

Precipitation

Overview

The water cycle is a continuous path that all water follows as it moves around Earth in different states. Tiny water droplets come together to form clouds and grow bigger and bigger. When the clouds get too heavy, the snow, hail or rain falls to the ground with the help of gravity. This is called **precipitation**.

Materials

One clear plastic or glass cup

Water

Shaving cream

Food colouring - blue works best

Protective clothing - food colouring can stain



Method



1. Fill a cup $\frac{3}{4}$ full with water



2. Spray shaving cream on top of the water to simulate clouds



3. Add several drops of food colouring. Be careful - one drop at a time, on top of the shaving cream

Hint - the use of a pipette will increase accuracy



4. Watch as the food coloring rain falls into the cup as the shaving cream cloud becomes heavy

Why

Water vapour condenses and forms precipitation that falls to the Earth as rain, sleet, hail, or snow.

Rain - Raindrops form around microscopic cloud condensation nuclei, such as a particle of dust or a molecule of pollution. In real life, raindrops are actually spherical, not tear drop shaped like they are often portrayed.

Hail - Hail forms in storm clouds when very cold water droplets freeze, as soon as they touch things like dust or dirt. The storm blows the hailstones into the upper part of the cloud. More frozen water droplets are added to the solid hailstone before it falls.

Snow - Snow falls as individual ice crystals formed in the clouds. Snowflakes develop different patterns, depending on the temperature and humidity of the air and always have six sides.

My personal research about precipitation