to its availability by the students.</p>
<b>Steps</b>	
<b>I Pre-activity-</b> <p>1. Teacher will instruct the students to work in groups of 5 students each or in pairs.</p> <p>2. Teacher will instruct the students in each group to bring the required materials to make a Flower Vase.</p> <p>3. Teacher will inculcate recycling spirit among students by instructing the students to make use of already available old leftover recycled material found in their homes instead of purchasing any new material items.</p> <p>4. Teacher will instruct the students on how to make a Flower Vase and ask students to create their own attractive Flower Vase and decorate it as they like.</p>	
<b>II Activity-</b> <p>1. Students will take one old CD/DVD and place it flat with shiny surface facing upwards as base. The center hole of CD can be covered with a round cut piece of cardboard using the Pidilite Multi-Purpose Allfix Clear &amp; Non-Staining Adhesive.</p> <p>2. Students will take an old carton cardboard piece of 6x6 size and roll it round and fix the edges using adhesive.</p> <p>3. Students will take A4 Silver Sheet and cover it around the rolled cardboard using adhesive.</p> <p>4. Students will attach the rolled cardboard to the base of the CD using adhesive on the edges of the cardboard on one side and fixing it to the CD surface.</p> <p>5. Students will now use remaining 7 CDs and each CD is cut into 2 pieces using markers and scissors making 14 half-moon shaped pieces; leaving away the centered hole part of the CD.</p> <p>6. Students will apply Pidilite Multi-Purpose Allfix Clear &amp; Non-Staining Adhesive to the straight edges of each of the half-moon shaped pieces and stick it to the rolled cardboard starting from the</p>	

base. Similarly all other pieces are fixed all around the cardboard in an orderly manner.

7. Now students will use the center hole part of the CD and cut the part into a square shape of 2.5 inches using markers and scissors and then cut small rectangles out of this square shaped piece.

8. The cut out small rectangle pieces should be attached all around on the upper neck part of the rolled cardboard using Pidilite Multi-Purpose Allfix Clear & Non-Staining Adhesive.

9. Students can use their creativity in decorating the flower vase with any shiny beads and other decorative material fixing to the flower vase. These items can be tied or stuck at the base, edges of the CD pieces attached and at the top of the flower vase using adhesive.

### III Post-activity-

1. Students will make an attractive and decorated Flower Vase.
2. Students will sell the product in the school market or any nearby market for Rupees 250/-
3. Students will calculate the profit of the product sold in the market. For example, 2 Flower Vase sold for rupees 500/-, will make a profit of rupees 335/-; which is the maximum cost price earned for making one Pen Stand in rupees 165/-, hence profit is earned by making flower vase.

### Precautions

1. Students should be advised to wear hand gloves while carrying out the activity.
2. Students should be aware of and be careful that CD discs cannot be divided because it is made up of only one layer, so it should be boiled for few minutes to make it softer and easier to cut. Whereas, DVDs can be divided into two parts as they contain two layers. DVDs should also be boiled for few minutes and then placed in cold water and then cotton dry it. Later insert a sharp knife and gently separate the two layers of the DVD discs.
3. Students should neatly make and decorate the flower vase.
4. During the activity, students should be very careful while using Pidilite Multi-Purpose Allfix Clear & Non-Staining Adhesive, to not to touch the adhesive by bare hands and not to smudge the adhesive on the surface and not to overuse the adhesive.
5. Students should ensure to fix the decorative items properly and tightly while making flower vase.

### Assessment of Student Activity

1. Students are assessed on following 3 parameters in Making of a Flower Vase. Each parameter is assessed for 10 marks, summing up to total 30 marks.
  - (a) Proper Use of Material/Items – 10 marks
  - (b) Functionality of the Flower Vase – 10 marks
  - (c) Aesthetic Look of the Flower Vase – 10 marks

### Reference Links

1. *Beautiful Flower Vase Out of C Disc/ Best Out of Waste/ Waste CD Disc Re-use Idea*  
<https://www.youtube.com/watch?v=fsGT5xSzWnI>
2. *Beautiful Flower Vase Out of Waste CD/ Old CD Craft Ideas/ Best Out of Waste/ Reused Old CD Craft*  
<https://www.youtube.com/watch?v=dKr90vgVSCA>
3. *Flower Vase Making/ Handmade Stylish Flower Vase/ Vase Decoration Ideas/ Flower Pot/ artmypassion*  
<https://www.youtube.com/watch?v=CjvnQaoeWzk>
4. *How to cut CDs & DVDs/ How to cut CD easily at home/ Old CD/DVD crafts/ recycle crafts/ CD crafts*  
[https://www.youtube.com/watch?v=7DNXH\\_JT15A](https://www.youtube.com/watch?v=7DNXH_JT15A)
5. *4 Ways of Cutting CD and DVD/ How to Cut CD/ Easy CD Cutting Tutorial*  
[https://www.youtube.com/watch?v=7DNXH\\_JT15A](https://www.youtube.com/watch?v=7DNXH_JT15A)

<https://www.youtube.com/watch?v=salHYVxy7Pw>

6. *Google Images of Flower Vase using CDs*

[https://www.google.com/search?q=flower%20vase%20using%20cds&tbm=isch&tbs=ring:CX2f92lAxhoEYRdwrULykT1HsgIOCgIABAAOgQIARAAQAE&hl=en&sa=X&ved=0CCQQuIIBahcKEwj4nJ6qvJ\\_9AhUAAAAAHQAAAAAQBW&biw=1903&bih=912#imgrc=7sxtofLNTVA98M](https://www.google.com/search?q=flower%20vase%20using%20cds&tbm=isch&tbs=ring:CX2f92lAxhoEYRdwrULykT1HsgIOCgIABAAOgQIARAAQAE&hl=en&sa=X&ved=0CCQQuIIBahcKEwj4nJ6qvJ_9AhUAAAAAHQAAAAAQBW&biw=1903&bih=912#imgrc=7sxtofLNTVA98M)

7. *Top 20 Recycling Games and Activities For Kids*

[https://www.momjunction.com/articles/recycling-activities-and-games-for-kids\\_00397175/](https://www.momjunction.com/articles/recycling-activities-and-games-for-kids_00397175/)

### Lesson Plan 15

**Name of Faculty: Dr. G. Madhukar**

Name of Faculty: Dr. G. Mahalingam			
Class	Class IX	Subject	English
Lesson Name	The Snake and the Mirror	Duration of the Lesson	45 Min
Concept(s) Covered		Creative expression	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. Mirror frame (wood or plastic)			
Skills that will be inculcated			
1. Entrepreneur skills 2. Business skills 3. Selling skills			
Interdisciplinary concepts that may be integrated			
1. Mathematics- (shape and size) 2. Science- (Mirror images) 3. Social- wastage management			
Learning Outcomes			
1. Students will make plastic snake 2. Students will sell the different mirror frames(Big and small) 3. Students will estimate profit and loss.\			
Tools/Material Needed			
1. Mirror –Rs.50 2.Wood frame-Rs.30 3. Plastic-Rs.40		4. Wood polish-50 5. Brush-Rs.30 6. Iron blade- Rs.40 7.Plaster-Rs.10	
Steps			
<b>Pre-activity</b> 1. Teacher will ask the students to bring different size mirrors, wood frames, wood polisher and Plastic material			
<b>Activity</b> 1. Students will take the mirror and cut the wood frame to suit the size of the mirror 2. Students will take hammer and use iron nails to fix the frame properly 3. Students will make plastic snake.			
<b>Post Activity</b> 1. Students will sell the mirror with wood frames in nearby market Rs.150 2. Students will sell the mirror with plastic snake at the cost of Rs.120 First time Rs.250 spent on the materials and profit Rs.20 Second time Rs.220 spent on the materials and profit Rs.50			
Precautions			

1. Make use of gloves while taking mirror
2. Safety measures need to be taken while fixing the frame.
3. Students should cut proper shape and size wood frame according to the mirror size
4. Students should use the plastic to make different size snakes.

### **Assessment**

#### Rubrics

- 1.Collection of mirror in different size
2. Applying color
- 3.Preparation of mirror frames in different size and shape

### Lesson Plan 16

**Name of Faculty: Dr. G. Madhukar**

<b>Class</b>	<b>Class IX</b>	<b>Subject</b>	<b>English</b>
<b>Lesson Name</b>	True Height	<b>Duration of the Lesson</b>	<b>45 Min</b>
<b>Concept(s) Covered</b>		<b>Athlete / Sports person</b>	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1.Witty socks making 2. Wool sweaters making 3.Knee caps/Ankle band			
<b>Skills that will be inculcated</b>			
1.Life skills 2. Entrepreneur skills 3.Organizational skills 4.Marketing skills			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Physical Education-Exercises 2. Science-Cleanliness 3. Social science- low-cost materials			
<b>Learning Outcomes</b>			
1. Students will make witty socks 2. Students will make knee caps 3. Students will make ankle band 4. Students will make wool sweater			
<b>Tools/Material Needed</b>			
1. Wool 2. Cotton 3. Thread		4. Needle 5. Bandage	
<b>Steps</b>			
<b>Pre-Activity</b> 1. Teacher will ask the students to bring Wool, cotton, thread, Needle and bandage. <b>Activity</b> 1. Take needle and put the wool to weave the sweater 2. Take the Cotton and weave socks 3.Take the bandage to bind the knee and ankle <b>Post Activity</b> 1.students will sell the wool sweaters 2. students sell the witty socks 3. students will sell the ankle band/knee band			



<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. Make sure the safe use of needle while stitching.</li> <li>2. Use bandage appropriately.</li> <li>3. Safety measures to be taken while cutting knee caps and ankle caps.</li> </ol>
<b>Assessment</b>
<ol style="list-style-type: none"> <li>1. Rubric Writing</li> <li>2. Presentation skills</li> <li>3. Group work</li> </ol>

### Lesson Plan 17

**Name of Faculty:** Dr.G.Madhukar

<b>Class</b>	<b>Class IX</b>	<b>Subject</b>	
<b>Lesson Name</b>	Swami is Expelled from School	<b>Duration of the Lesson</b>	<b>45 Min</b>
<b>Concept(s) Covered</b>		<b>Story boarding</b>	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Book binding. 2. School bag (Jute) making 3. Duster making			
<b>Skills that will be inculcated</b>			
1. Concentration skills. 2. Selling skill 3. Creative skill			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Math concepts- Shape and size 2. Science- neat and tidy 3. Social Science- marketing			
<b>Learning Outcomes</b>			
1. Students will learn how make book binding. 2. Students will learn jute bag making 3. Students will learn duster making.			
<b>Tools/Material Needed</b>			
1. Paper bundle (A4Size) Rs.300 2. Plaster Rs.50 3. Jute bags Rs.15		4. Thread Rs.20 5.Needle Rs.10 6.Old clothes Rs.20 7.Scissors Rs.35	

<b>Steps</b>
<p><b>Pre-activity</b> Teacher will ask the students to bring paper bundle, plaster, needle, thread, jute bags and old cloths</p> <p><b>Activity</b></p> <ol style="list-style-type: none"> <li>1. Take A4 size papers and keep 20/30 papers as bunch.</li> <li>2. Take needle and thread and stitch them properly</li> <li>3. Take the plaster and keep it on the thread</li> <li>4. Take a jute bag and cut it in different size</li> <li>5. Take the needle and thread and stitch the jute bag.</li> <li>6. Take old cloth stitch the cover and keep some old cloths in it and close it.</li> </ol> <p><b>Post Activity</b></p> <ol style="list-style-type: none"> <li>1. Students will sell the books in nearby school. Rs.50</li> <li>2. Students will sell the jute bag in the market Rs.70</li> <li>3. Students will sell the duster. Rs.20</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. Take precaution while stitching book</li> <li>2. Safety measures to be taken while cutting the jute bag.</li> <li>3. Students should cut the cloth properly to make cloth duster.</li> </ol>
<b>Assessment</b>
<ol style="list-style-type: none"> <li>1. Port folio assessment</li> <li>2. Book binding soft and hard binding</li> <li>3. Jute bad in different sizes</li> </ol>

### Lesson Plan 18

**Name of Faculty: Dr. G. Madhukar**

Class	Class IX	Subject	English
Lesson Name	What is Man without Beasts	Duration of the Lesson	45 Min
Concept(s) Covered		Environmental Education	
Vocation(s) or Occupation(s) that can be connected to this lesson			
1. Clay model ( Eco friendly Ganesha) 2. Wood model (Animals and Birds) 3. Beads- Charts 4. Glass pieces			
Skills that will be inculcated			
1. Preservation skills 2. Environmental conservation skills 3. Creative skills 4. Drawing skills			
Interdisciplinary concepts that may be integrated			
1. Maths -weight 2. Science- Environmental protection 3. Social- festival celebration			
Learning Outcomes			
1. Students will learn how to make clay Ganesha. 2. Students will learn Wood models-Animals and birds 3. Students will prepare different models with beads 4. Students will learn to prepare glass pieces			
Tools/Material Needed			
1. Black soil-Rs.20 2.Water-Rs.10 3. Wood-Rs.50		4. Blade-Rs.40 5. beads-Rs.60 6. Glass pieces-Rs.60	

<b>Steps</b>
<p><b>Pre-Activity</b></p> <ol style="list-style-type: none"> <li>1. Teacher will ask the students to bring clay ,wood, blade, beads and glass pieces</li> </ol> <p><b>Activity</b></p> <ol style="list-style-type: none"> <li>1.Take clay and do the clay Ganesha</li> <li>2. Take wood and cut different animals and bird shapes with blade.</li> <li>3. Take beads and make different charts</li> <li>4. take glass pieces and do different models</li> </ol> <p><b>Post Activity</b></p> <ol style="list-style-type: none"> <li>1.Students will sell the clay Ganesha during festival Rs.50</li> <li>2. Students will sell the wood Animal Rs.60</li> <li>3. Students will sell the beads chart in the market Rs.30</li> <li>4.Students will sell the Glass model Rs.30</li> </ol>
<b>Precautions</b>
<ol style="list-style-type: none"> <li>1. Make use of clay and water while making clay Ganesha.</li> <li>2. Safety measures to be taken while cutting the wood.</li> <li>3. Use gloves while making model with glass pieces.</li> </ol>
<b>Assessment</b>
<ol style="list-style-type: none"> <li>1. Students will create portfolio of their work</li> <li>2. Through viva-voce</li> <li>3. Through drawing</li> </ol>

## Lesson Plan 19

**Name of Faculty: Dr.G.Madhukar**

<b>Class</b>	<b>Class IX</b>	<b>Subject</b>	English
<b>Lesson Name</b>	A Long walk to freedom	<b>Duration of the Lesson</b>	<b>45 Min</b> <b>2 periods</b>
<b>Concept(s) Covered</b>		<b>Civil rights</b>	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Nursery Plantation			
2. School garden			
3. Leaf art			
<b>Skills that will be inculcated</b>			
1. Agricultural skills			
2. Gardening skills			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Maths- (time and area)			
2. Science- (seed germination)			
3. Social Science- waste management			
<b>Learning Outcomes</b>			
1. Students will participate in gardening			
2. Students will sell vegetables			
3. Students will understand profit and loss.			
<b>Tools/Material Needed</b>			
1. Seeds Rs.100		4. Plant cutting scissors Rs.50	
2. Compost Rs.50		5. Plastic bags Rs.40	
3. Plant vases Rs.40		6. Big leaves Rs.10	
		7. Digging knife Rs.60	



Steps
<p><b>Pre-Activity</b></p> <p>Teacher will ask the students to bring varieties of seeds, compost, plant vase, scissors, Plastic bags and big leaves</p> <p><b>Activity</b></p> <ol style="list-style-type: none"> <li>1. Take the digging knife and dig the hole and put the seed in it.</li> <li>2. Take the water and pour on it.</li> <li>3. Take the plant vase and fill it with soil and put the seed in it.</li> <li>4. Take compost and spread it on the soil.</li> <li>5. Take big leaf and draw the figure on it.</li> </ol> <p><b>Post Activity</b></p> <ol style="list-style-type: none"> <li>1. Students will sell the plant in near market. Rs.40</li> <li>2. Students will sell the vegetables in the market place.Rs.100 kg</li> <li>3. Students will sell the leafy vegetables to near community. Rs.10per bunch</li> <li>4. Students will understand the profit and loss.</li> </ol>
Precautions
<ol style="list-style-type: none"> <li>1. make use of gloves while digging the soil</li> <li>2. Safety measures need to be taken while cutting the leafy vegetables</li> <li>3. Students should take precautions while leaf art drawing</li> </ol>
Assessment
<ol style="list-style-type: none"> <li>1. Rubric created by the students</li> <li>2. Jury evaluation by teachers</li> <li>3. Agricultural skills</li> <li>4. Gardening skills</li> </ol>

## Lesson Plan 20

**Name of Faculty: Dr .G. Madhukar**

<b>Class</b>	<b>Class IX</b>	<b>Subject</b>	<b>English</b>
<b>Lesson Name</b>	The Accidental Tourist	<b>Duration of the Lesson</b>	2 classes
<b>Concept(s) Covered</b>		Study tour/Excursion	
<b>Vocation(s) or Occupation(s) that can be connected to this lesson</b>			
1. Photo painting 2. Drawing/Painting 3.Mehndi design/art			
<b>Skills that will be inculcated</b>			
1. Creative skills 2. Drawing skills 3. Painting skills 4. Organization skills 5. selling skills			
<b>Interdisciplinary concepts that may be integrated</b>			
1. Maths- measurement 2. Science- color mixing/color combination 3. Social- designing			
<b>Learning Outcomes</b>			
1. Students will do photo painting 2. Students will draw the different tourist places 3. Students will do Mehndi art			
<b>Tools/Material Needed</b>			
1. Photos Rs20 2.ChartsRs.15 \3. Colors Rs.50		4.Mehndi cones Rs.30 5. Color papers Rs.20 6. Brush pens (12clors) Rs 200 7. Scissors Rs.50	
<b>Steps</b>			
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**Pre-Activity**

Teachers will ask the students to bring photos, charts, colors, Mehndi cones, color papers Brush pens packet and Scissors

**Activity**

1. Take plain chart and draw the photo.
2. Take color paper and draw the diagram and do painting.
3. Take mehndi Cone and do the painting on hands

**Post Activity**

1. Students will sell the photo painting in school exhibition. Rs.100
2. Students will sell the diagrams and painting in the market. Rs.60
3. Students will do the Mehndi painting in school annual day function Rs.50

**Precautions**

1. Make use of hand covers while painting
2. Safety measures need to be taken while drawing
3. Tour guide must identify nearby tourist plac

**Assessment**

1. Evaluation of photo painting
2. Portfolio assessment.
3. Assessment of drawing/Painting.
4. Evaluating Mehndi design

### **Conclusion**

The Action Research for Integrating Vocational Education in four classes, specifically 9-10 classes in Subject Methodology - Language English, has successfully developed 20 lesson plans that integrate vocational education into the English Language curriculum. By using content analysis in classes 9th and 10th English Language Subject, the lesson plans were framed to allow students to gain income-generating skills while participating in vocational activities. The objective of this project was to enable students to gain academic curriculum knowledge while also acquiring vocational skills, which would make them self-sufficient. This initiative is a great approach to get students ready for the real world and give them the practical experience they need to succeed in their future employment. It also underlines the necessity of vocational education and the integration of vocational education into academic curriculum. Students who pursue vocational education are better prepared to pursue their passions and succeed in their chosen industries because they are able to learn practical skills that are unique to their career interests. Schools can give students practical experience and enable them to apply the theoretical knowledge they learn in the classroom to real-world problems by including vocational education into their curricula. This not only improves their overall educational experience but also aids in their better comprehension of the practical aspects of their chosen careers. In conclusion, this project makes a substantial contribution to closing the knowledge and skill gap between the classroom and the real world by giving students a well-rounded education that equips them for their future aspirations.

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I extend my gratitude to **Dr. Qudsia Hafeez** and **Dr. G. Madhukar** Co-Researchers of this project for their support and encouragement throughout this project.

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**Dr. UMME SALMA**

## ANNEXURES – BRIEF PROFILES OF RESEARCHERS

**Dr. Umme Salma** is an Assistant Professor in the Department of Education and Training at Maulana Azad National Urdu University (MANUU), Hyderabad. With a B.Ed. and M.Ed. in Special Education (Intellectual Disability), M.Sc. in Psychology, NET in Education and a Ph.D. in Education, she has a strong educational background. Her research work, which includes 10 research papers in National and International Journals/Edited books and 12 research papers presented in National and International Seminars/Conferences/Workshops, reflects her commitment to the field. Dr. Salma has also received training from prestigious institutions like the University of Virginia, USA, and the University of Oxford, UK in association with CESS, Hyderabad on Secondary CLASS Observation Training. Her proficiency in observing and coding classroom interactions has played an essential role as a researcher in presenting the results. Her research interests include Inclusive Education, Early Childhood Care and Education (ECCE), Intellectual Disability, Learning Disability, and Psychology.

**Dr. Gampala Madhukar**, presently working as a Assistant Professor in the Department of Education, University College of Education, Osmania University, Hyderabad. Completed 15 years of teaching and Research in the field of Education. MA (Psychology), MA (English), MEd, UGC-NET(Education) and UGC-NET(Psychology). Awarded Ph.D in Education in the year 2014. At present pursuing Ph.D in Psychology from Department of Psychology, University College of Arts and Social Sciences, Osmania University, Hyderabad. Areas of interests are Psychology, Inclusive Education and Teacher Education. Organized 2 National Conferences and 2 National Webinars on Education. Published 12 Research Papers in UGC-CARE and other reputed Journals, Co-editor for 4 Books and contributed 6 chapters in Edited Books. Participated and presented papers in 12 International Conferences and 18 National Conferences. Life Member in many professional bodies like Indian Science Congress Association, Kolkata, Indian Association of Teacher Educators, UP, Indian Academy of Applied Psychology, Chennai, All India Association of Educational Research, Bhubaneswar, Association of Socio-Economic Development, UP, Indian School Psychology Association, Puducherry and Osmania Psychology Association, Osmania University, Hyderabad. Indian School Psychology Association (In SPA) State Convenor, Telangana.

**Dr. Qudsia Hafeez** is an academician holding nearly a decade of experience in teaching at various levels from school to higher education. She has Master's Degrees in Microbiology, English, Education, Psychology, and a Doctorate Degree in Education from Osmania University. She qualified for APSET, UGC NET in Education, and TSSET in Life Sciences. She has taught Biological Science Methodology and Education to B.Ed and M.Ed students. She has worked as an IDP IELTS Trainer. Her areas of interest are Science Education, English Language Education, and Teacher Education. She has presented papers at State, National, and International Seminars. She has published research articles in National and International Journals. She is currently pursuing Post-Doctoral Fellowship from ICSSR in Education.

### **SELF -DECLARATION**

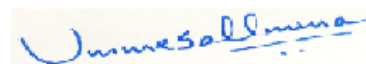
**TITLE OF THE MINOR RESEARCH PROJECT: Action Research for Integrating Vocational Education in Teacher Education by Subject Methodology - English**

**NAME of LEAD RESEARCHER : Dr. Umme Salma**

**NAMES of CO-RESEARCHERS : Dr G Madhukar, Dr. Qudsia Hafeez**

1. I/We confirm that I/We have read, understood and agreed to the submission guidelines, policies and this submission declaration as per the MGNCRE Work Order.
2. I/We confirm that the Research Report is the authors' original work and the Research Report has not received prior publication and is not under consideration for publication elsewhere.
3. I/We confirm that the lead researcher and the co-researchers listed on the title page and in this form have contributed significantly to the work, have read the Research Report, attest to the validity and legitimacy of the content, and agree to its submission.
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