

# CYCLONES

## Cyclone experiment

This activity is aimed at teaching students how air moves during a cyclone, through this simple experiment.

### Get sucked in

Before you start there are some materials you will need.

Quantity	Material
2	2 litre bottles (empty with lids). The experiment works much better if the bottles are the same size.
1	Roll of masking tape
A few drops	Food colouring
500ml	Water
1	Clock or a stopwatch to time your cyclone

### Instructions

1. With the help of an adult, pierce a hole in the two lids so that water can flow through (approximately 5 - 10 mm in diameter, depending on the size of your lids).
2. Fill one bottle with the water and food colouring.
3. Screw the lids tightly on the bottles. Stand the bottle with water up and place the empty bottle over it, neck to neck.
4. Tape the two bottles together.
5. Tip the bottles over and swirl them in a circle.
6. Watch the water fall to the bottom bottle, creating a liquid cyclone.

### Observations

1. Make a list of observations.
  - ▶ What happened?
  - ▶ How quickly did the water drain to the bottom bottle?
  - ▶ What did it look like?

Write any more interesting observations and findings.

2. This time, just turn the bottles, without swirling them.
  - ▶ What happened this time?
  - ▶ How quickly did the water drain?
  - ▶ What did it look like? Was it different to the first experiment? If so, how? You can use diagrams to illustrate the differences.

How does your experiment compare to pictures or images of cyclones that have affected Cairns?

## Curriculum links

F	Science	ACSSU004: Science as a Human Endeavour Earth and space sciences	Daily and seasonal changes in our environment, including the weather, affect everyday life
1	Science	ACSSU019: Earth and Space Science Science Understanding	Observable changes occur in the sky and landscape
		ACSHE021: Science as a Human Endeavour Nature and development of science	Science involves asking questions about, and describing changes in, objects and events
		AC SIS024: Questioning and predicting	Respond to an post questions, and make predictions about familiar objects and events
2	Science	ACSSU032: Science Understanding Earth and space science	Earth's resources, including water, are used in a variety of ways
		ACSHE034: Science as a Human Endeavour	Science involves asking questions about, and describing changes in, objects and events
		ACSHE035: Science as a Human Endeavour	Science involves asking questions about, and describing changes in, objects and events
3	Science	ACSHE050: Science as a Human Endeavour: Nature and development of science	Science involves making predictions and describing patterns and relationships
4	Science	ACSSU075: Earth and Space Sciences Nature and development of science	Science involves making predictions and describing patterns and relationships
		ACSHE062: Science as a Human Endeavour; Use and influence of science	Science knowledge helps people to understand the effect of their actions
5	Geography	ACHGK030: Geographical Knowledge and Understanding	The impact of wildfires or floods on environments and communities and how people can respond
6	Science	ACSSU096: Science Understanding; Earth and Space Sciences	Sudden geological changes or extreme weather conditions can affect Earth's surface
		ACSHE098: Science as a Human Endeavour; Nature and development of science	Science involves testing predictions by gathering data and using evidence to develop explanations or events and phenomena
		ASHE099: Science as a Human Endeavour; Nature and development of science	Important contributions to the advancement of science have been made by people from a range of cultures
		ACSHE100: Science as a Human Endeavour. Use and influence of science	Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives

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