

# DIG IN TO EARTH

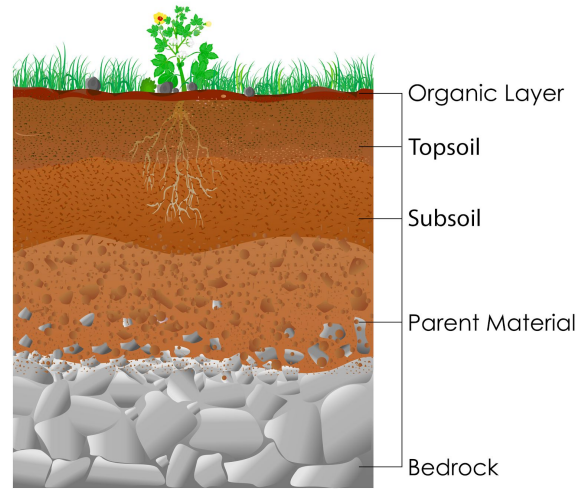
THIS WEEK, LET'S EXPLORE EARTH'S SOIL AND WHAT MAKES UP THE GROUND BENEATH YOUR FEET

\* It's time to begin a soil scientist! This week you get to dig into the topsoil and subsoil of the Earth.

First, watch the YouTube Video on the Earth's soil layers to train to become a soil scientist.

Second, gather your exploration materials and set up your nature journal pages.

Third, head out into the unknown! Find a spot to dig a hole, and start exploring the big world of dirt!



Biology
Soil Layer

Today you are a **soil scientist!** Soil scientists work to look at the dirt beneath your feet and all the Earth's layers. These scientists use shovels to dig holes and look at the color, texture, and organisms living in the soil.

Before we begin, you'll need a bit of training. Watch the YouTube video to learn more: [Soil Profile of Earth - Soil Layers and Horizons - Geography for Kids | Educational Videos by Mocomi](#)

Alright, now you're ready to become a soil scientist yourself! Start by finding a fresh page in your nature journal to create the table below. Be sure to leave yourself plenty of room to write your observations.

	Depth	Color	Texture	Plants	Animals
Topsoil					
Subsoil					

You'll also want to give yourself some space to write about:

1. The location of your study (Are you in the woods? By a road? By a building?)

2. What plants do you see right away? (Is there grass? Trees? Flowers?)
3. How does the topography (shape of the ground) look? (Is it flat? Hilly?)

Once you've got all of these things down in your journal with plenty of room to write, you're ready to gather your materials and head out! For this exploration you will need:

- A trowel or small shovel
- 2 cups or ziplock bags
- Water (keep at home)
- And don't forget to take pictures along the way of your exploration to share with us! Send them to [kcttrusted@gmail.com](mailto:kcttrusted@gmail.com) to be featured in our FUN FRIDAY and entered to win a prize in our drawing!

Head outside and find a place you can dig a small hole. Be sure to have permission where you dig! Once you find a spot...

1. Write down your observations about your location, plants you see, and the topography
2. Carefully clear away any branches or leaves until you see dirt, this is part of the **topsoil** - what does it look like? Color? Texture? Draw a picture too!
3. Dig a little more into the **topsoil** - what does it look like now? Do you see any bugs or animals?
4. Dig until you reach the **subsoil** - how do you know it's the subsoil? Something about it will change, the color, the texture, maybe you'll start to see bigger rocks. What does the **subsoil** look like? Color? Texture?
5. Measure how deep the topsoil is, and write it down in the depth column of the table. Don't forget your units! (Inches? Centimeters?)
6. Dig a little further into the **subsoil** so that you can **grab a handful!** Put it in your cup or bag to transport.
7. Before you fill in your hole again, **grab a handful of topsoil** as well to transport!
8. Now it's time to fill in your hole and head back home!

Once your home, fill out your observations more looking at the soil samples you collected. You can write, draw, and talk about what you see! Here are some things to check out:

- Color: Use words like dark brown, light brown, yellowish brown, or reddish brown. Some soil might also be black, gray, yellow, or orange.
- Texture: Spray water on the soil to help you feel the texture. Pick sandy, clayey, or loamy. Sandy soil feels gritty and does not stick together well. Clayey soil is sticky.

Loamy soil is between sandy and clayey. (Loam is not related to amount of organic matter.)

- Living Organisms: Did you find any worms, ants, or other organisms? Don't forget plant roots and seeds.

You've done so much exploring today! It's time to wrap it all up with one last question: **How is topsoil different from subsoil?**

Here are some things to help you think about the differences:

- Which one has more organic matter? (Hint: Which one has a darker color?)
- Which one has more living organisms?
- How well do you think topsoil and subsoil hold water?
- How easy do you think it is for air, water, and plant roots to move through topsoil and subsoil?
- Does this soil get wet for a long time? (Hint: If the subsoil is gray, it probably stays wet for a long time.)
- What do you think would be different if you dug somewhere else? (Give it a try sometime.)