

Rain Gauge

Focus

Investigate the availability of rainwater. Make your own rain gauge. Conduct a class experiment to collect rainwater in the rain gauge over a period of time. The students can keep daily records of the rainfall amounts. They can then calculate how many days they would need to collect enough water for one person's daily water requirement.

a) Collecting the rain

Precautions

- A rain gauge collects water to measure the amount of rainfall. On the top of most rain gauges is a funnel to concentrate the water into a flask below. Commercial rain gauges are designed so the appropriate rainfall is indicated on the side of the gauge. Reading the level of water in the cylinder against the scale will provide the rainfall. This can be used as a comparison with the class' calculations.
- When setting up the rain gauge, place it in a position where it's not affected by dripping trees, bushes or buildings and will not be knocked over or disturbed by people or animals.

Procedure

- Ask students to measure the amount of rain fallen in the students' locality using a rain gauge made by the class. When the rain has been collected the total volume of water needs to be measured.
- To calculate the rainfall you will need to measure the following:
 - The area of the funnel
 - The volume of the rain collected by the funnel.
 - The amount of rain = the volume collected (divided by) the area of the funnel

Note: You need to be aware that all metric measurement are interrelated and 1mL (millilitre) is exactly the same as 1cc (cubic centimetre). The area of the funnel can be estimated by drawing the funnel onto one cm square graph paper and adding the squares completely enclosed in the circle and half the squares bisected by the circle.

EXTENSION

- Make and set up a rain gauge at home.
- Calculate the area of your school. Using the findings from the rain gauge, find out the volume of water covering your school each time it rains.
- Find out the annual rainfall for your region and estimate the volume of water that will fall on the school over a year.

