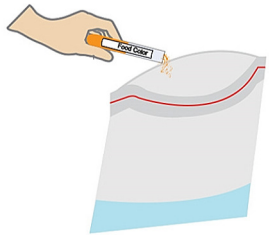


WATER CYCLE

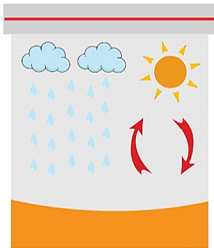
- 1 Fill one fourth of the zip lock bag with water.



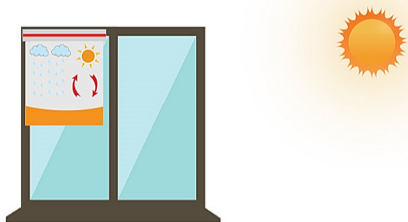
- 2 Add food color given in the test tube.



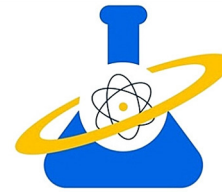
- 3 Paste all the stickers on zip lock bag as shown in the picture.



- 4 Stick zip lock bag on the glass of the window where direct sun light falls.



Working: When sunlight falls on the zip lock bag, the water inside the bag gets heated up and due to evaporation, the water vapours form and get condensed and are seen on the upper part of the bag.



Future STEM Explorers

Water Cycle



Learning Outcomes:

Students will be able to

- Understand the terms like- evaporation, condensation, precipitation etc.
- Understand how water is circulated within the nature
- Understand the concept of water cycle

As the word 'cycle' in the water cycle indicates, there is no starting point. This means, we can begin at any point and follow the path until it reaches the starting point.

Water changes its form in nature. In water bodies, it is in liquid form, it evaporates and become vapour (gaseous form) and again falls down as rain (liquid form). **Water cycle** is a continuous cycle where water evaporates and then condenses to form clouds and then precipitates as rain.

There are four main stages in water cycle which are as follows:

1) Evaporation and transpiration

The heat of the sun warms up the water bodies like lakes, seas, oceans etc. As the water heats up, it changes to water vapour. The conversion of water (liquid) into vapour (gas) due to heat is known as evaporation. Also, green plants in the forest and other places also release water to maintain the temperature inside them. This process is known as transpiration. When warm and light air rises up, it also lifts up these vapours.

2) Condensation

At higher altitudes, the water vapours again turn back to tiny water droplets. The conversion of water vapour (gas) into water droplet (liquid) is known as condensation. The tiny droplets come together to form clouds. With time, these clouds become heavier with water and become rainy clouds.

3) Precipitation

When rainy clouds cannot hold more water droplets, they start releasing water in the form of rain, snow, sleet and hail.

Rain- When precipitation happens in the liquid form (water) only, this is known as rain. This happens at normal temperature.

Hail- When precipitation happens in the form of solid ice balls or lumps of ice, this is known as hail.

Snow- When precipitation happens in the form of white or translucent ice crystals, this is known as snow fall.

Sleet- A mixture of rain and snow is known as sleet.

4) Runoff and Infiltration

As water reaches the ground, it travels back to lakes and rivers and finally meets seas and oceans. This is known as runoff. Besides runoff, the water is also absorbed into the soil and the process is known as infiltration.

After going through all the four stages, the water again starts the same journey known as water cycle.



Quiz Time

1. Give answer in one word:
 - a. The conversion of liquid into gas is known as?
 - b. Let us assume, all the water bodies are black in colour due to dirt and pollution. What will be the colour of the water evaporated from these bodies?
 - c. When precipitated water is absorbed by the soil, the process is known as?
 - d. Precipitation of water in the form of ice balls or lumps of ice is known as?

2. How are rainy clouds formed?

3. What would happen if there would be no condensation?

4. What is transpiration? How does it help in water cycle?