



# Weather scientists – building a rain gauge

## AT A GLANCE



### Place

Build indoors, set up outdoors



### Key idea

Observing the weather and building a measuring device yourself



### Effort

Materials 10 min · Preparation 15 min



90 minutes



6–16 children



8–12 years



research



## Materials

- |                                                                   |                                      |
|-------------------------------------------------------------------|--------------------------------------|
| <input type="checkbox"/> empty plastic bottles (1 per 2 children) | <input type="checkbox"/> sticky tape |
| <input type="checkbox"/> craft knife or scissors (leaders only)   | <input type="checkbox"/> pebbles     |
| <input type="checkbox"/> ruler and waterproof pens                | <input type="checkbox"/> water       |



## Schedule

|               |                                                                                   |
|---------------|-----------------------------------------------------------------------------------|
| <b>0–15'</b>  | <b>Weather quiz</b> – Which clouds do you know? What does a red evening sky mean? |
| <b>15–55'</b> | <b>Building the rain gauge</b> – Build it step by step (see below).               |
| <b>55–70'</b> | <b>Setting it up</b> – Find an open spot outdoors, not under trees.               |
| <b>70–80'</b> | <b>Weather diary</b> – Each team makes a table: date, rain in cm, weather.        |
| <b>80–90'</b> | <b>Closing</b> – Harvest thought: rain and sun are gifts (Genesis 8:22).          |



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## How it works – simply explained

- 1 The leader cuts off the top third of the bottle.
- 2 Put pebbles in the bottom of the bottle – so it does not tip over.
- 3 Pour in water until the pebbles are covered. That is the zero line.
- 4 Using a ruler and pen, draw a scale in centimetres from the zero line.
- 5 Turn the cut-off top upside down, put it on as a funnel and tape it in place.

 **Example:** “Last week the water was at 2 centimetres, today it is at 3 – so 1 centimetre of rain has fallen.”

## Safety

- Only leaders do the cutting; cover cut edges with tape.
- Do not set up rain gauges next to roads.

## Variations

- Build a wind vane from a straw and cardboard.
- Collect weather records over a month.

## Something to think about

What are you thankful for when it rains – and when the sun shines?