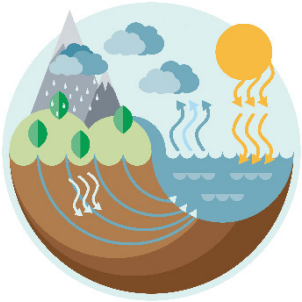
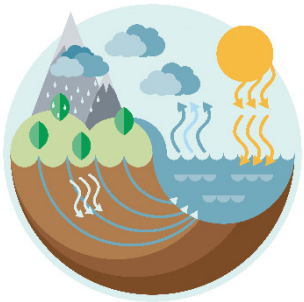


NO-PREP SCHOOL

THE WATER CYCLE



Thank you!

Name _____

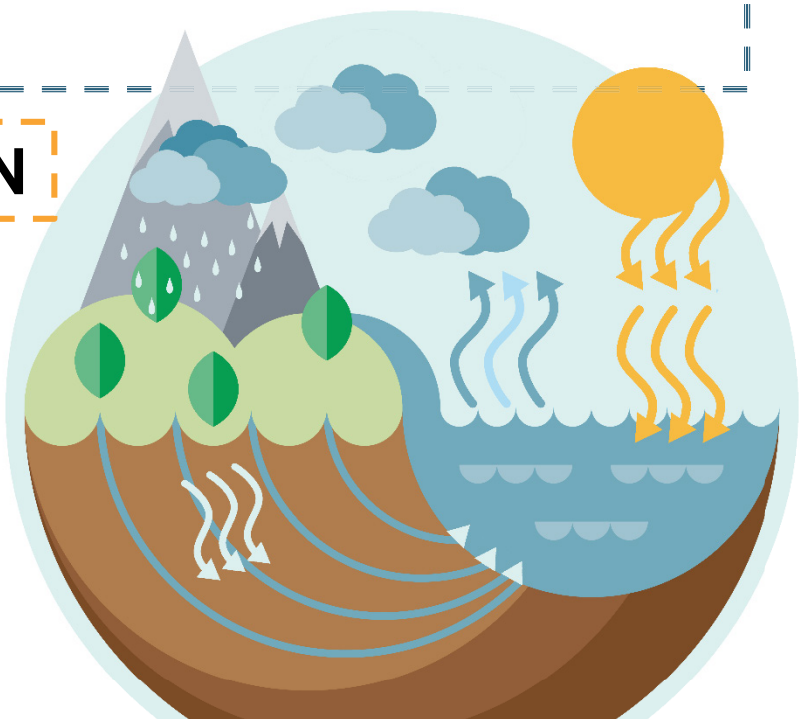
THE WATER CYCLE - 1

The **water cycle** describes the constant **renewable** production and flow of freshwater on the earth. **Freshwater** is water that can be used for drinking. Lakes, and rivers, and puddles in your backyard are made up of freshwater. **Salt water** is not suitable for drinking. The oceans and seas are made up of salt water.

A **cycle** is an event that repeats over and over. A cycle also describes things that travel in a **circle**.

THOUGHT QUESTION

Can you think of another event in nature which repeats over and over again?



THE WATER CYCLE

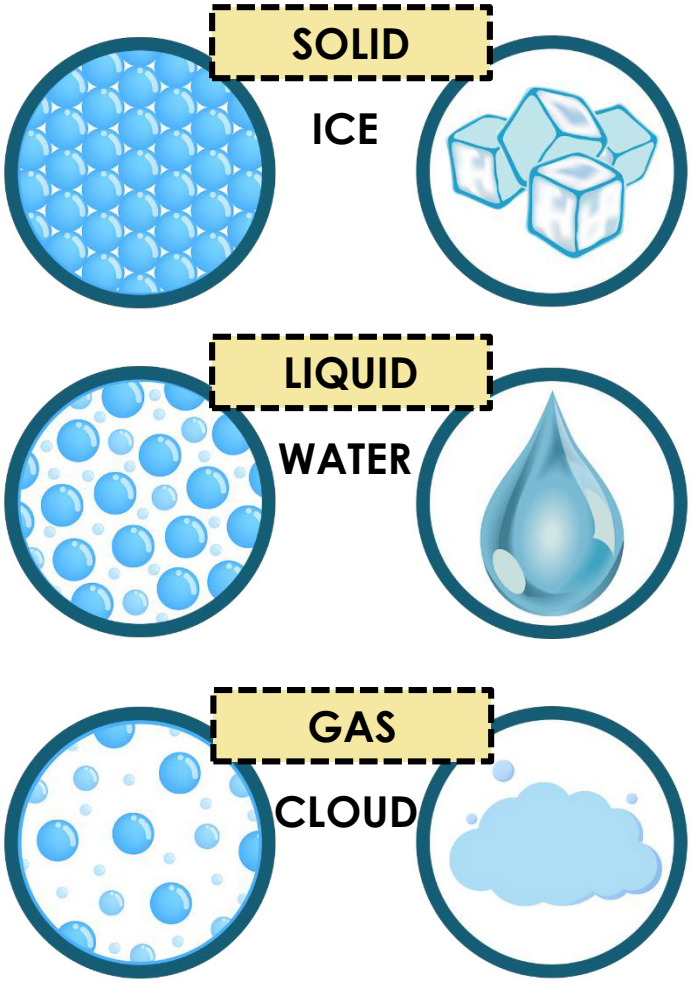
Name _____

THE WATER CYCLE - 2

The first thing you must understand when you begin learning about the water cycle is that water comes in three different **states of matter**:

In the water cycle the **solid** state is **ice**, the **liquid** state is **water**, and the **gas** state is a **cloud**.

The water cycle is a series of **events** that repeats. It has no beginning and it has no end. It is **continuous**.



PREDICTIONS

If a glass of water is left outside overnight in a snowstorm, predict the state of matter in the glass in the morning.

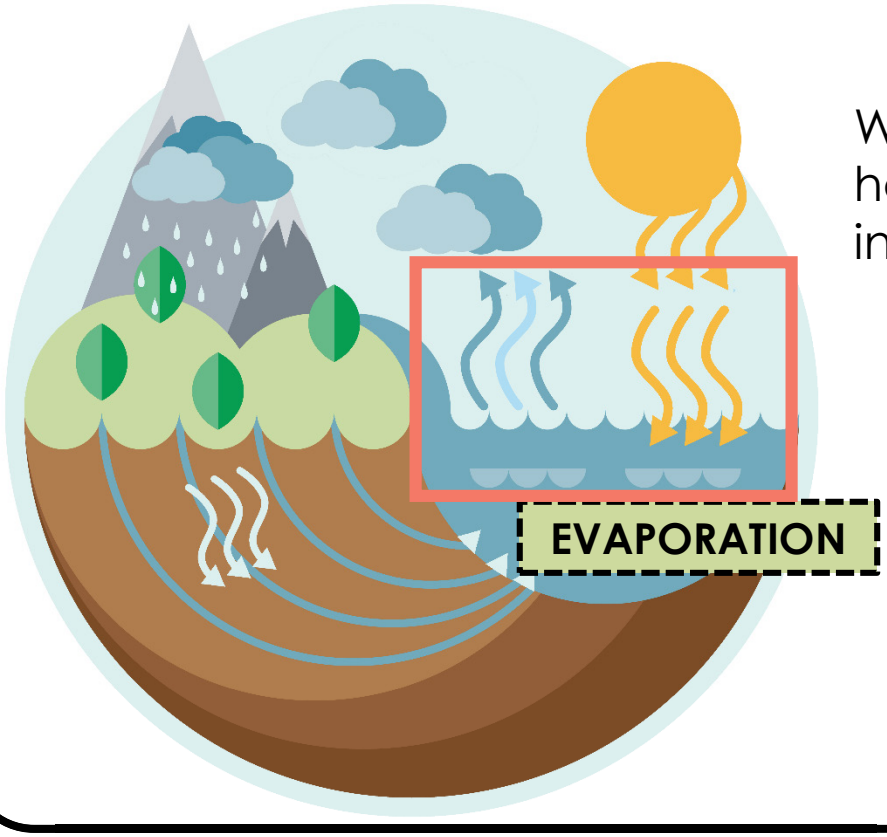
SOLID LIQUID GAS

Name _____

THE WATER CYCLE - 3

During the water cycle water changes its **state of matter**. It goes from liquid to gas and then back to liquid. If it is cold enough it will also go through the solid state as snow or hail.

The oceans contain almost all of the water on earth and the sun is like the motor driving the cycle. The **sun** heats the ocean water causing it to evaporate into the air. **Evaporation** means to change into a vapor or a gas.



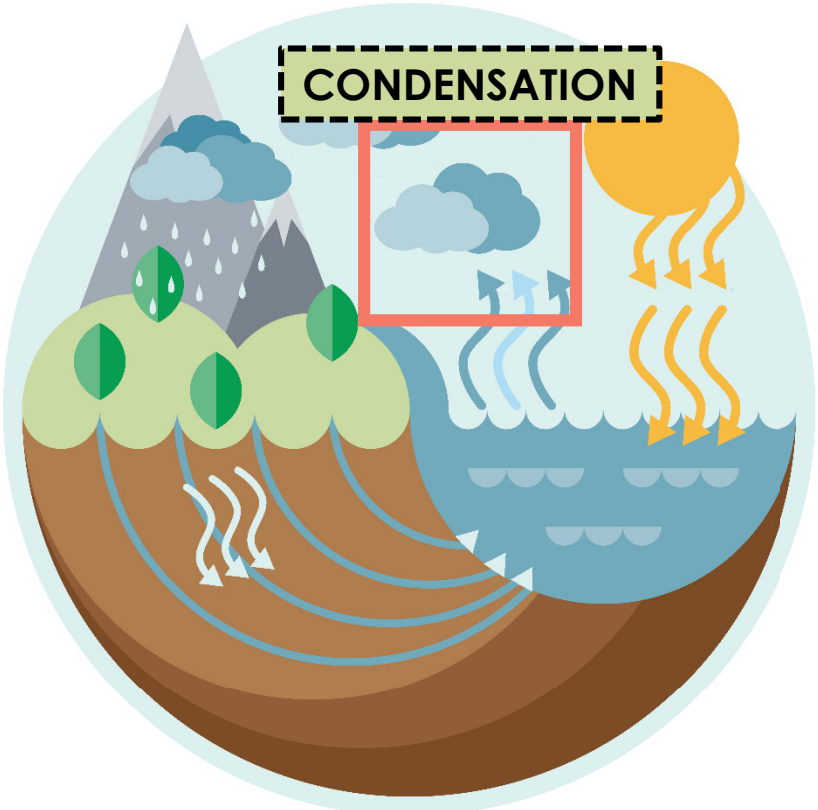
PREDICTIONS

What do you think happens to the water in the air?

Name _____

THE WATER CYCLE - 4

When water evaporates it turns into vapor. **Vapor** is the gas state. The water vapor rises into the atmosphere during evaporation. As it goes up, cooler air causes this water to **condense** into **clouds**. This process is called **condensation**.



PREDICTIONS

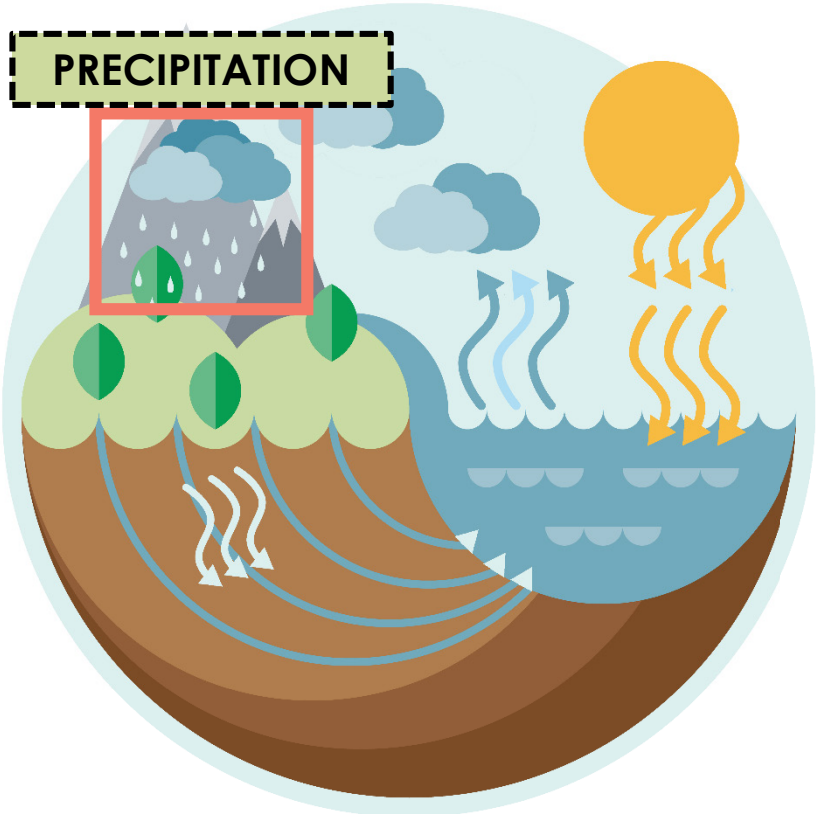
Why do you think some clouds are dark and some are light?

Air currents (wind) will move the clouds all over the globe. Clouds will smash into each other causing them to grow bigger. These clouds will hold a lot of condensed water vapor in them.

Name _____

The clouds collect the water vapor until they are **saturated**. That means they cannot hold any more water vapor and it's time for the water to fall out of the gas **state** and reenter the **liquid** state. The scientific name for water falling from clouds is **precipitation**.

PRECIPITATION



Water falls out of the clouds in the form of **rain**, **snow**, **sleet**, and **hail**. Most of this precipitation falls back into the oceans or onto land as water.

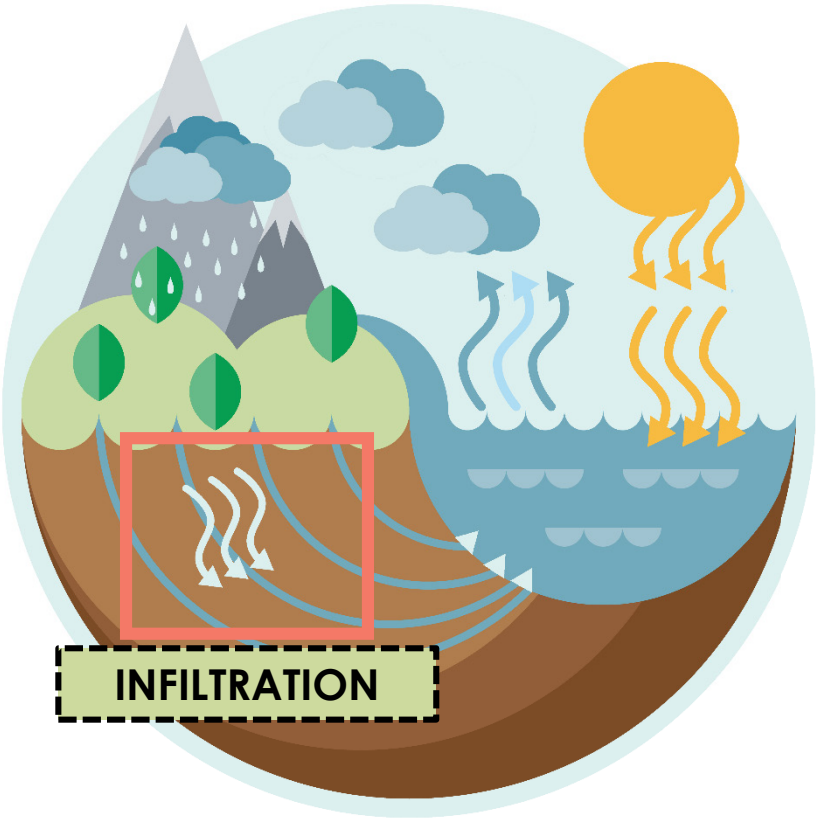
PREDICTIONS

Can you look at the diagram and predict the next step in the water cycle?

Name _____

Rain water flows over the ground as surface runoff due to the force of gravity. **Surface runoff** is when the ground get so full of rain water or snow melt that it must flow over the land. **Infiltration** is the seepage of water into the soil. Some water seeps deep into the ground and fills up the **aquifers**, which are underground storage beds of water.

Drinking water comes from surface runoff.

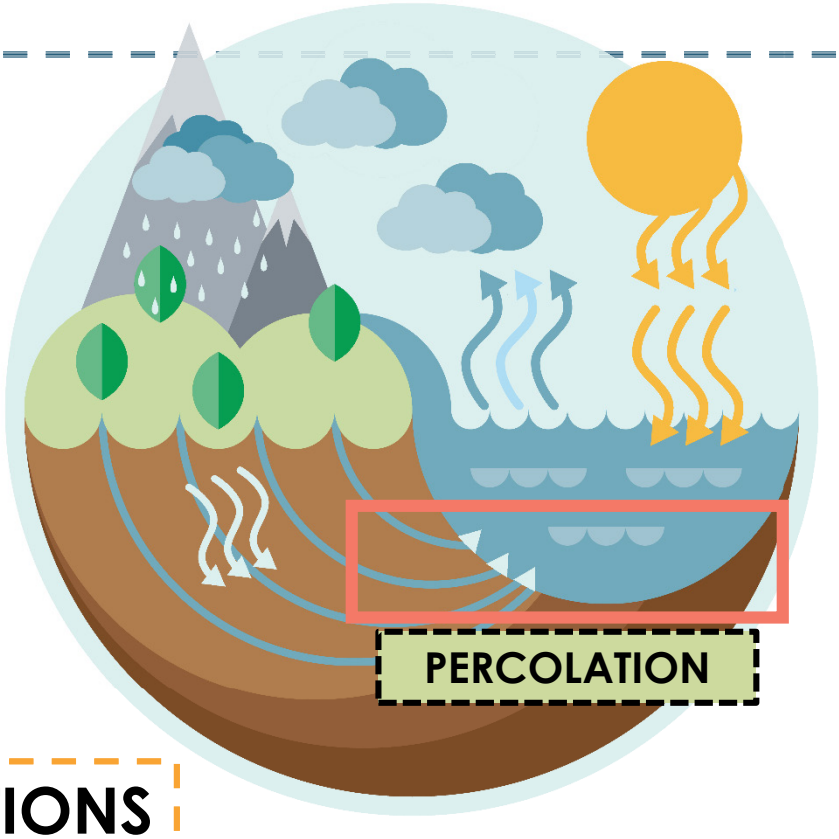


PREDICTIONS

Can you guess what will happen if the ground becomes saturated like the clouds did?

Name _____

Some infiltrated water stays close to the land surface and can seep upwards into lakes and oceans. This seepage is called **groundwater discharge** and the process of water moving through the soil and rocks is called percolation. **Percolation** is the seepage of water from underground to above ground. Groundwater flows up to a body of water and reenters the water cycle.



PREDICTIONS

Can you guess what will happen next in the water cycle?

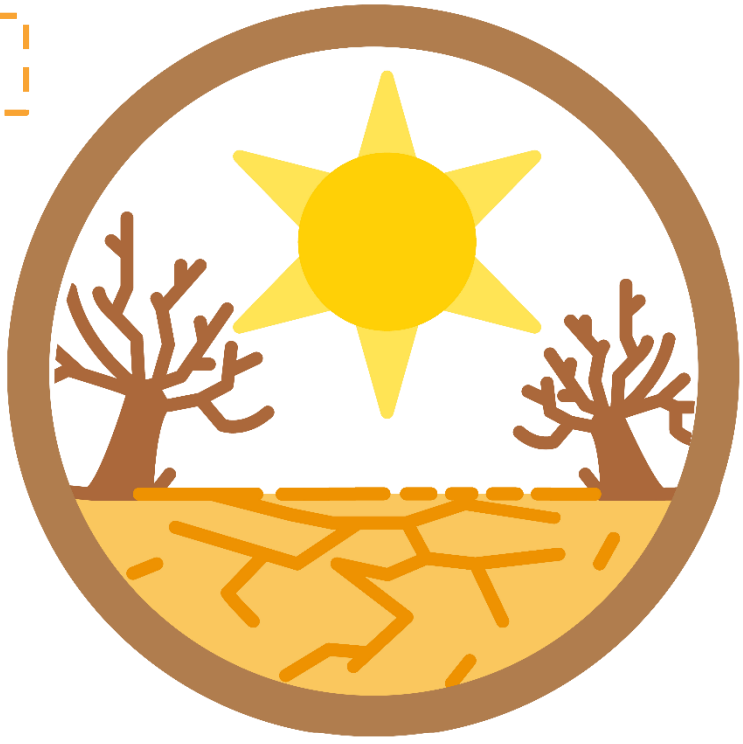
Name _____

We have completed the cycle but the water cycle is never really complete. Water is a **renewable resource**. That means it replenishes itself.

However, some places can experience water shortages called **droughts**. This happens when water is used up faster than the cycle can replenish it. When this happens water is considered a **scarce resource**. That means there is a limited amount available and it should be **conserved**.

THOUGHT QUESTION

Think of some reasons why we have water shortages. Name at least two.



Name _____

THE WATER CYCLE - 9

Write the correct water cycle number in the blank circle it belongs to on the picture.

1. INFILTRATION
2. PERCOLATION
3. EVAPORATION
4. PRECIPITATION
5. CONDENSATION