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# Write a story about your school’s soil!

# Name:

Soil is a mixture of many things, including weathered rocks and minerals, roots of plants, fungi, bacteria, insects, and dead creatures. Just as important, the spaces between the particles allow air and water to move through the soil. This means that soil is a complicated mix of different size particles and types of materials.

The soil on the BEST plots has been formed by many processes. Soil is made through the breakdown of rocks and living things. Rocks are broken down by wind and rain and even plants! It can take thousands of years to break down completely. Living things are being broken down into smaller and smaller pieces as they decompose. Soil can be carried by wind and rivers to new places. The soil in Michigan is special because it is transported from Canada by the glaciers. When the glaciers came, they scraped all the soil down to the bedrock. The soil that we have is the dust and stones that the glaciers dropped when the glaciers melted. However, the soil around your school yard could be from sod brought from somewhere else or even from debris from when your school was built. When you collect your soil, carefully look at it because you can learn about its history.

Characterize the soil (soil characterization) from your plots. Create a story about the soil from your plot. Where do you think the soil came from? (Hint: there is no right or wrong answer).

Some things to consider:

Do you see any rocks or minerals in the soil? Where did they come from?

What is the texture of the soil? How do you explain where it came from?

Did you find carbonates in the soil? Where did they come from?



# *Soils of Michigan*

**Teachers Guide:**

To expand your student’s knowledge of soils, you can encourage your students to create a soils collection. Soil properties such as texture and pH are only interesting when compared over large areas.

If you wish and have room in your classroom, the students can start a “soil collection” program. Students can be encouraged to bring soils from different parts of the state.

You can ask the students to bring in soil from their backyard. Be sure the students the parent’s permission first. Encourage the students to find different kinds of soil. Collect some from grass. Collect some from under a pine tree. Look for soil that seems sandier.

The students (or the teacher) can collect soils from an agricultural field, a forest, a wetland, and the schoolyard. If a student visits the dunes in Western Michigan, how might the soil change close to Lake Michigan versus more inland?

The student should bring back soil in a zip lock baggie. The location of the soil and the date should be written on the bag with a permanent marker.

If you wish, you can use the soil characterization protocol, the soil pH and the soil nitrogen protocol.

**Student Sheet**

**You have been asked to collect soil! Plant growth depends on the soil.**

There are lots of possibilities. You can bring in soil from your backyard.

Be sure to get your parent’s permission first!

You can collect some from grass or under a pine tree. Look for soil that seems sandier.

You can collect soil from an agricultural field, a forest, a wetland, and the schoolyard. If you visit the dunes in Western Michigan, how might the soil change close to Lake Michigan versus more inland?

When you collect soil, you should bring the soil back in a zip lock baggie. The location of the soil and the date should be written on the bag with a permanent marker.

**You should take the following notes:**

What is your soil like? What color is it?

What plants grew in your soil? (i.e. grass, type of tree, wetland plants, etc.)

How does your soil compare to your classmates soil? More sandy? Less sandy?

What kind of soil probably has the highest nutrients? What is the pH?

How is the soil different from soil from our plots?

Soil pH: Which soils are acidic? Which are basic?