

WATER CYCLE EXPERIMENTS



Condensation Station

Items Needed:

Ziploc baggie

tape

blue food coloring (optional)

marker (optional)

water

- If desired, draw water, a cloud, and a sun on the Ziploc baggie with a marker.
- Add 2 inches of water to the baggie.
- Add a few drops of blue food coloring to the water (optional).
- Hang on a sunny window for several hours.
- After several hours or when heavy condensation appears on the bag, remove the bag and tap the bag, if necessary, to make the water droplets fall.

This experiment allows children to observe the water from the bag evaporating, condensing, falling like precipitation, and collecting again at the bottom. Notice that the water does not stay blue once it evaporates. This is because the food coloring is heavier than the water vapor and thus stays down, much like the salt from the ocean water.

Make it Rain

Items Needed:

shaving cream

small glass

medium glass

straw or eye dropper

blue food coloring

water

- Place approximately 3 tablespoons of water in the small glass and add about 10 drops of blue food coloring.
- Fill the medium glass with water. Add 1-3 inches of shaving cream to the top. The more shaving cream used the longer the experiment will last.
- Add the colored water to the shaving cream drop by drop using an eye dropper or by dipping the straw in the colored water, placing your finger over the end, holding it over the shaving cream, and lifting your finger enough to allow drops of colored water to drip onto the shaving cream.
- Continue dropping the water onto the shaving cream until you observe it getting too heavy and “rain” starting to come out below. Depending on the amount of shaving cream used, this could take anywhere from 40-100 drops.



This experiment demonstrates what happens in the clouds during the water cycle. When a cloud accumulates too many water droplets they fall in the form of precipitation. In the experiment, after a certain point the shaving cream can no longer absorb the water drops and gravity pulls them down into the water.

The aim of this experiment is to find out whether the exposed surface area affects the rate of evaporation.

Evapo- Rate

Items needed:

3 plastic containers of different sizes

A measuring cup or beaker

water

A notebook and a pen to record your findings

Warm and sunny weather

- Using the measuring cup, measure and pour into each container exactly 8oz of water
- Leave the containers on a sunny windowsill and wait for at least an hour
- After an hour or more, measure and record the amount of liquid left in each container.
- Compare the measurements.

There should be a difference in the amount of water found in each container at first and in the end. The container with a largest exposed surface area will have less remaining liquid than the other two containers.

During evaporation, liquid particles gain heat energy unevenly. The particles that have a comparatively higher energy will try to escape the liquid. If there is more surface area exposed to the air, more particles can escape faster. On the other hand, if there is less surface area exposed, fewer particles will escape and the rate of evaporation will be slower. Therefore, the larger the exposed surface area, the higher the rate of evaporation!