

EXPERIENTIAL LEARNING

CLASS: VII

SUBJECT: SCIENCE

CHAPTER: 9 – SOIL.

SUB – TOPIC: PROPERTIES OF SOIL

NAME OF THE ACTIVITY: HANDS ON ACTIVITY.

MATERIALS REQUIRED: Sand, garden soil, clayey soil, measuring cylinder, funnel, filter paper and paper cups.

METHODOLGY OF ACTIVITY:

- Students are divided into three groups. Each group is asked to bring one type of soil (allotted to them).

ACTIVITY 1: ABSORPTION

- Students of each group are asked to take the soil in a cup.
- Half a cup of water is poured into the cup of soil.
- Students are asked to note down the time taken for the water to be absorbed by the soil.
- The recordings of absorption of each type of soil is recorded and compared as follows.

S.NO	TYPE OF SOIL	TIME TAKEN
1	SAND	
2	GARDEN SOIL	
3	CLAY	

Which type of soil took less time to absorb water?

ACTIVITY 2: WATER HOLDING CAPACITY

- Students of each group are asked to take a cup and a hole is made at its bottom.
- Students are asked to
 - Take same weight of soil in three different cups (one by each group).
 - Same amount of water is added to each cup by the students.
 - The setup is left for half an hour and each is weighed and noted down.
 - Students are asked to record it and share their results as follows.

S.NO	TYPE OF SOIL	WEIGHT OF SOIL BEFORE ADDING WATER	WEIGHT OF SOIL AFTER ADDING WATER
1	SAND		
2	GARDEN SOIL		
3	CLAY		

1. Name the type of soil which is heavier after half an hour.
2. Name the type of soil that has more water holding capacity.

ACTIVITY 3: PERCOLATION

- Students of each group are asked to take a funnel and line it with filter paper.
- This funnel is kept on the measuring cylinder.
- Sample soil is put in the funnel and equal volume of water is added (say 50ml) to each funnel.
- Water is allowed to drip into the measuring cylinder and the same is recorded after an interval of 5 minutes.

The results are recorded and shared as follows-

S.NO	TYPE OF SOIL	VOLUME OF WATER POURED	VOLUME OF WATER COLLECTED	TIME TAKEN TO DRAIN
1	SAND			
2	GARDEN SOIL			
3	CLAY			

1. Find out the soil in which water drains faster.
2. Find out the soil in which water drains slowly.

CURIOSITY QUESTIONS:

Will the type of soil available in an area influence the growth of the crop cultivated there? Give reasons.

ANSWER GUIDE:

- Are the needs of all crops same?
- Do all types of soil have the same rate of absorption, percolation and water holding capacity?