

CLASS: 7

GEOGRAPHY

**CHAPTER -5: WATER (Handout)**

**MODULE: 1/3**

Our earth is called blue planet because 71 % of the Earth's surface is covered with water. Water is the main reason for life on the Earth. Water flows endlessly between the ocean, atmosphere and land. You will be surprised to know that the amount of water on the Earth has remained relatively constant over the past several years, why? The answer of this question is water cycle.

**Water Cycle:**

The sun's heat causes evaporation of water vapours. When the water vapours cool down, it condenses and forms clouds. From there it may fall on the land or sea in the form of rain, snow or sleet.

The process by which water continually changes its form and circulates between oceans, atmosphere and land is known as **water cycle**.

The Water cycle describes how water evaporates from the Earth's surface, rises into the atmosphere, cools and condenses to form clouds and falls again to the surface as precipitation.

There are three main stages in the water cycle. They are evaporation, condensation and precipitation. Let's look at each of these stages.

**1 Evaporation:** It is a process by which water changes from liquids to gas or vapours.

**2 Condensation:** Condensation is the process by which water vapour turns into liquid. It is the reverse of evaporation. Condensation happens when air becomes so saturated with water vapour that it cannot hold any more water.

**3 Precipitation:** When too much water has condensed, the water droplets in the clouds become too big and heavy for the air to hold them. So, they fall back down to the Earth as rain, snow, hail or sleet. Precipitation is any liquid or frozen water that forms in the atmosphere and falls to the Earth.

**Our earth is like a terrarium.** It means that the same water that existed centuries ago still exists today. The amount of water on our planet does not increase or decrease.

The major sources of fresh water are the rivers, ponds, springs and glaciers.

The ocean bodies and the seas contain salty water. The water of the oceans is salty or saline as it contains large amount of dissolved salts.

Most of the salt is sodium chloride or the common table salt that we eat.

**Salinity-** Salinity is the amount of salt in grams present in 1000 grams of water. The average salinity of the oceans is 35 parts per thousand.

**Dead sea-** Dead Sea in Israel has salinity of 45 parts per thousand. Swimmers can float in it because the increased salt content makes it dense.

## **Distribution of Water Bodies**

We know that three fourth of the earth surface is covered by water. If there is more water than land on the earth, why do so many countries face water scarcity?

Before we discuss why water is getting scarce, we must know how much water is available for use on our earth.

The following table gives the distribution of water in percentage.

<b>Oceans</b>	:	<b>97.3%</b>
<b>Fresh water-</b>		
Ice caps	:	02.0 %
Ground water	:	0.68 %
Fresh water lakes	:	0.009 %
Inland seas and salt lakes	:	0.009 %
Atmosphere	:	0.0019 %
Rivers	:	0.0001 %
Total	:	100.00 %

More than 97 % water on the earth is salty water and only 2.7% is fresh water. But even most of that is not available to us! Most of the fresh water is in the form of glaciers, and ice- caps or is underground. Less than 1% of fresh water is easily available to us.

**Water distribution can be understood by a simple activity.**

-Take 2 litres of water. Let it represent the total water on the surface of the earth. Take out 12 spoons of water from this vessel in another bowl. The water that is left behind in the vessel represents the salty water found in oceans and seas.

The 12 spoons of water that was taken in a bowl is the total amount of fresh water on the earth.

Now, the 12 spoons of fresh water is distributed as follows:

9 spoons = the ice-caps

2 spoons = the groundwater

$\frac{1}{2}$  spoon = the freshwater lakes

1 drop of water = the water from rivers.

All the large rivers like the Nile and the Amazon, don't even add up to 1% of Earth's total water.

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