



Microplastics in soil

We can often see pollution from large and even fairly small pieces of plastic, but have you heard of microplastic? Microplastics come from the breakdown of larger pieces of plastic or they may have been created especially for products such as cosmetics and toothpaste. Microplastics are much harder to remove from the environment as they are much more difficult to see.

ACTIVITY

Is there any plastic rubbish in your local area?



ACTIVITY OVERVIEW

Choose a location where children can safely survey litter and rubbish. Children could work in pairs.

Look for plastic rubbish: Children could photograph or make a list of all the plastic items they find in their local area. They could sort the plastics into what was supposed to be there (purposeful, e.g., footballs) and what was not (rubbish, e.g., pen lids in the soil).

Look for microplastics: Children could put some soil in a tray and, using a magnifier or microscope, look carefully to see if there are any microplastics present. Look in various locations.

Remind children to wash their hands thoroughly after handling soil or rubbish, even if they have worn gloves.

RESOURCES

a safe place to hunt for plastic litter
to look for microplastics - access to bare soil
plastic tray/container
gloves/spoons/trowels
magnifiers (or microscopes)
camera or pencils and paper
soap and warm water for hand-washing

KEY FACTS/SCIENCE

Plastic is not a natural substance but it is made from natural materials such as cellulose (from plants), coal, natural gas and oil. These materials are transformed by chemical reactions to make plastics. It takes time and energy to make plastics.

Plastic is now found in many places in the natural world, including in our oceans and in soil. 5 grams of soil (about a teaspoon) can contain 4 to 20 tiny plastic pieces. Plastic pieces that are less than 5mm in diameter are called **microplastics**.

Some plastics are **biodegradable** - this means they can be broken down in nature by microbes (organisms such as bacteria). Many plastics, such as polythene, are not biodegradable and remain in the environment for a very long time, often for many hundreds or even thousands of years.

QUESTIONS FOR LEARNING

- Were there any microplastics in the soil?
- How do you think plastic might get into the soil in your location?
- Where can you recycle plastic rubbish?

Use the QR code to find out about a scientist who has invented a new type of recyclable plastic.

