



Haveley Hey Community School. Growing Outside.

Tuesday 21st January 2025

Weather: A little chilly, with some drizzle.

Growing Outside

Children: Year 3.

Soil.

Today at Growing Outside Year 3 joined me in the allotment. We were learning all about SOIL. Soil is very important it is some creatures homes and lots of plants and trees grow in it. Soil has a few different layers, the top layer is called HUMUS. This layer is quite thin and is made up leaves and dead plants that are beginning to rot. The next layer is TOP SOIL. This is where most plants roots are and some creatures may live. As you go further into the layers the soil becomes harder and full of rocks. Not much lives down there, but large tree roots.



To understand soil a bit better we were going to make a 'SOIL CAKE.' It might not be a very tasty cake though! Soil is made up of lots of different things. I had hidden different ingredients underneath a sheet and I wanted the children to figure out what they may be.

The children had a think and then made some guesses. We added LEAVES, STICKS, pieces of WOOD and FLOWERS. Then we added some fake bugs, and a toy SQUIRREL. In the wild when a creature dies they will fall to the ground and decompose.

Many creatures live in the soil too, such as worms and ants. After some thinking the children realised that if there are creature in the soil then there poo must be in it too! So in went some fake poo!



Soil Layers

Soil is made up of distinct horizontal layers. If you could take an elevator ride through the earth's surface you would pass several distinct layers.

What are the layers of soil?

The **humus** is the topmost layer of soil. It contains quite a bit of living material, plants, decaying leaves, needles, moss, and more. This layer is thin and very dark in color.

The **topsoil** is the next layer down. It is made mostly of minerals, and most plant roots live here. This layer is also dark in color due to the amount of decaying plant and animal matter.

The **subsoil layer** is next. It is made of sand, silt and clay that have not been broken down all the way, so it usually has less organic material in it. It is also lighter in color.

The **parent material** is the next layer down. It is mostly rock that has been slightly weathered. Not many things live down here, except for the biggest tree roots.

The **bedrock** is the lowest layer of soil. It is a solid rock layer.

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The children sprayed some WATER into our soil, this is what the roots of plants suck up, without it the soil would be very dry and hard, nothing would grow. We realised that there may be different ingredients in the soil, depending where you are in the country. If you are near the beach for example there may be SAND and SHELLS in the soil.

Lots of the children said ROCKS or STONES. These break down from big to small and help to keep the soil loose. An incredibly important ingredient in soil is AIR/OXYGEN. Without it the soil would be very heavy and everything would be squashed. All the creatures and micro organisms living in the soil wouldn't be able to breathe.

There are also traces of METAL in soil, these are known as HEAVY METALS. These include copper and zinc, so in went some pennies for copper.

I had to give a few clues but some of the children guessed FOSSILS. We all got to see some fossilised shells and wood, everyone thought they were amazing! Fossils can be thousands of years old, these can break like other rocks,



leaving traces in our soil.

This led on to our last ingredient TIME! It can take anything from a couple of months to 1000s of years for things to break down into soil. It is amazing to think that what we walk upon could contain ingredients far older than any of us.



Then the ingredients needed stirring. Worms help to mix our soil when they wriggle around. The children pretended they were worms by using a large spoon to stir everything together.

Wow we definitely learnt a lot about soil today.

Well done year 3!

Dawn.