

SREE NARAYANA TRAINING COLLEGE, NEDUNGANDA

DOCUMENTARY EVIDENCE OF THE ACTIVITIES SHOWING INSTITUTIONAL OPPORTUNITIES FOR DEVELOPING COMPETENCIES AND SKILLS IN DIFFERENT FUNCTIONAL AREAS

1. Organizing Learning (Lesson Plan)



Discussion Class



Demonstration Class

LESSON PLAN

Name of the teacher :	Akshaya .k	Name of the school :-	
Subject	: Basic Science	Std & Div :-	VIII
Unit	: Fibres & Plastics	Duration :	30 minutes
Sub unit	: Plastic	Date :-	

*** CURRICULAR STATEMENT**

- * Through experimentation, observation & discussion, the students acquire an awareness about plastic in daily life.
- * The students get evaluated through their participation in group activities, presentation & experimentation skills.

*** CONTENT ANALYSIS**

- 1) TERMS :- plastics, polymers, Thermo plastic, Thermo setting plastic, PVC, Conductor, Insulators, monomers, Cross links, Physical & chemical change.
- 2) FACTS :- (i) plastics are synthetic polymers.
(ii) plastics have properties different from that of fibres.
(iii) Bakelite is the first artificial plastic.
(iv) plastics are bad conductors of heat & electricity
(v) plastics do not react with water & do not corrode.



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- (vi) Based on changes occurring while heating, plastics are classified into 2.
 (vii) plastic can be moulded into different shapes.
 3) CONCEPT :- plastic, thermosetting & thermo plastic.

4) DEFINITIONS

- (i) Thermoplastic :- Thermoplastics are defined as plastic that gets softened on heating & hardened on cooling. This process can be repeated any number of times.
 (ii) Thermosetting plastic :- Thermosetting plastics are defined as those plastic which remains soft when heated during its manufacture & gets hardened permanently on cooling. Once hardened they cannot be remoulded by heating.

* LEARNING OBJECTIVE GRID

Objective area	Anticipated mental process/ Action Verb.	Product outcome.
1) Remembering	Recalls, Tell.	Facts
2) Understanding	Compare	Definitions, Fact
3) Applying	Identify	Concept, fact, Definition
4) Analysing	Categorize, List, Distinguish	Fact, Definition.
5) Evaluating	Explain, compare, conclude	Definition, Fact.
6) Creating.	Compile	Definition, Fact.

* TEACHING LEARNING RESOURCES

- Materials - chalk, board, plastic cover, plastic mug, plastic bottle, switch board, PVC pipe, melamine, plate, Bakelite handle, electric wire, sanitizer bottle.
 → Audio-visual Aids :- Activity card containing situations in which plastic are used, chart with definition.

* ATTITUDES TO BE DEVELOPED

Curiosity, Openmindedness, Questioning.

* PROCESS SKILLS TO BE ATTAINED

Observing, Inferring, Classifying.

* EXPECTED PRODUCT :- Completed activity card.

* PRE REQUISITE.

Students already know about conductors & insulators and also knows about physical & chemical change.

* CLASSROOM INTERACTION PROCEDURE

PUPIL RESPONSE

INTRODUCTION

The teacher enters the class with a plastic cover and asks about the well being of the students.
 The teacher ~~also~~ displays few items on the table and asks the students whether they know the items on the table.
 She asks the students identify a common



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The teacher then explains the reason for this behaviour of plastic and briefly explains the concept of structure of plastics.

The teacher then draws two columns on the board and asks the students to categorize the items on the table as thermoplastic & thermosetting plastic and also asks the students to note them down on their notebooks.

After classifying them, the teacher asks the students to distinguish between them and to state few other difference between the two.

The teacher further adds that thermoplastic undergo physical change on heating whereas thermosetting plastic undergo chemical change along with physical change.

The teacher asks the students again, whether all the items kept on the table melt down.

The teacher then says that now we have identified two types of plastic, based on their reaction towards heat.

The teacher then explains the concept of thermoplastic & thermosetting plastic and shows the students chart containing definition about them, and asks two students to read both the definitions.

• **Thermoplastic** :- Thermoplastics are defined as plastic that gets softened on heating & hardened on cooling.

• **Thermosetting plastic** :- Thermosetting plastics are defined as those plastic which remains soft when heated during its manufacture & gets hardened permanently on cooling.



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CONSOLIDATION

After summarizing the above concepts, the teacher proceeds to the review session:

* REVIEW

- (1) List out few characteristics of plastics.
- (2) Can all plastic be reheated any number of times?
- (3) What is thermoplastic?
- (4) Give one example for thermosetting plastic.
- (5) Give one difference between thermosetting & thermoplastic.

* FOLLOW UP ACTIVITY

The teacher asks the students compile more examples of thermosetting and thermoplastic from day to day life and categorize them. The teacher also asks them to find out major disadvantage of plastic & note it down on science diary.

* BLACK BOARD SUMMARY

2. Developing Teaching Competencies



School Induction




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School Internship

2. Assessment of Learning

Sample Question Paper of Mid Semester Exam for Semester 1 & III

SREE NARAYANA TRAINING COLLEGE, NEDUNGANDA
FIRST SEMESTER B.Ed. DEGREE MODEL EXAMINATION, JUNE 2022

EDU 04.8: THEORETICAL BASE OF PHYSICAL SCIENCE EDUCATION

Time: 2 Hours Max. Marks: 50

PART- A

Choose the correct answer. Answer all questions. Each question carries one mark.

- Who proposed the quantum theory for tachyons?
 - M. N. Saha
 - E. C. G. Sudarshan
 - P. C. Ray
 - C. V. Raman
- 'Truth is beauty'- This statement is closely related to which value of science?
 - Cultural value
 - Aesthetic value
 - Disciplinary value
 - Moral value
- Which of the following is not a technique of teaching?
 - Debate
 - Dalton Plan
 - Simulation
 - Role play
- Deductive Reasoning is also known as
 - Top down approach
 - Bottom down approach
 - Top up approach
 - Bottom up approach
- If a teacher thinks over his/ her own teaching practices and analyses them, the person is a
 - Good Scaffolder
 - Good Mentor
 - Good Reflective Practitioner
 - Good Supervisor

(5x1=5 Marks)

PART- B

Answer all questions. Answer in a **word** or **sentence**. Each question carries one mark.

- Name any one famous Indian woman scientist and give any one of her contributions to science.
- What is skepticism?
- Define learning based on constructivism.
- Give an example of positive transfer of learning.
- Who is the father of Indian Chemistry?

(5x1=5 Marks)

PART- C

Answer all questions. Answers should be very brief and to the point. Each question carries two marks.

- List any four characteristics of the role of teacher as a mentor.
- Distinguish between the product and process aspects of science.
- List the integrated process skills in science.
- State the method of concomitant variations in Mill's canons of induction with an example.
- What is 'buzz session'? Why is it called so?

(5x2=10 Marks)

PART- D

Answer any four questions. Each question carries five marks.

- Bring out the role of science in sustainable development.
- Explain the concept of objective based instruction.
- Describe brainstorming as an effective method of teaching science.
- What is Problem Solving method? Explain the steps involved.
- Explain the concept of Virtual Learning Environment (VLE).
- Describe the basic teaching model by Glaser.

(4x5=20 Marks)

PART- E

Answer any one question. Each question carries ten marks.

- 'The scientific method is a method that could be adopted by students to solve a problem in a systematic way' - Do you agree with the statement? Justify your answer.
- The Bloom's Digital Taxonomy gives educators an excellent framework to begin to assess their digital practices. Substantiate.

(1x10=10 Marks)




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Sample Question Paper of Model Examination for Semester I

Sample Question Paper of University Examination for Semester II

(Pages : 3) M – 5598

Reg. No. :

Name :

Second Semester B.Ed. Degree Examination, November 2021
EDU-09.8: CURRICULUM AND RESOURCES IN DIGITAL ERA:
PHYSICAL SCIENCE EDUCATION
(2019 Admission Onwards)

Time : 2 Hours Max. Marks : 50

PART – A

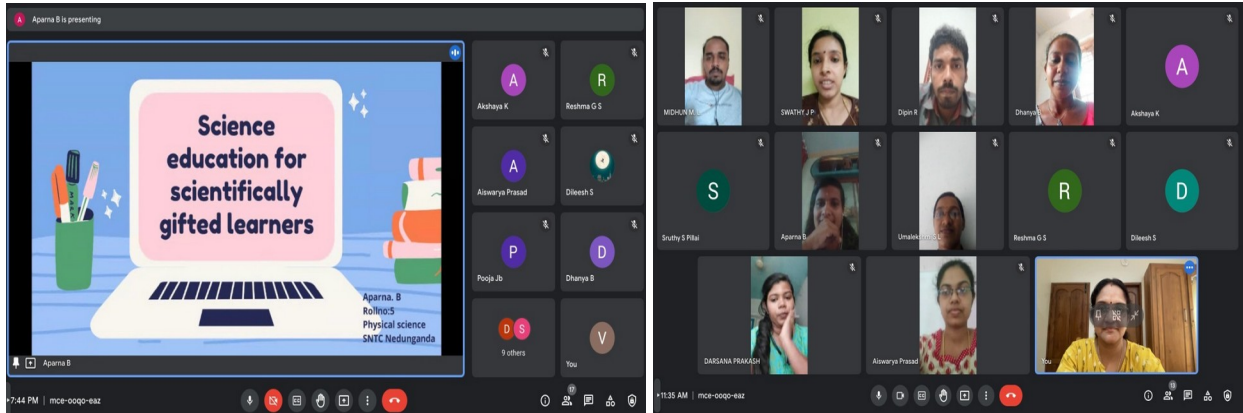
Choose the correct answer. Answer all questions. Each question carries 1 mark.

- Beginning from a nucleus the circles of knowledge go on widening. This approach of curriculum organization is known as :
(a) Concentric Approach (b) Spiral approach
(c) Historical Approach (d) Topical Approach
- MOODLE was founded and developed by:
(a) Martin Dougiamas (b) Tim O'Reilly
(c) Darcy DiNucci (d) Dale Dougherty
- The scheme by NCERT to identify and nurture the talented students is:
(a) NSTSS (b) KVPY
(c) Science Olympiad (d) Sasthraposhini scheme
- First aid for alkali burn is:
(a) Wash with water and Apply Olive Oil
(b) Wash with water and then with Silver nitrate solution
(c) Wash with water and then with Sodium bicarbonate solution
(d) Wash with water and then with Lemon juice

P.T.O.

<p>5. Which among the following is not an informal science learning context (a) Science laboratory (b) Playground (c) Planetarium (d) Music Room</p> <p style="text-align: right;">(5 × 1 = 5 Marks)</p> <p style="text-align: center;">PART – B</p> <p>Answer all questions. Answer in one word or sentence. Each question carries 1 mark.</p> <ol style="list-style-type: none">Point out the features of activity centered curriculum.Write the full form of ANERT.Give an example of free, online academic search engine.What is meant by 'topical approach' of curriculum organization?What is Ptable? <p style="text-align: right;">(5 × 1 = 5 Marks)</p> <p style="text-align: center;">PART – C</p> <p>Answer all questions. Each question carries 2 marks.</p> <ol style="list-style-type: none">What is the significance of Science Exhibitions?Explain the role of Science Park as a learning context.Briefly explain the role of research in physical science educationWrite a note on 'Edublog'.Community based resources provides life related experiences for learners. Substantiate. <p style="text-align: right;">(5 × 2 = 10 Marks)</p> <p style="text-align: center;">2 M – 5598</p>	<p style="text-align: center;">PART – D</p> <p>Answer any four questions. Each question carries 5 marks.</p> <ol style="list-style-type: none">"The spirit of science will be felt only if it is treated historically". Can you agree with this statement? Justify your answer.Briefly explain CASE.Give an outline of the nature of Science and science education as given in KCF 2007.Illustrate with examples the correlation of Physical Science with life and environment.Describe the role of a science teacher as a digital migrant.What are the first aids provided for the common accidents that can happen in a science laboratory? <p style="text-align: right;">(4 × 5 = 20 Marks)</p> <p style="text-align: center;">PART – E</p> <p>Answer any one questions. Each question carries 10 marks.</p> <ol style="list-style-type: none">Explain the principles underlying curriculum construction. Give suitable examples from secondary school physical science topics.Practical works in the laboratory provides firsthand experience and gives training in scientific method to the learner. How will you organize and maintain a science laboratory in support of this statement? <p style="text-align: right;">(1 × 10 = 10 Marks)</p> <p style="text-align: center;">3 M – 5598</p>
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3. Technology Use and Integration



ICT Integrated Class

4. Organizing Field Visits



Field Trip for Semester1




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5. Conducting Outreach/ Out of Classroom Activities



'Food and Nutrition Awareness' at SSPBHSS, SSPBHSS, Kadakkavoor on 19 January 2022.



Training on Paper Bag Making at Kadakkavoor on 19 January 2022




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6. Community Engagement



Community Extension Programme in collaboration with Anchuthengu Gramapanchayat in Wards 2 & 6 on 02/05/2022 & 05/05/2022

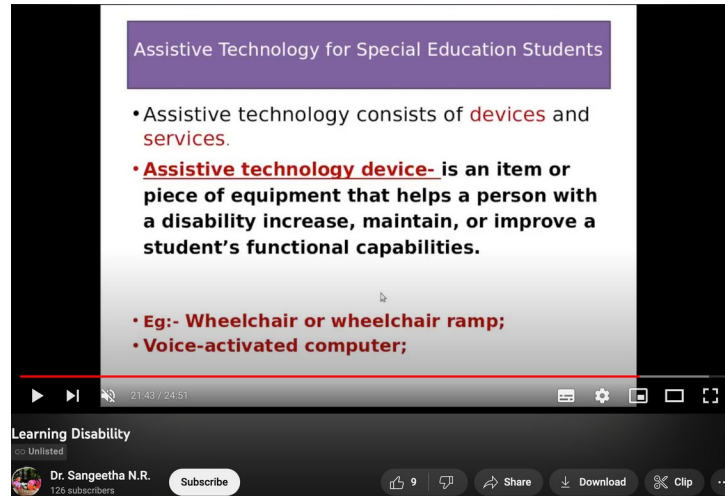


Flood Relief Activities




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7. Facilitating Inclusive Education

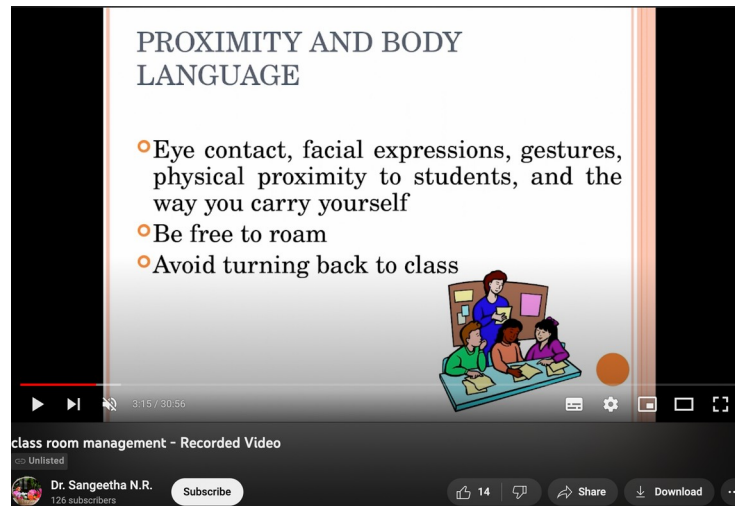


Assistive Technology for Special Education Students

- Assistive technology consists of **devices** and **services**.
- **Assistive technology device-** is an item or piece of equipment that helps a person with a disability increase, maintain, or improve a student's functional capabilities.
- **Eg:- Wheelchair or wheelchair ramp;**
- **Voice-activated computer;**

Learning Disability
Unlisted
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PROXIMITY AND BODY LANGUAGE

- Eye contact, facial expressions, gestures, physical proximity to students, and the way you carry yourself
- Be free to roam
- Avoid turning back to class

class room management - Recorded Video
Unlisted
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