

ACTIVITY NO. -17- THE GREEN LUNGS

Subject	Science
Class	VII
Chapter/Unit	Forests: Our Lifeline
Topic	Uses of forest
Time	30 minutes (10 groups with 4 students in each)
Nature of Activity	Group

What will I learn (Learning Outcome)?

To summarize the various products obtained from forest, the importance of forest, food chain and the need to conserve forest.

Skills: Applying, Analyzing and Creating.

What I have to do?

To: (a) list the products obtained from forests
(b) specify the significance of forest.
(c) develop the concept of a food chain present in a forest.
(d) create a mind map on the ways to conserve forest

What do I require?

10 Handouts each for 4 topics, Stop watch, 10 Talking Sticks, Plastic/Glass Bowl,
4 small pieces of paper / slips of paper.

What do I need to know?

An area with high density of trees is called a forest. A forest is a system which is composed of plants, animals and microorganisms. Forest is the habitat for a variety of living beings. Many plants, animals and microbes live in the forest. .

➤ Teacher's Activity

Teacher will

- explain that an area with high density of trees is called a forest and all living organisms are dependent on forest directly or indirectly for their sustenance.
- brief the activity.
- divide the students into 10 groups with four students in each group (Home group)
- write four topics in four slips and keep them in a bowl.
- rotate this bowl in all the groups and ask the students to pick a paper slip, and thus assign one topic to each member of each group.
- manage time during the activity
- reshuffle the groups into expert groups after one round of discussion

How will I proceed?

➤ Student's Activity

1. Students will arrange themselves into 10 groups (Home groups) of 4 students each-
 - Group A- A1, A2, A3, A4
 - Group B- B1, B2, B3, B4
 - Group C- C1, C2, C3, C4
 - Group D- D1, D2, D3, D4
 - Group E- E1, E2, E3, E4
 - Group F- F1, F2, F3, F4
 - Group G- G1, G2, G3, G4
 - Group H- H1, H2, H3, H4
 - Group I- I1, I2, I3, I4
 - Group J- J1, J2, J3, J4
2. Students in each group will read about the following topics (Silent reading)-
 - {Time allocated- 5 minutes}
 - 1. Products obtained from forest- (for students A1, B1, C1, D1, E1, F1, G1, H1, I1, J1)
 - 2. Importance of forest- - (for students A2, B2, C2, D2, E2, F2, G2, H2, I2, J2)
 - 3. Food chain present in a forest- - (for students A3, B3, C3, D3, E3, F3, G3, H3, I3, J3)
 - 4. Ways to conserve forest- - (for students A4, B4, C4, D4, E4, F4, G4, H4, I4, J4)
3. These students will shuffle to form five expert groups-
 - Group 1- A1, B1, C1, D1, E1, F1, G1, H1, I1, J1
 - Group 2- A2, B2, C2, D2, E2, F2, G2, H2, I2, J2
 - Group 3- A3, B3, C3, D3, E3, F3, G3, H3, I3, J3
 - Group 4- A4, B4, C4, D4, E4, F4, G4, H4, I4, J4
 - Group 5- A5, B5, C5, D5, E5, F5, G5, H5, I5, J5

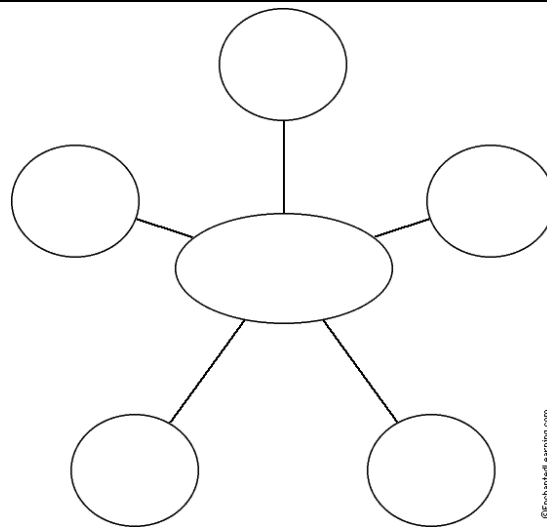
They will discuss their common topics in expert groups

 - {Time allocated- 10 minutes}
4. Students will reshuffle to their original home groups.-A, B, C, D, E, F, G, H, I and J.
5. Each student will explain his/her topic within the home group with a talking stick in hand. Time allocated for speech will be 2 minutes.
6. One representative from each group can then present the entire topic “Forest: Our lifeline” in the class. (Time allocated -5 minutes for each student representative of home group)

What have I observed?

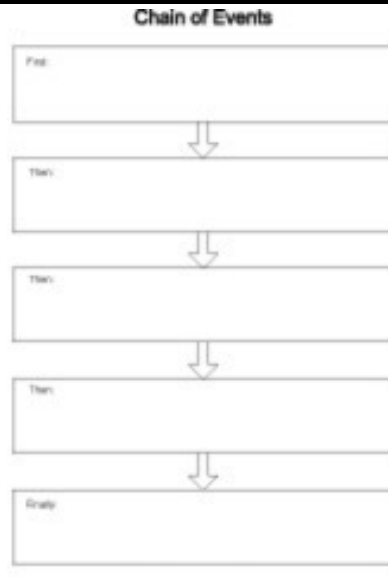
Each student will fill in the required information in the given web and table-

PRODUCTS OBTAINED FROM FOREST



Observation	Importance of forest
1.	
2.	
3.	
4.	
5.	

FOOD CHAIN PRESENT IN A FOREST



WAYS TO CONSERVE FOREST



What have I learnt?

- 1 Some products obtained from a forest are _____, _____ and _____.
2. The forest are of great importance as all living beings depend _____ or _____ on forest for their sustenance.
3. The plants are known as _____ in a food chain.
4. _____ or planting of trees is a way to conserve forest.

What am I curious to learn?

- Let us collect the information regarding temperature, rainfall in a forest area for a decade back and also collect the same for the present to see a change in the pattern based on the climate changes and the factors affecting it.

Let me evaluate myself

Q1. Why are forest considered a very important natural resource?

Ans. _____

Q2. Name any two medicinal plants found in a forest.

Ans. _____

Q3. What is a food chain? Mention the importance of a food chain in a forest.

Ans. _____

Q4. List any two methods that can be used for conserving forest.

Ans. _____

Q5. Two friends shared their experiences of their vacation trip to two different forests. Do you think they would have seen the same types of plants and animals during their respective trips? Give reason.

Ans. _____

1.PRODUCTS OBTAINED FROM FOREST

A forest product is any material derived from forestry for direct consumption or commercial use. The products which we get from forest are:

- **Paper:** Paper which we use to write and read is got from trees present in a forest.
- **Wood:** Wood which we used to burn in thermal power plant or other places are got from the trees in forest.
- **Ayurvedic medicines:** Ayurvedic medicines which we use to cure our problems and diseases are got from Ayurvedic tree from the forest.
- **Fruits:** The fruits which we eat are got from forest.
- **Spices:** The spice which we use in cooking does not grow in domestic places. They only grow in forest.

2.Importance of forest

Forests are of great importance to mankind. The importance of forests are as follows:

- Forests help in maintaining water cycle on earth. Plants absorb water from the soil through their roots. The process of releasing excess water by plants into the atmosphere in the form of water vapour is known as transpiration. The process in which water vapour from oceans rises and condenses to form clouds is known as condensation and the process of moving clouds to land due to sea breeze is known as precipitation and this eventually leads to rainfall. All these processes together form the water cycle and hence forests play a significant role in continuing water cycle.
- Forests help in maintaining the temperature and oxygen level of the atmosphere. Plants release oxygen during photosynthesis and consume carbon dioxide. Forests being a huge reserve of plants and trees, they play a significant role in balancing oxygen level in the atmosphere.
- Forests help in preventing global warming. Increased amount of carbon dioxide (greenhouse gas) in the atmosphere results in greenhouse effect and thus causes global warming.
- Forests prevent soil erosion. Trees present in the forests hold the soil particles strongly with the roots and prevent them from erosion.

3. FOOD CHAIN

What is a food chain?

All living things need to feed to get energy to grow, move and reproduce. But what do these living things feed on? Smaller insects feed on green plants, and bigger animals feed on smaller ones and so on. This feeding relationship in an ecosystem is called a food chain. A food **chain** shows how energy is transferred from one living organism to another via **food**.

Food chains are usually in a sequence, with an arrow used to show the flow of energy. Food chains describe the feeding relationship between the organisms of an ecosystem. The flow of energy from one species to another at various biotic levels forms a food chain. The successive levels in the food chains of a community are called as trophic levels. Various trophic levels in a food chain include producers, primary consumers, secondary consumers and tertiary consumers.

Importance of a food chain

- Food chain helps in studying feeding relationships between organisms.
- Food chain also helps us to know how much energy we gain by consuming which food.
- Food chain helps us to know energy flow from one trophic level to another trophic level.

4. Conservation of forest

Conservation of forest is the practice of planting more trees and maintaining the forested areas for the sustainability for future generations. Forests are an important natural resource and are beneficial to humans in several ways. But due to increasing deforestation activities, it has become essential to conserve forests throughout the world. Deforestation is the permanent destruction or loss of forests for the expansion of lands for agriculture, live stocks, etc.

Following are some of the major steps for conservation of forest:

1. With the advent of industrialization, several trees have been cut at an alarming rate for raw materials and various other purposes
2. Forest fires are one of the common causes of loss of forests.
3. More trees should be planted (afforestation) to increase the forest cover. Trees should be selected according to the geographical conditions of a particular region and proper care should be taken during the growth of trees.
4. Prevention of exploitation of forest and forest products is necessary for the conservation of forest.
5. The existing forests should be protected from diseases by spraying chemicals, antibiotics or development of pest-resistant strains of trees.
6. Prevention of overgrazing by cattle, sheep, goat and other animals.
7. Avoiding activities that lead to soil erosion.