

A PET cloud

Objectives

By the end of this lesson the student will:

- have made their own cloud in a bottle.

Background

When water condenses, the droplets may form clouds. Particles of dust assist the formation of droplets. Without tiny particles of dust in the air, clouds would not form.

Droplets in clouds are small enough to be supported by the air. When they join together to form larger droplets they can no longer be supported and rain falls. It takes about one million cloud droplets to make an average size rain drop.

Fact File

Cloud particles consist of tiny droplets of liquid water or ice. The size of these particles ranges from approximately 5 to 75 microns (0.005 to 0.075mm)

Resources and actions

Ensure that the cap on the bottle is screwed on tightly so that no water escapes when shaken.

Print off the student's worksheet and photocopy one for each student:
http://www.bom.gov.au/lam/Students_Teachers/Worksheet15.shtml

Ask the students to carry out the activity from the worksheet then go over their results at the end of the class.

Questions and solutions

1. Why does shaking the bottle help the experiment?

Shaking the bottle would be putting water droplets into the air of the bottle.

2. Why do you think the smoke from the match helps the cloud form?

The smoke particles help the small droplets to join together to form larger droplets that become visible as cloud.

Extension activity

Repeat the activity using hot water. Does it work better?

Time

30-45 minutes

Assessment Task

Q1 & 2