



# Sree Narayana College of Education

(Affiliated to MG University, Approved by NCTE)

Muvattupuzha, Ernakulam Dist, Kerala, Pin - 686661

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## KEY INDICATOR

### 2.4 COMPETENCY AND SKILL DEVELOPMENT

#### METRIC:2.4.5

Adequate skills are developed in students for effective use of ICT for teaching learning process in respect of

1. Preparation of lesson plans
2. Developing assessment tools for both online and offline learning
3. Effective use of social media/learning apps/adaptive devices for learning
4. Identifying and selecting/ developing online learning resources
5. Evolving learning sequences (learning activities) for online as well as face to face situations

**Documentary evidence in support of each response selected**



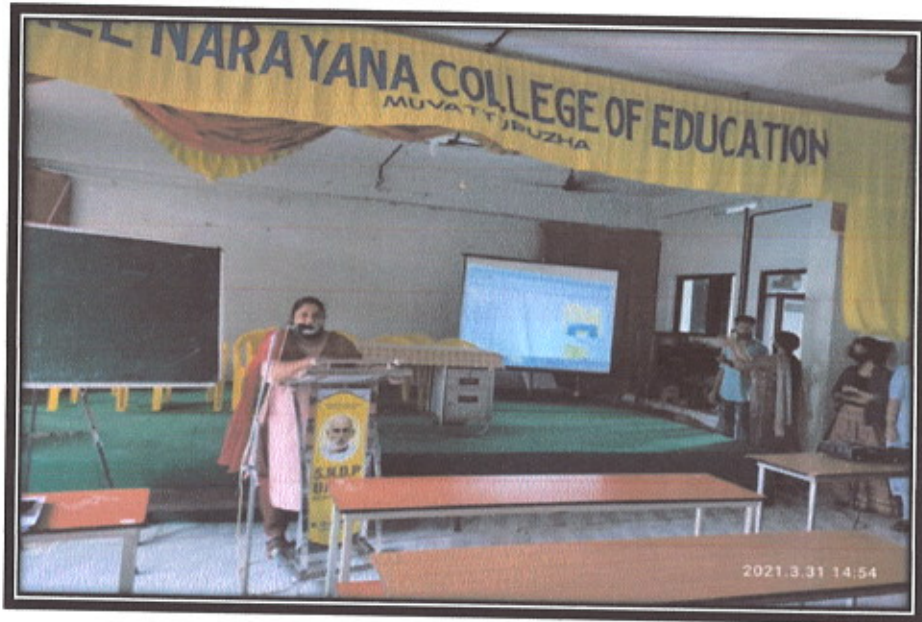
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## Preparation of lesson plans



  
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**Classroom Orientation and Practice in writing lesson plans**



**Classroom Orientation in Writing lesson plans**



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|  |                         |
|--|-------------------------|
| NAME OF THE TEACHER: MEENAKSHI KRISHNA K.                | DATE: 2.12.2022         |
| NAME OF THE SCHOOL: S.N.D.P.HIGH SCHOOL<br>.MUVATTUPUZHA | STANDARD:<br>VIII       |
| SUBJECT : BIOLOGY  | STRENGTH: 37            |
| UNIT : DIVERSITY FOR SUSTENANCE                          | DURATION: 45<br>MINUTES |
| TOPIC : BIODIVERSITY DEPLETION                           |                         |

### CONTENT OVERVIEW

Biodiversity depletion-Causes

### CONTENT ANALYSIS

#### TERMS

Western Ghats,Red Data Book,,Extinction,IUCN

#### FACTS

- Birds fall easy victims to changes in the ecosystem.
- The Western Ghats is rich in biodiversity.
- IUCN is an organization for environmental protection.

#### CONCEPTS

- Reduction or loss of plant and animal species is called biodiversity depletion.
- Biodiversity or the varieties of all living things on our planet,has been declining at an alarming rate in recent years ,mainly due to human activities,such as changes in land use,pollution,climate changes,use of fertilizers,destruction of ecosystems etc.

#### PRE REQUISITES

Students knows about biodiversity.

#### LEARNING OBJECTIVES

- ❖ Knowledge domain:



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- Develops knowledge and understanding about the above mentioned terms, facts and concepts.
- ❖ Process domain:
  - Develops an idea about biodiversity depletion its causes and consequences.
- ❖ Application domain:
  - Applies the acquired knowledge in conservation of biodiversity.

**LEARNING MATERIALS**

Text book, ICT Videos, Images, Activity Cards.

| LEARNING ACTIVITIES   | PUPIL RESPONSES  |
|---|--|
| <p><b><u>ACTIVITY No:1</u></b><br/>           After a friendly talk teacher shows the images of different types of birds in Kerala using ICT. The students are asked to discuss about the changes in the diversity of birds in their locality. They have to note down the points in their science diary. After that the teacher consolidate it is due to biodiversity depletion.<br/>           (en.m.wikipedia.org/wiki/list_of_birds_of_kerala)</p> <p><b>CONSOLIDATION</b><br/>           Reduction or loss of plant and animal species is called Biodiversity depletion.</p> <p><b><u>ACTIVITY No:2(Group Discussion)</u></b><br/>           The teacher will divide students into different groups and shows the article about biodiversity in textbook page number 188. The students are asked to discuss about it and complete the activity card suitably. They are provided with some indicators. Based on the indicators students completed the activity cards.</p> <p><b>INDICATORS</b></p> <ul style="list-style-type: none"> <li>❖ The Western Ghats rich in biodiversity.</li> </ul> | <p>Students listen carefully about the lesson.<br/>           Students discussed about the topic.</p> <p>Students completes the activity cards suitably.</p> |



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|  |                             |   |  |  |  |   |  |   |
|--|-----------------------------|---|--|--|--|---|--|---|
| <p>❖ Ecological diversity is destroyed</p> <table border="1"> <tr> <td data-bbox="399 324 776 369"> <p><b>Activity Card</b></p> </td> </tr> <tr> <td data-bbox="399 369 776 448"> <ul style="list-style-type: none"> <li>Western Ghats is also known as ----- &amp;-----</li> </ul> </td> </tr> <tr> <td data-bbox="399 448 776 515"> <ul style="list-style-type: none"> <li>Western Ghats is rich with-----,</li> </ul> </td> </tr> <tr> <td data-bbox="399 515 776 627"> <ul style="list-style-type: none"> <li>The deterioration of ecological diversity in Western Ghats is accelerated by-----,</li> </ul> </td> </tr> </table> <table border="1"> <tr> <td data-bbox="399 649 776 694"> <p><b>Answers to be consolidated</b></p> </td> </tr> <tr> <td data-bbox="399 694 776 840"> <ul style="list-style-type: none"> <li>Sahyadri &amp; Sahya mountain.</li> <li>Ecosystems, such as forests, grass lands, Sacred groves, Marshes, rivers and ponds.</li> </ul> </td> </tr> <tr> <td data-bbox="399 840 776 918"> <ul style="list-style-type: none"> <li>Agriculture, dams which obstruct the flow of rivers, mining, tourism, hunting.</li> </ul> </td> </tr> </table> <p><b>ACTIVITY No:3</b><br/>The teacher show video dealing about biodiversity depletion. Based on this teacher asks students to list out causes of biodiversity depletion.<br/>(<a href="https://youtu.be/wXjiHr8jWBs">https://youtu.be/wXjiHr8jWBs</a>)</p> <p><b>CONSOLIDATION</b></p> <ul style="list-style-type: none"> <li>Large scale destruction of ecosystem.</li> <li>Over exploitation of natural resources.</li> <li>Excessive use of chemicals in agricultural fields.</li> </ul> | <p><b>Activity Card</b></p> | <ul style="list-style-type: none"> <li>Western Ghats is also known as ----- &amp;-----</li> </ul> | <ul style="list-style-type: none"> <li>Western Ghats is rich with-----,</li> </ul> | <ul style="list-style-type: none"> <li>The deterioration of ecological diversity in Western Ghats is accelerated by-----,</li> </ul> | <p><b>Answers to be consolidated</b></p> | <ul style="list-style-type: none"> <li>Sahyadri &amp; Sahya mountain.</li> <li>Ecosystems, such as forests, grass lands, Sacred groves, Marshes, rivers and ponds.</li> </ul> | <ul style="list-style-type: none"> <li>Agriculture, dams which obstruct the flow of rivers, mining, tourism, hunting.</li> </ul> | <p>Students observe the video carefully.</p> <p>Students find out the causes of biodiversity depletion.</p> |
| <p><b>Activity Card</b></p>  |                             |   |  |  |  |   |  |   |
| <ul style="list-style-type: none"> <li>Western Ghats is also known as ----- &amp;-----</li> </ul>  |                             |   |  |  |  |   |  |   |
| <ul style="list-style-type: none"> <li>Western Ghats is rich with-----,</li> </ul>   |                             |   |  |  |  |   |  |   |
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**Model Lesson Plan integrated with ICT**



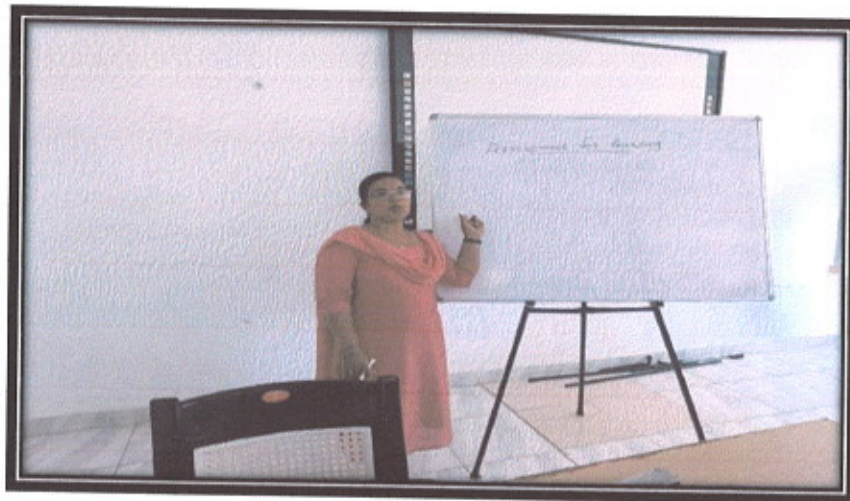
  
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**Developing assessment tools for both online and offline learning**

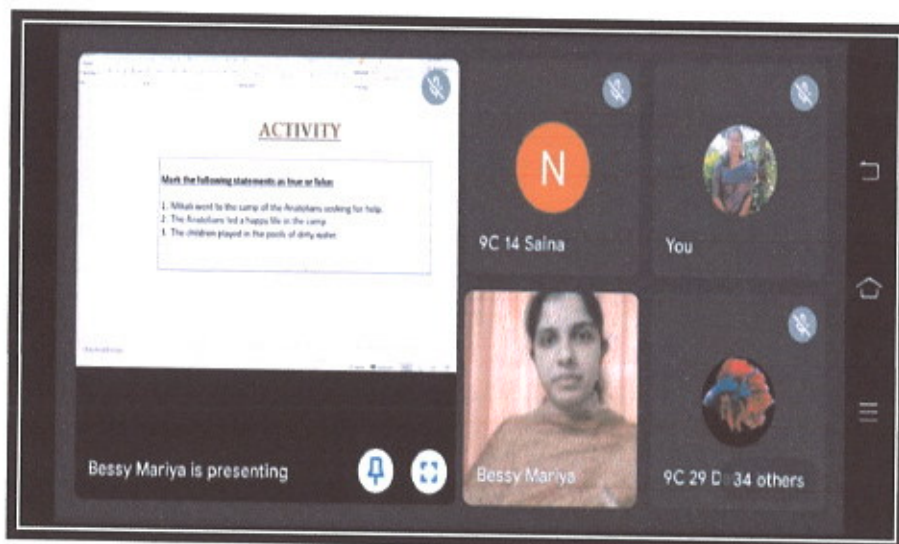


  
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## Orientation and explanation on online & offline assessment tools



**Orientation class on assessment for Learning**



**Orientation class on preparation of question paper**



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## ACHIEVEMENT TEST IN BIOLOGY

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(Affiliated to Mahatma Gandhi University, Kottayam)

### ACHIEVEMENT TEST IN BIOLOGY

STANDARD :VIII

Total Score:25

Time : 45 minutes

#### INSTRUCTIONS

1. First 5 minutes is given as cool of time. This time is to be for reading and understanding the questions.
2. Write down your answers for all questions.
3. The score for each question is given along with the questions.

#### Choose the correct answer

1. Who coined the term biodiversity first?  
a) Dr. Norman Myers b) Walter G Rosen c) Irwin Rose d) August Weisman (1)
2. The study of interaction between organisms and their surrounding is known as  
a) Geology b) Ecology c) Pedology d) Climatology (1)
3. — are always included in the first trophic level of all food chains  
a) Herbivores b) Producers c) Carnivores (1)
4. The ecological interaction between flower and bee is an example of  
a) Commensalism b) Mutualism c) Parasitism (1)



  
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5. Find the example for wildlife sanctuary from the following

a) Nilgiri b) Silentvalley c) Wayanad (1)

6. Which of the following is a biosphere reserve

a) Eravikulam b) Kadalundi c) Agasthyarkoodam (1)

7. Which of these is an ecological hotspot

a) Periyar b) Western Ghats c) Wayanad d) Agasthyarkoodam (1)

8. Which of the following is not an endangered species

a) Lion tailed macaque b) Quagga c) Malabar hornbill d) Malabar civet cat (1)

9. Which of the following does not come under In situ conservation method

a) Community reserve b) Ecological hotspots c) Zoological garden (1)

10. The institute related to Gene Bank

a) IUCN b) MBG c) RGCB d) NTBGRI (1)

11. Find the odd one out from the following

i. a) Quagga b) Malabar Civet Cat c) Nilgiri Tahr d) Lion tailed macaque (1)

ii. a) Eravikulam b) Mathilketan Shola c) Periyar, Silent Valley (1)

12. Find out suitable example for the animal relations mentioned

i. Parasitism ii Mutualism iii Commensalism

a. Hermit crab and Sea anemone

b. Mango tree and lorchus

c. Mango tree and vanda (3)



  
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**13. Classify the following into Ex situ and In situ conservation**

Zoological gardens, Sacred grooves, Gene banks, Biosphere reserves  
Botanical gardens, National parks (3)

**14. Match the following**

| A                 | B                             |
|-------------------|-------------------------------|
| I. Rachel carson  | a. Sahya mountain             |
| II. IUCN          | b. Red data book              |
| III. Dodo         | c. Silent spring              |
| IV. Deforestation | d. Lost links                 |
| V. Western Ghats  | e. Biodiversity depletion (5) |

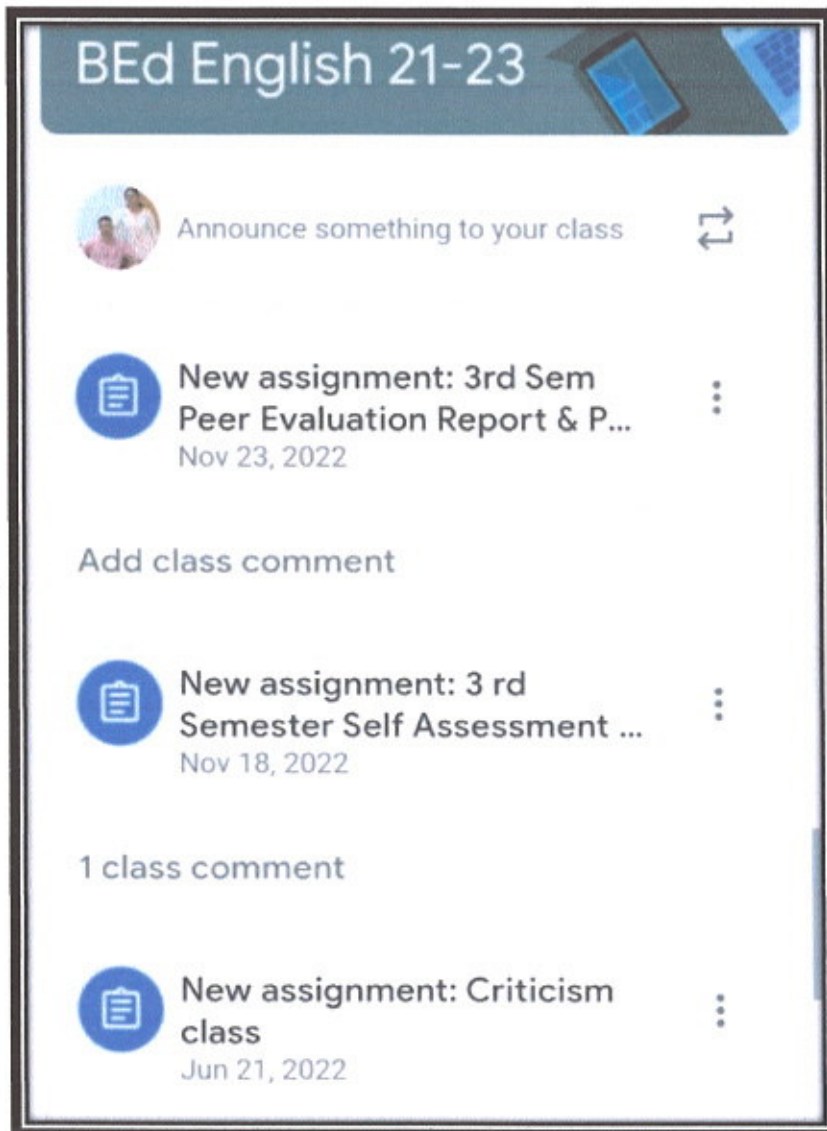
**15. Select True or False for the following questions**

- A. The fall of a sparrow is the autobiography of A.O. Hume.
- B. Birds fall easy victims to changes in the ecosystem.
- C. The number of trophic levels of the ecosystem is not constant.
- D. MAB is situated at Thiruvananthapuram. (2)

**Achievement test question paper**



  
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**Google Classroom for online learning and assessment**



  
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## A Survey on Menstrual Waste Management and the Reach of Sustainable Menstrual Hygiene Products Among School Children

By Meera John, 1<sup>st</sup> year B.Ed. Student, Sree Narayana College of Education, Muvattupuzha. So, I request you to participate in the same and furnish all the required details so that the study can be carried out effectively.

1. Name: \_\_\_\_\_
2. Age: \_\_\_\_\_
3. Annual Income:
  - upto 50,000
  - 50,000 to 1,00,000
  - 1,00,000 to 5,00,000
  - 5,00,000 to 10,00,000
  - above 10,00,000
4. Are you aware of the personal hygiene required during menstruation?
  - Yes
  - No
  - Partly
5. Do you believe that your schooling completely enhanced your awareness about menstruation?
  - Yes
  - No
  - Partly
6. Which is the Menstrual product that you use? (Check all that apply)
  - sanitary napkins
  - cloth pads
  - menstrual cups
  - tampons
  - others
7. Advantages of the product that you use: \_\_\_\_\_
8. Disadvantages of the product that you use: \_\_\_\_\_
9. Which is the disposal method that you follow to treat the menstrual waste? (Check all that apply)
  - Open burning
  - Sanitary napkin incinerator
  - Dumping
  - Burial
  - Other means
10. Apart from your family members have you ever received awareness from any other sources in treating menstrual waste?
  - Yes
  - No
11. Are you aware about the environmental impacts caused by the use of non-sustainable menstrual products like sanitary napkins?
  - Yes
  - No
  - Partly
12. Do you have enough awareness about the importance of using sustainable menstrual products like menstrual cups?
  - Yes
  - No
  - Partly
13. Do you think enough awareness is being spread in the society regarding the usage of sustainable menstrual products?
  - Yes
  - No
14. Do you wish to have a change from the current menstrual product that you use to some sustainable products?
  - Already using sustainable product
  - Yes
  - No
15. What are the factors that act as hindrances in this change according to you? (Check all that apply)
  - Ambiguity
  - Fear
  - unawareness
  - Family and their believes
  - Taboos existing against such products
  - other factors

→  
P.T.O

Offline Survey questionnaire



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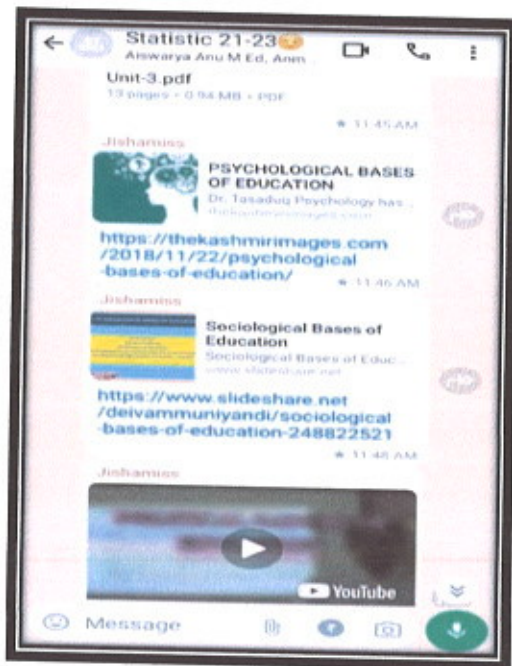
**Effective use of social media/learning apps/adaptive devices for learning**



A handwritten signature in green ink, appearing to be "M. C. S.", written over a horizontal line.

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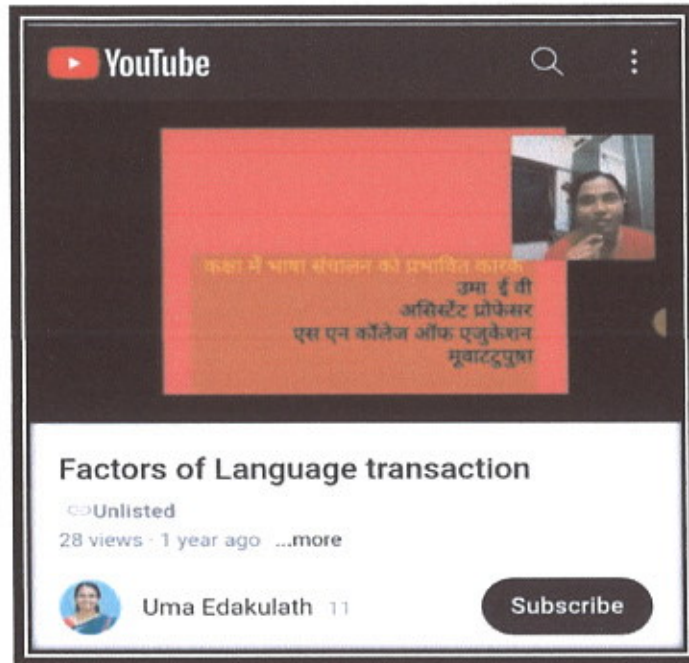
## Effective use of social media for learning



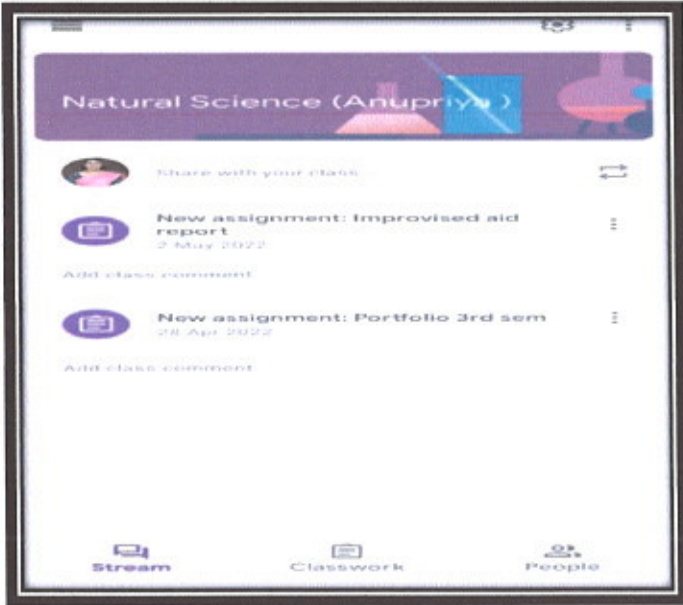
Using whatsapp for sharing documents



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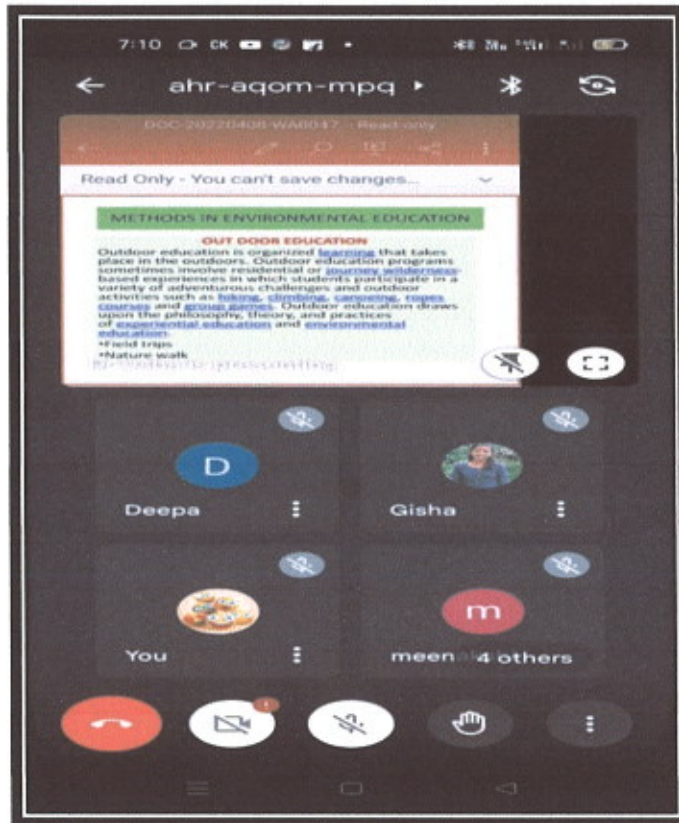
**Using Youtube for knowledge transaction**



**Documents sharing through Google classroom**



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**Learning through Google meet**



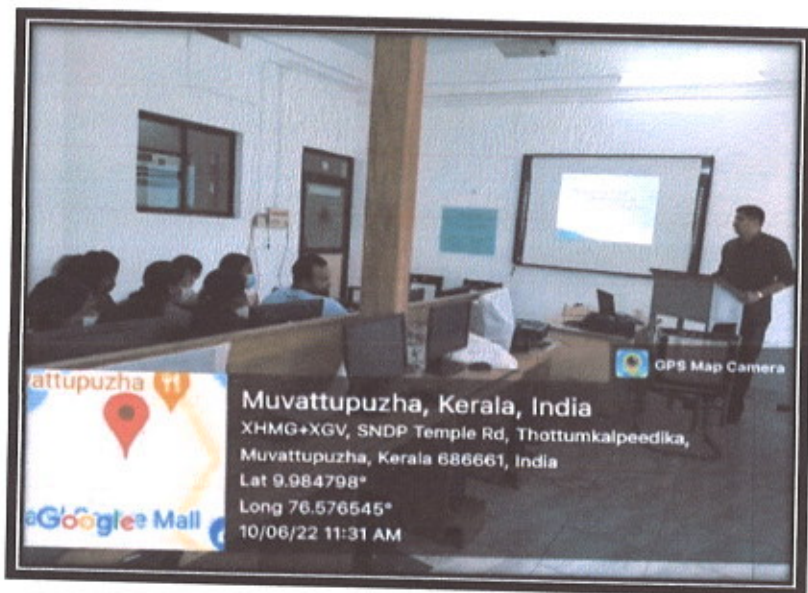
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**Identifying and selecting/ developing online learning resources**



  
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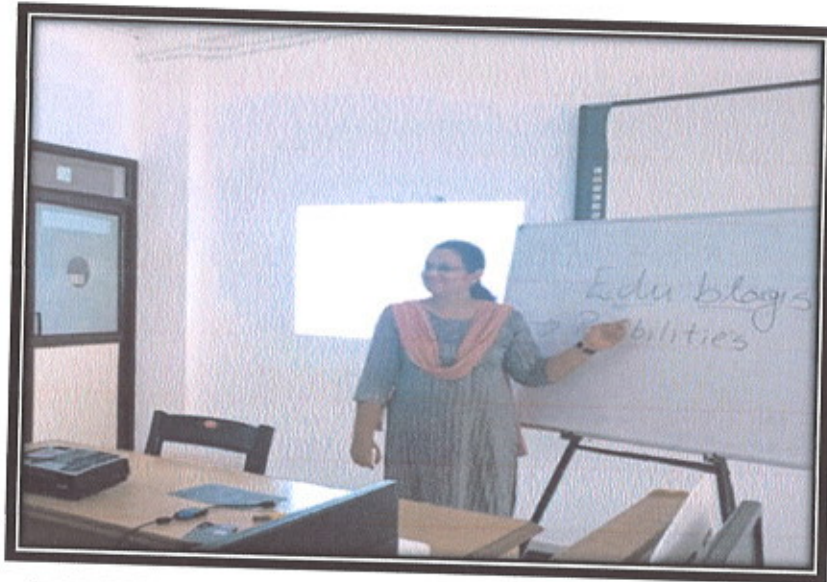
## Developing online learning resources



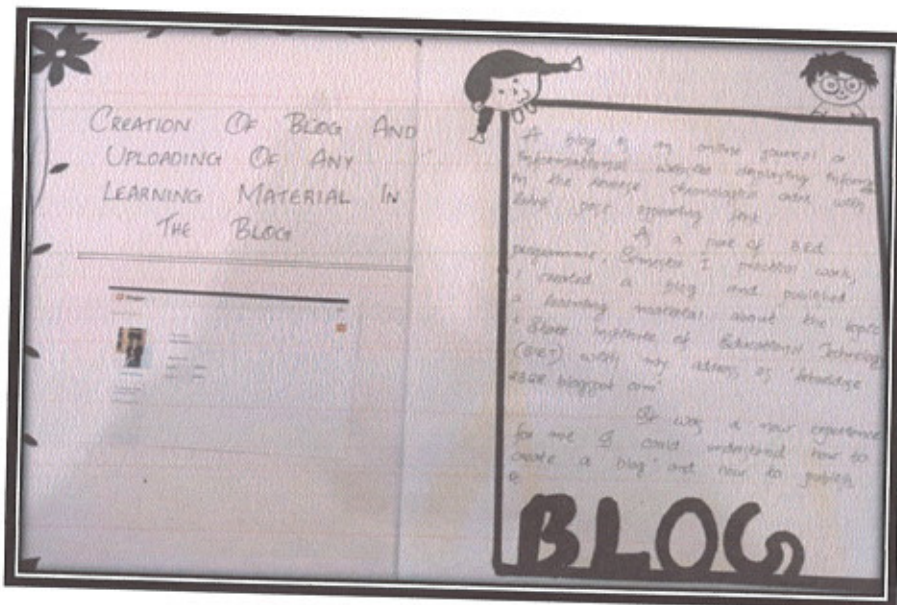
**Seminar on ICT in learning**



  
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**Orientation class on creation of blogs**



**Portfolio showing the blog creation and uploading**



  
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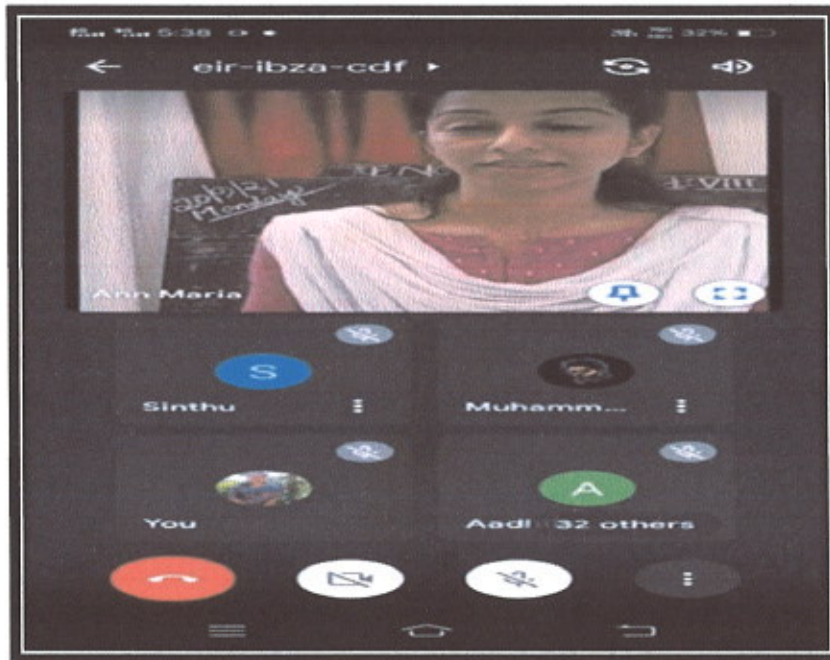
**Online learning resources prepared by students sample :1**



**Online learning resources prepared by students sample:2**



  
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Online learning resources prepared by students sample:3



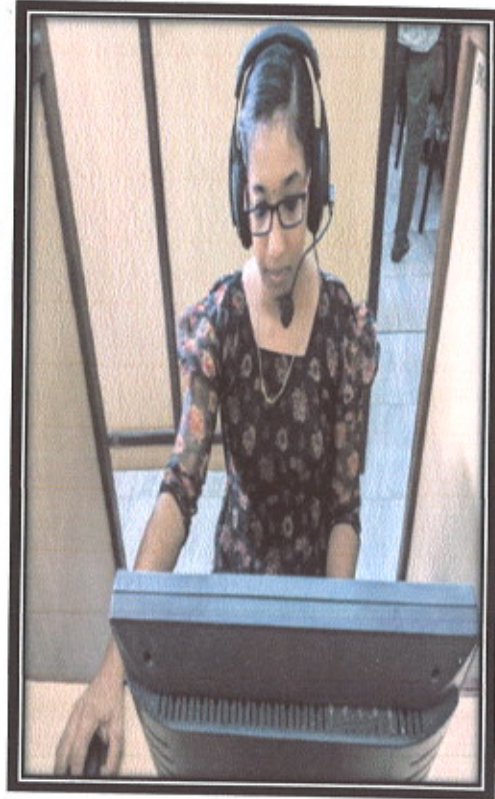
  
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**Evolving learning sequences (learning activities) for online  
as well as face to face situations**



  
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## Evolving learning sequences online



Learning experiences through google meet



  
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## Evolving learning sequences face to face situations



**Learning occurring in real classroom environment**



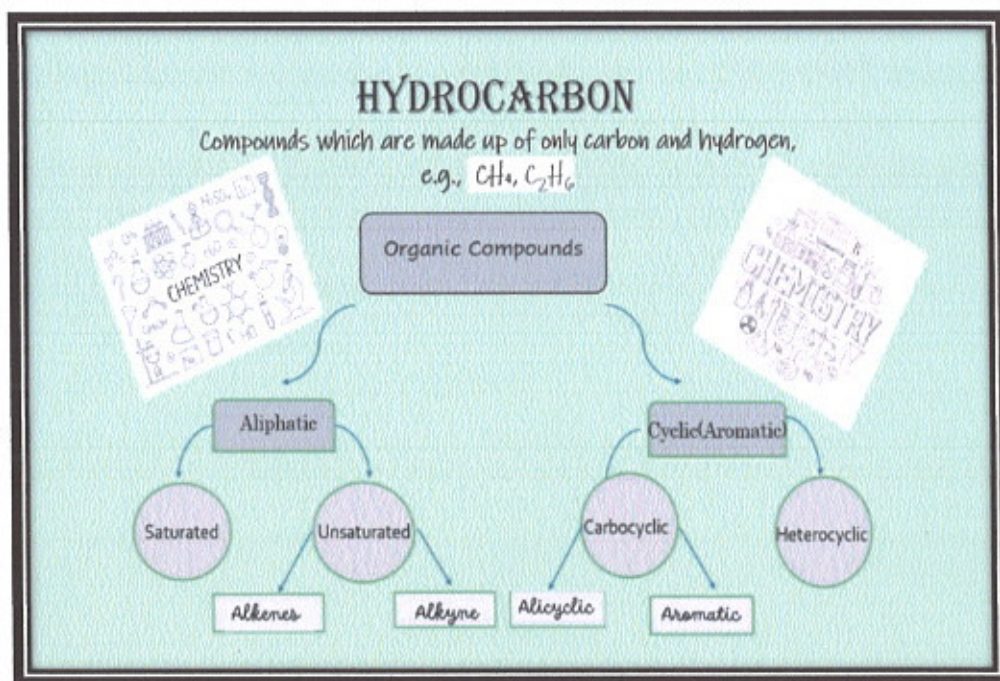
**Orientation regarding preparation of concept map through google meet**



  
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**Orientation regarding preparation of concept maps**



**A sample digital concept map created by the students on the topic 'Hydrocarbon'**



  
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