

Directions: Read the information below.

The Journey of Water

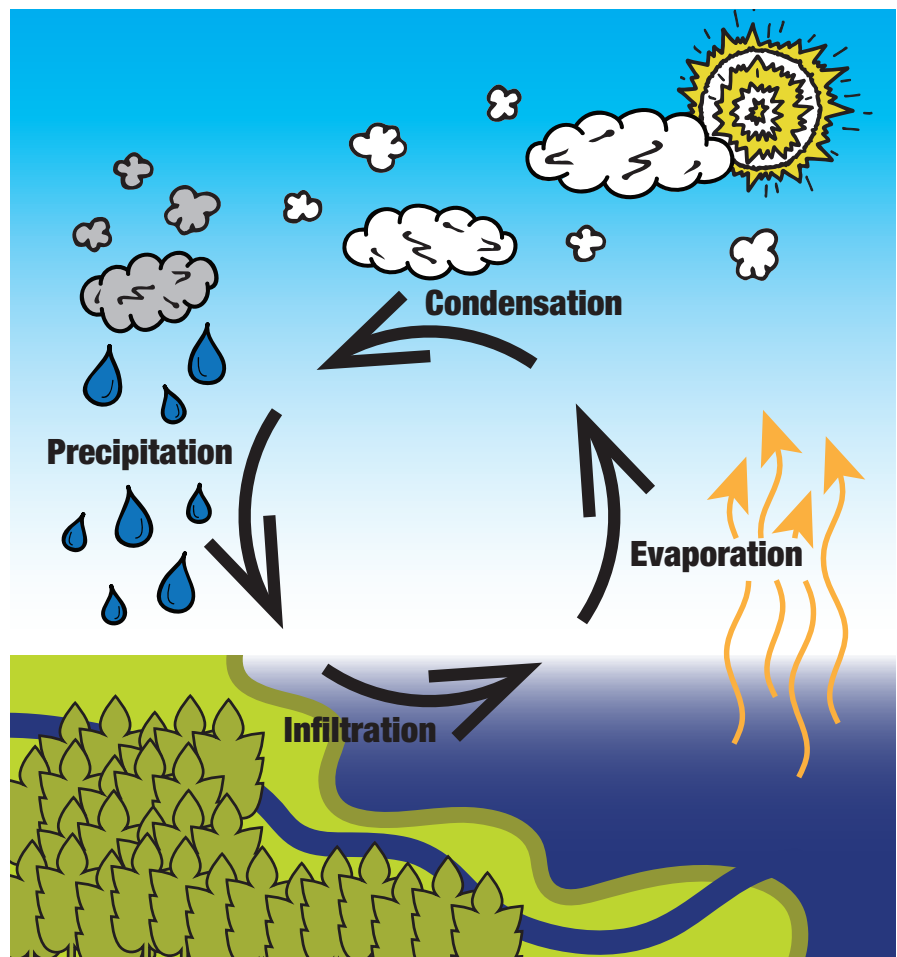
Earth has over 300 million cubic miles of water on its surface. That includes water in our oceans and rivers, rain falling from clouds, as well as water rising up from the surface. If water rising up from Earth's surface sounds strange, let's take a look at the hydrologic cycle, also called the water cycle. Water moves through Earth's atmosphere in four steps: evaporation, condensation, precipitation, and infiltration.

Evaporation occurs when water at the surface of Earth is heated by the sun's energy. As the heat warms the water it changes form. Water changes from liquid form to vapor. We cannot see the vapor, but the water evaporates and moves higher in elevation. We see an example of evaporation in our own homes. Remember a time you saw a pot of boiling water. The water in the pot was in liquid form, but as it heated up it began to boil and cause steam to rise up above. Steam is just water that has been evaporated. As the water continues to rise we may not always see the presence of the water vapor but it's still there.

So where does the evaporated water go? It continues to rise into the atmosphere. You may recall that at higher elevations, the air temperature is lower meaning the water cools down as it makes its journey up. This is where it experiences condensation, turning back into liquid form. If you've ever gone outside in the morning and noticed the ground was wet from dew, then you've seen condensation at a low level. In Earth's atmosphere we see this as clouds. It is possible for the clouds to scatter and the water to vaporize again, or the clouds could continue to grow and get large creating the right conditions for rainfall.

The rainfall that occurs is called precipitation. It happens when water particles in clouds continually bind together to form a droplet large enough that it cannot withstand the force of gravity any longer and falls to the ground. As gravity pushes the water to Earth's surface it may or may not fall as a liquid depending on the conditions. In wintertime we see this as snow, but it could also be rain, sleet, or hail.

Precipitation that has fallen to Earth's surface goes through infiltration. This is the process of precipitation being soaked into Earth's surface, such as soil, and being absorbed. From this point, it will eventually evaporate again and go through the entire water cycle process again.



Directions: Answer the question below.

Explain each phase of the water cycle on your model. Be sure to include what causes that phase to occur.

Evaporation

Condensation

Precipitation

Infiltration