

Water Cycle in a Bag

Project Worksheet

In this activity, you will create a miniature water cycle inside a sealed plastic bag. By observing the changes that occur over time, you will gain a better understanding of the processes of evaporation, condensation, and precipitation that occur in the water cycle.



Materials Needed:

- Sealable plastic bag
- Water
- Permanent marker
- Tape
- Sunlight or lamp
- Paper towel or cotton ball

1. Prepare the Bag:

- Take the sealable plastic bag and, using a permanent marker, label it with your name and the date.
- Fill the bottom of the bag with a small amount of water, just enough to cover the bottom.
- Seal the bag tightly, ensuring no water leaks out.

2. Create the Environment:

- Find a sunny spot near a window or outside where the bag can receive sunlight for several hours.
- If sunlight is not available, you can use a lamp to simulate the heat.

3. Observe and Document:

- Place the sealed bag in the chosen location and observe it at regular intervals throughout the day.
- Make notes of any changes you observe inside the bag, such as condensation forming on the sides or water droplets appearing.
- Take photos or draw diagrams to document the changes.



4. Understanding the Process:

- As the water in the bag is heated by sunlight (or lamp), it will evaporate, turning into water vapour.
- The water vapour will rise and eventually condense on the cooler inner surface of the bag, forming tiny droplets.
- These droplets will gather and grow until they are heavy enough to fall back down as precipitation.
- The cycle will continue as long as there is heat to drive evaporation and a surface for condensation.

5. Optional Additions:

- To enhance the condensation process, you can tape a paper towel or cotton ball to the top inside the surface of the bag. This will provide more surface area for the water vapour to condense on.
- You can also add food colouring to the water in the bag to make it easier to see the precipitation.

6. Reflection:

- After observing the water cycle in the bag for a full day, reflect on what you have learned.
- Consider how the processes of evaporation, condensation, and precipitation are interconnected in the water cycle.
- Think about how this miniature model relates to the larger water cycle that occurs naturally on Earth.

