

Water Cycle Experiment

Ages

3-7 years old

Description

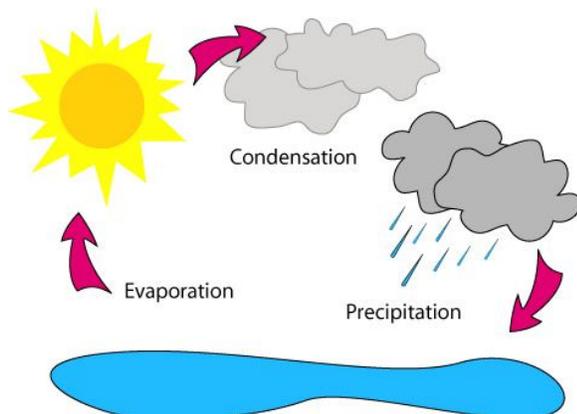
Why does it rain and how come we never run out of water? Answer these questions and learn about the water cycle with this simple at-home science experiment. Children can create their own mini water cycle with just a ziploc bag and watch the water as it goes through each stage of the cycle!

Materials

- Water
- Black permanent marker
- Ziploc sandwich bag
- Blue food colouring (optional)
- Tape

Background

Water covers about 71% of the Earth's surface, which is a lot but it is limited. This means that it is a fixed supply, it is all the water we have. Water sustains all life on Earth and we use so much of it every day...so how have we not run out of water yet? Well this is thanks to something called the 'water cycle'.



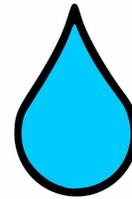
Source: [Playdough to Plato](#)

The water cycle works when the sun heats up the liquid water and it leaves the ground (*lakes, streams, rivers, ocean, etc.*) becoming water vapour (*gas*) in a process called **EVAPORATION**. When the water vapour reaches a point in the sky where it is cold enough, it turns back into liquid (*condenses*) and forms water droplets. The water droplets form together to create clouds. This part of the water

cycle is called **CONDENSATION**. As more water droplets join the cloud, and it becomes heavy enough the liquid will fall back down to the ground in the form of **PRECIPITATION** (*rain, snow, etc.*). And then the water cycle will start over again, repeating itself over and over. This is how we don't run out of water!

Directions

1. Start the discussion by talking about water and asking questions, such as where can you find water and what do we use it for? Talk about the water cycle.
2. Get the children to draw a water cycle with a permanent black marker onto the ziploc sandwich bag. It should include the sun, clouds and a body of water at least but they can add anything they want!
3. Fill the bag $\frac{1}{4}$ of the way with water and then add a few drops of blue food colouring.
4. Close the ziploc bag and run over the seal a few times to make sure it is closed tightly.
5. Use tape to hang the sealed ziploc bag on a window that gets sunlight.



6. Now sit back and watch as the sun warms up the water and it evaporates into vapour!
7. Watch as water droplets form on the inside of the ziploc bag as the water vapour cools (condenses). The water droplets or fog at the top of the bag is where clouds would form.

The water droplets that are dripping down from the top is precipitation!
8. Follow up the experiment by talking about what happens to precipitation once it falls.

WHERE DOES RAIN GO?

- Collects in bodies of water such as lakes, streams, ocean, etc.
- Soaks into the soil and feeds plants
- If the ground is already saturated, runs off into rivers, lakes, etc.
- Animals drink it

Have fun experimenting and make sure to share your photos with us on the Allan Brooks Nature Centre Facebook Page!