What is soil?

My children are covered in dirt on a regular basis. I remember picking my son up from school one day and the parent next to me saying 'Oh no, your child has had a terrible accident!'. To be honest, I could not see anything wrong! He was just covered in mud. The reason? Dirt angels - he had been lying in the soft mulch making dirt angels. Dirt is fascinating. Why not look at the different soils you can find on a walk or in the garden?
Start a conversation about the different soil types. Describe them with your senses.

Equipment list

Soil samples, for example mulch, compost, garden bed, sandy soil etc
Trowels
Recycled pots and tubs – preferably with lids!
Jars with lids to dissolve the soils
Water
Optional: Magnifying glasses, torch, white paper

Method

Take some soil samples. Find as many different ones as you can. Discuss where you could get them from, for example near a pond, under a tree, near the sandpit, from the vegetable garden. The more variety, the better. And now you can start investigating them! Here are some ideas you might like to try:
What do the different soil samples smell like? What do they feel like in your hands? Roll some between your fingers – do they form sausages or break up (you can add a little water)? What do they look like? What different colours have you got? Can you make paint the same colour as your soil samples, and use that to document your answers? Do the soil samples mix with water? Try and stir a couple of spoonful's into water and observe how this changes the colour of the water. Could you use this water to paint with?

Observations, conclusions, ideas

You can document your results by painting with the different colours, drawing the jars with the samples, drawing a map of where you got your soil samples, talking about the results. What is the soil that we use to grow veggies like? What is its texture and how does it differ from other soil samples? What is the consistency and colour? Do you think we could grow veggies in the sandpit? Why not? You could even test your soils to find out if it is alkaline or acidic by using **red cabbage juice!**

What's the STEM?

Investigating substance with all your senses, although in this case please NOT taste, is a great way to improve the observational skills of children. Using the scientific language allows the children to gradually add to their vocabulary and lets them practice describing things. Looking at the results you can decide where produce and plants would grow best and why.
An extension idea could be to start your own veggie patch and explore with the different soils over a longer period of time!