Year 4: Science

Activity 3: Let's build a rain gauge

Now that you have explored where it rains and how it's measured, let's try to collect some rain.

Materials required	Number
2 litre plastic bottle (labels removed)	1 per experiment
ruler with millimetres	1 per experiment
modelling clay	¼ of a packet per experiment
scissors	1 per experiment
duct tape or masking tape	1 (to share)
sticky tape	1 (to share)
black permanent marker	1 (to share)

*Use appropriate safety precautions when handling scissors

Figure 1: Materials set up

Method

1. Discard the lid of the bottle.
2. Cut the neck off the bottle just before it narrows off.

   Safety Tip: it is a good idea to have an adult help start you off as the plastic can be tough to put the scissors through.
3. Place your modelling clay at the bottom of your bottle and smooth out to form a level surface. This will help the bottle stay upright too as well as creating an even surface as pictured right.
4. Turn the neck upside down and place in the top of your bottle so it makes a funnel. Use duct or masking tape to attach the neck to the body of the bottle – *remember you will need to empty the rain out so only use a little of the tape to attach it.*
5. Attach a ruler to the side of the bottle, you may need to hold it in place with sticky tape, make sure the ruler starts in line with the top of the modelling clay.
6. With your marking pen, draw lines and measurements on your bottle or if you prefer, leave your ruler taped to the bottle and use that instead.

Figure 2: Step 2 and 3

Figure 3: Step 4

Using your rain gauge

1. Place your rain gauge in a shady position but where rain can still reach it. Ensure the bottle won't tip or blow over easily.
2. Each day at the same time, measure how much rainfall has been collected. Find somewhere to record your readings. If there is no rain, the recording should be 0 mm.
3. Empty the bottle once you have recorded the rain.
4. Record your results in Activity 4 – Rainfall results.

Figure 4: Step 5

Student action (options for assessment)

See Activity 4 – Rainfall results.