



One Planet Matters

# Making a rainwater gauge

## Summary:

This is a simple activity sheet that can be used by your learners to create a rainwater gauge. It is a fun way to get creative and explore environmental questions in a scientific way.

**Key Stage / Age group:** KS1 & KS2

**Time needed:** 1 hour

**Location:** Outside (with indoor prep if desired)

## Curriculum links:

KS1 - Geography & Science - Weather

KS2 - Geography & Science - Climate/local area study/local fieldwork/rivers and the water cycle.

## Eco links:

A whole school approach to saving water. By measuring how much water falls around your site, you can also open a conversation about why it is a good idea to collect water on-site for watering your plants. You can use this as evidence for installing a water butt on your site. If this is something that you are interested in doing, get in touch with One Planet Matters and we can help you to access and install one.

## What is a rainwater gauge?

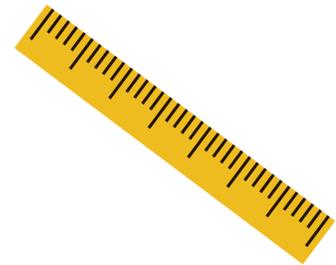
A water gauge is a simple tool to measure the amount of rainfall in a certain area. This is important to know when you are growing plants or planning a garden, as the amount of rainfall will determine what types of plants will grow best.

If you keep a record of rainfall over time, you will start to see patterns - over a year's period, you will be able to see how the amount of rainfall differs seasonally, and over a few years, you will be able to track how rainfall changes over time. This can give you an insight into the effects of climate change in your region as well as helping you to understand how we can start to adapt to climatic changes.



### You will need:

- A 2 litre plastic bottle
- A handful of pebbles or small stones
- Masking tape
- Permanent marker
- Ruler
- Paper and pencil
- Scissors



## How to:

1. Use the scissors to cut off the top of your plastic bottle - you want to cut it at the widest part at the top, just before the narrower point. You may need an adult to help with this, as the cut edges may be sharp.
2. Place a handful of pebbles or stones in the bottom of your bottle - this will keep it from falling over if it gets windy. Shake the bottle gently so that the pebbles settle and sit on an equal level.
3. Take the cap off the top of the bottle, and place it upside down inside the bottom of the bottle. It should look like a funnel - this will catch water and direct it into the bottle. Make sure the edges of the bottom and top of the bottle are in line with one another, and tape them together. This will keep your water gauge in place and also soften any sharp edges.
4. Attach a piece of masking tape vertically from the bottom of your bottle to the top.
5. Then take your permanent marker and draw a line to mark the top of the pebbles. This will be the bottom of your rain gauge - write "0" next to your line to note this. Now mark every  $\frac{1}{2}$  cm from your "0" mark up to the top of your bottle.
6. Place your water gauge somewhere where it won't be disturbed, but also where it isn't under any trees or anything else that will get in the way of the rain. It is a good idea, if you want to make it even more stable, to dig it into the ground up to your "0" mark.
7. Pour a little bit of water into your water gauge, up to your "0" mark, so just covering the pebbles. Now your water gauge is ready to go!
8. Keep an eye on your water gauge, and make sure you have your pen and paper at the ready to note down your rain data. You want to make sure that you record rainfall each morning at the same time, and that you make sure that you still have water up to the "0" mark after you have recorded how much rain you had over the previous 24 hours. This will reset your water gauge so that you can accurately measure rainfall.
9. We recommend that you track rainfall month by month on a calendar or table in your classroom, so that each month, term or year, you can make a graph to plot out your results. This will allow you to visually see how rainfall changes seasonally and year on year, and prompt you to have discussions about weather, seasons, and climate change.