Make your own water cycle

In this simple "water cycle in a bag" experiment, we will observe the different stages of the water cycle process up close.

In this activity students will learn about the different components and connections between elements of the natural water cycle.

55 mins   **1-2 people**

Preparation time: 15 minutes,
Activity time: 40 minutes
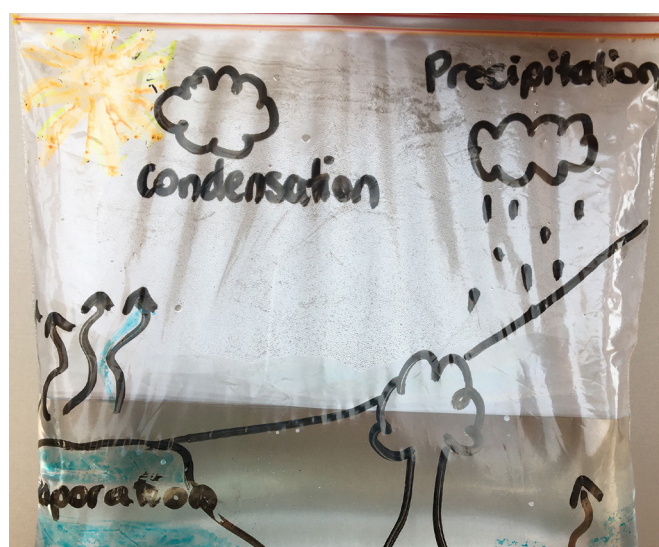**Difficulty:**   low

Equipment required:

☐ A ziplock plastic bag (re-use one from your lunch box)
☐ Permanent markers
☐ Warm water (45º C)
☐ Blue food coloring (optional)
☐ Packing tape
☐ Adult supervision for young children when handling hot water

Instructions

Step 1 Draw the following water cycle elements onto your bag, sun, a mountain landscape, and a water body (lake, river or wetland). Add a couple of clouds, a tree and rain.

Step 2 Label the following components of the natural water cycle on your diagram

▪ Evaporation – sun heats water to form vapour (steam)

▪ Condensation (cloud formation)

▪ Precipitation (rain, hail, snow)

▪ Surface run off into lakes, rivers and waterways

Step 3 Warm up the water until steam starts to rise (don't let it boil).

Step 4 Add a drop of blue food colouring into the water if you want.

Step 5 Pour the water into the ziplock bag and zip it up.

Step 6 Hang the bag upright on the window using packing tape.

Step 7 As the water evaporates, look for the vapours rising and condensing at the top of the bag. A white patch can be seen resembling clouds in the upper atmosphere.
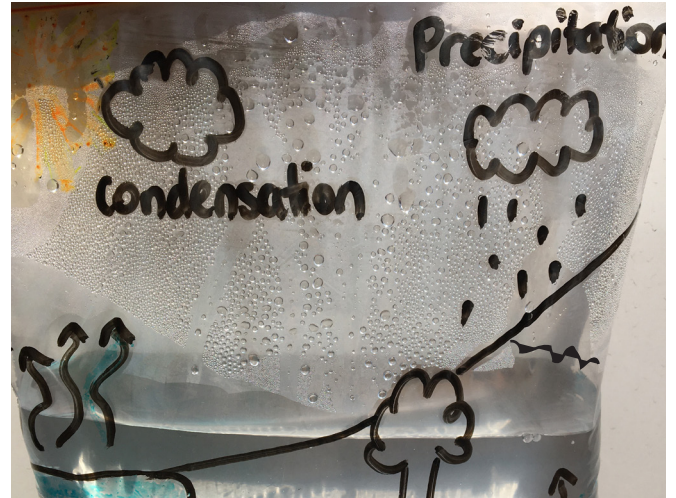

Step 8 After a while, water droplets appear on the inside of the bag. This is condensation.

Step 9 As the water drops become bigger, they will eventually slide downward. This is precipitation (rain).

The sliding down on the land resembles the run off stage that brings water back down to the ground flowing into the waterway.

Step 10 If it's a hot day, leave the bag against a sunny window and it will keep cycling through the different stages of the water cycle.