



RANDOM ACTS OF SCIENCENESS

Lesson: Water Cycle in a Bag

CURRICULUM REFERENCE: Air and Water in the Environment

LESSON OBJECTIVE

Observe the full water cycle in your very own living room and see how water goes through the different steps of its course within the environment.

THE SCIENCE BEHIND

The water cycle has been happening for millions of years. The sun's rays warm up water, causing it to evaporate. The water vapour rises into the atmosphere where it eventually cools. This cooling condenses the vapour and turns it back into a liquid. This liquid returns to the earth as rain, snow, or hail and the cycle begins again.

VIDEO: <https://youtu.be/iwCl4dxUrR4>



FOLLOW-UP QUESTIONS

1. Where does water come from and where does it go?
2. How do we feel fog vs. rain?
3. How else do we see water? Is there another state?

LEARNING OUTCOMES

- Investigate, through experimentation, the characteristics of water (e.g., water takes up space, flows or moves when not contained, has mass) and its uses.
- Investigate the stages of the water cycle, including evaporation (e.g., heat water in a kettle), condensation (e.g., collect the water vapour from the kettle on an overturned mirror), precipitation (e.g., allow the water vapour on the overturned mirror to collect, cool, and drop), and collection.
- Investigate water in the natural environment.



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MATERIALS (PER PERSON)

- Large ziplock bag
- Painter's tape
- Food dye
- Sharpie
- Water

INSTRUCTIONS

1. Draw some waves at the bottom of the bag and clouds near the top.
2. Fill your bag with $\frac{1}{4}$ cup of water.
3. Add a few drops of blue food colouring.
4. Find a sunny window and tape it where it will get a lot of sun. TIP: In warm weather, your car window would be a great spot, too.

