

Chapter 14

Water

WATER : Water is essential for life and used for different purposes in our daily life. Two thirds of the Earth is covered with water. Still we can't use this water as most of the water is in oceans and seas which are salty and can't be used in daily life.

SOME SOURCE OF WATER:

- i. Pond and Lake
- ii. Oceans and Seas
- iii. Underground Water

WATER CYCLE : Water from the ocean and surface of the earth goes into air as vapor, this vapor transform in clouds and returns as rain, hail or snow and finally goes back to the oceans. Then again this water is converted to vapor to form clouds and then water. This circulation of water in this manner is known as the water cycle.

This circulation of water between ocean and land is a continuous process. This maintains the supply of water on land.

HOW CLOUDS ARE FORMED : When the water is converted to vapor it starts moving up, thus gets cooler and cooler. Air/Vapor becomes so cool that the water vapor present in it condenses to form tiny drops of water. It is these tiny droplets that remain floating in air and appear to us as clouds. When these droplets gets heavy they start falling as rain.

PROBLEMS IF IT RAIN HEAVY OR DOES NOT RAIN FOR LONG: If it rain heavily for long then this may cause **floods** problem. And if it does not rain for long period of time in an area then this may cause **droughts**.

WATER CONSERVATION: The amount of usable water on earth is limited so it needs to be used carefully and also needs to conserve the water. One of the methods of conserving water is **Rainwater Harvesting**. Collecting and storing rainwater for later use is called **rainwater harvesting**. This can be done by collecting the water which falls on roofs and then store them in a tank for later use. Other thing that can be done is to let pass the rainwater in ground so that the ground water level is maintained.

NCERT QUESTION-ANSWERS

1. Fill in the blanks in the following:

Answer.

- (a) The process of changing water into its vapour state is called evaporation.
- (b) The process of changing water vapour into water is called condensation.
- (c) No rainfall for a year or more may lead to drought in the region.
- (d) Excessive rains may cause floods.

2. State for each of the following whether it is due to evaporation or condensation:

Answer.

- (a) Condensation
- (b) Evaporation
- (c) Condensation
- (d) Evaporation
- (e) Evaporation

3. Which of the following statements are “true”?

Answer.

- (a) False; some amount of water vapour is always present in air in all seasons.
- (b) False; water also gets evaporated from the upper layer of the soil.
- (c) True
- (d) False; evaporation of water may take place in absence of sunlight. During the daytime all the air surrounding us gets heated. This warm air provides heat for evaporation of water in absence of sunlight.
- (e) True

4. Suppose you want to dry your school uniform quickly. Would spreading it near an *anghithor* heater help? If yes, how?

Answer.

Yes, spreading of clothes near an *angithi* or a heater would help to dry the clothes quickly. This is because *angithi* or a heater provides heat that causes the water to evaporate at a faster rate.

5. Take out a cold bottle of water from the refrigerator and keep it on the table. After some time, you will notice a puddle of water around it. Why?

Answer.

This is because water vapour present in air collide with the surface of cold water bottle which and condenses into water droplets. These water droplets collect and form a puddle of water around the bottle.

6. To clean their spectacles, people often breathe out on glasses to make them wet. Explain why the glasses become wet.

Answer.

When we breathe out, we exhale carbon dioxide gas along with water vapours. The water vapour on colliding with the surface of the glass gets condensed due to which the glass becomes wet. This slightly wet glass can be easily cleaned with a soft cloth.

7. How are clouds formed?

The process of evaporation followed by condensation causes the formation of clouds. Water present on the earth's surface gets evaporated due to sunlight, and then rises up in the atmosphere. On reaching a certain height, water vapour present in air condenses to form tiny droplets of water. These water droplets collect to form clouds that float in air.

8. When does a drought occur?

Answer.

Scarcity of water at a region due to very less or no rainfall for a long time leads to draught in that region.