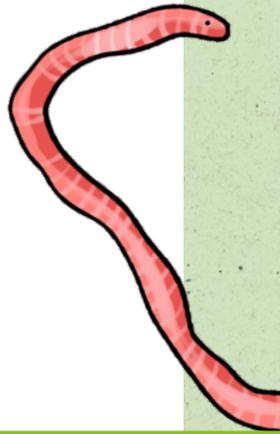
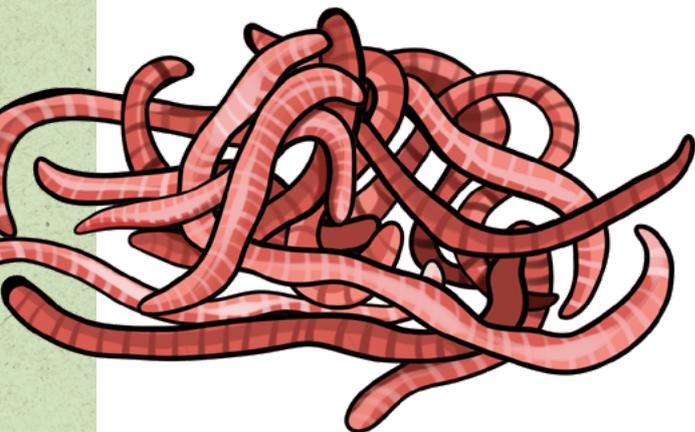


Become a Soil Scientist!



Did you know that 95% of the food we eat comes from soil?

Soil is vital to life on Earth. Not only is it where 95% of our food comes from, it's home to a quarter of the Earth's species – there's more life in a teaspoon of soil than there are people on the planet. How plants grow depends on the type of soil you have. Some, like clay soils, are high in nutrients, whilst others, like sandy soils, are lower in nutrients and even acidic – not ideal growing conditions. When deciding where and what to grow, growers and farmers work out what type of soil they have on their land. By seeing which shapes can be made from the soil you have, you can identify which type it is, helping you to find the best places to grow.



Soil facts

- Soil is made up of: 45% minerals, 25% water, 25% air and 5% organic matter like decaying plants and animals.



- Soil stores more carbon than the world's plants, forests and atmosphere combined.
- UK soils store 10 billion tonnes of carbon
- A single hectare of soil has the potential to store and filter enough water for 100 people for one year

In this activity, you'll use deduction to identify different types of soil and find out how suitable they are for growing.

Find out more about how to **Save Our Soil** from our experts

Before the session

- 1 Think about where you will get soil from. You could ask participants to bring in a cup full of soil from their garden, provide some from community growing spaces, or see if a local allotment would be happy for you to collect some. A few different soil samples will work best for experiencing a variety of soil types, but don't worry if this isn't possible as it's interesting to learn about your local environment regardless of its soil variety.
- 2 Set up enough tables for everyone to sit at and cover with newspaper to protect the surface
- 3 Ensure everyone has an apron and gloves as well as access to both the soil and water.

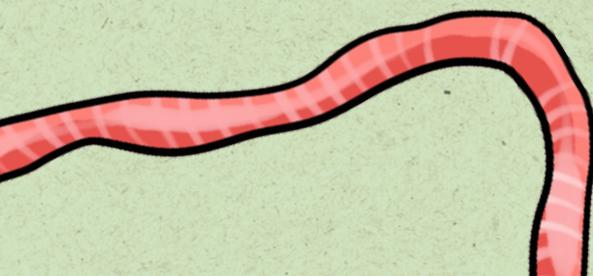
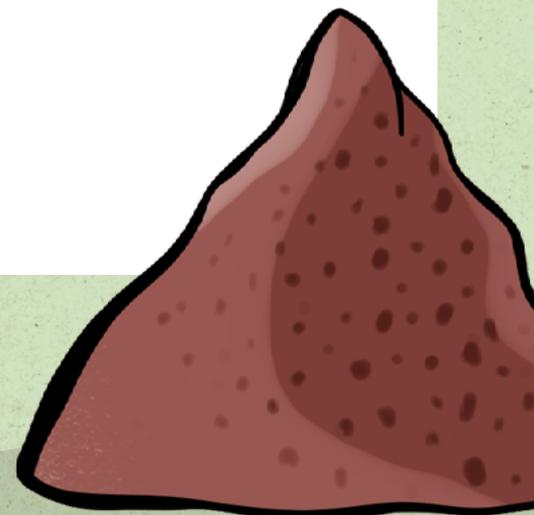
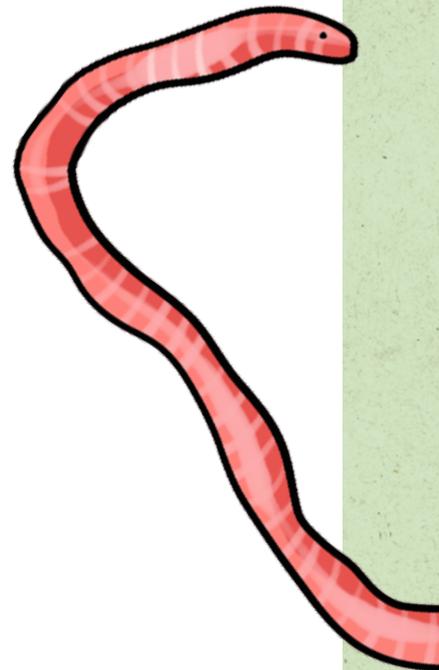


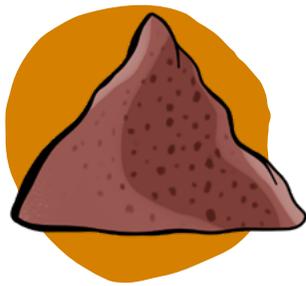
During the session

- 4 Before participants do this activity independently, it's a good idea to demonstrate with one soil sample and work out which type of soil you have as a group
- 5 Ask participants to wet their soil sample and then squeeze it between their hands until no more water comes out
- 6 After kneading the soil for a few moments, try to make the below shapes in order. The final shape you're able to make out of the list below will tell you what type of soil you have. For example, if you can make a cone and ball shape but not a worm, you have silt.

Materials and equipment

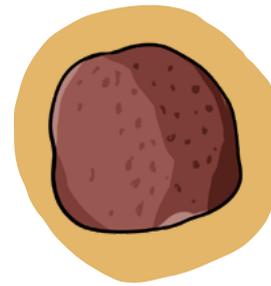
- gloves
- goggles
- tables
- old newspaper
- aprons
- bowls
- water in a squeeze bottle or jug
- soil





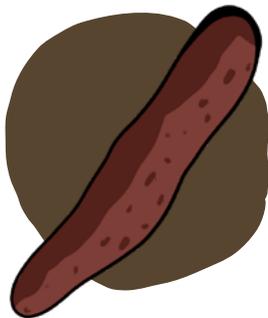
Cone

This soil type is sand. This soil contains sand and is gritty and rough to touch, easily falling through your fingers. This soil is low in nutrients as water drains through it quickly, washing it away.



Ball

This soil type is silt. Retains moisture but can be slow to drain, this is a good soil if you look after it. It's smooth to touch and can feel soapy when wet.



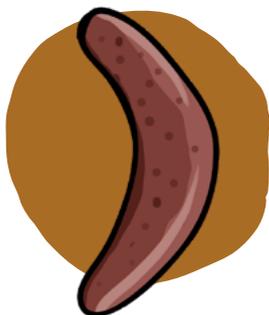
Worm

This soil type is loam. A mix of clay, sand and silt which is mouldable but does not feel sticky.



Broken bent worm

This soil type is chalk. Gritty and dry to touch, this soil is stony and free draining but can suffer from poor plant growth.



Smooth bent worm

This soil type is clay. This soil has the smallest size grains, it's smooth when dry and sticky when wet. It holds nutrients well and is a good soil to grow plants in.