

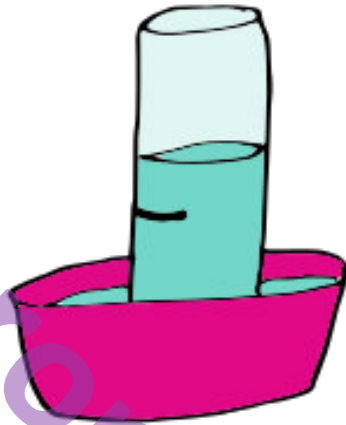
Brontosaurus Learning

Making science fun!

An Experiment about

Weather

Make A Barometer



What you will need:

- A bowl
- A clear bottle with a wide mouth
- Water
- A marker

What you will do:

- 1 This experiment will need to be conducted over a few days at least, so you will need to be patient! **Do not touch your barometer before you have finished taking readings!**
- 2 Half fill your bowl with water and place it on a bench where it won't be disturbed for the length of your experiment.
- 3 Now 3/4 fill the bottle with water. Put your hand over the mouth of the bottle and turn it upside down in the middle of the bottle.
- 4 Without tipping the bottle, mark the water level with the marker.
- 5 Now watch the water inside the bottle over the next few days or so. Write down when it the water gets higher and lower than the line, and note the weather at the time.

What is going on?

The air inside the bottle is a constant pressure because it is trapped in there by the bottle. When the outside air pressure goes up, it will push down harder on the water in the bowl and push more water into the bottle. When the outside air pressure is lower it will let more water out of the bottle. Can you see a relationship between the air pressure and the weather?

Challenge:

- Research how air pressure is shown on weather maps. Draw one of your own.



TEACHING NOTES:

Brontosaurus Learning Experiment:
Weather W09

Topic: Weather and air pressure

Key Concepts:

- ♦ Air pressure affects the weather

Resources:

- Investigation Record IR01– one copy per student
- Experiment Description Weather W09– one copy per student
- Bowls, clear bottles with wide mouths, water, markers

Lesson Notes:

Remind students to listen carefully to instructions, and that they will need to **OBSERVE** their experiment over time so that they can see changes on their barometer. Remind them that if they touch the barometer after it is set up their barometer will not be able to measure the changes in air pressure.

As a class discuss the experiment prior to undertaking it, and students should complete the sections of their Investigation Report IR01 from "Title" to "Hypothesis".

Once their barometer is set up they can draw up a table to record their observations:

Date	Time	Air Pressure High/Low	Weather

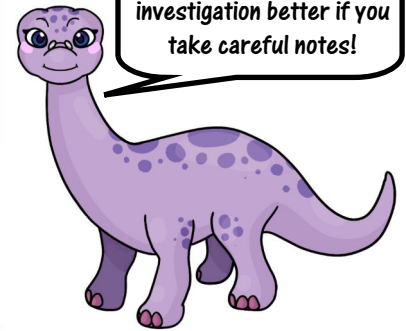
What should happen in this experiment, and why?

In this experiment your students should be able to observe the changes in air pressure over time and see the relationship between air pressure and weather.

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Investigation Record



Experiment Title:

Scientist (that's you!):

Materials: What will I need?

Investigation—what am I going to do in this experiment?

Diagrams are a great idea!

Hypothesis: What I think will happen:

Observation: What I SAW happen:

Diagrams are a great idea!

From my investigation I learnt:

Great work scientist!