

Close Reading and Text Dependent Questions in Science

What Is in Soil? (Pebbles, Sand, and Silt – Grade 2)

The text selection, *What Is in Soil?*, is found in *FOSS Science Stories, Pebbles, Sand, and Silt*, pgs. 20-24.



Look in the Student Learning Outcome (SLO) Documents for guidance on when this should be taught. These can be found on the BPS Science Department's website: <http://bpsscience.weebly.com/> You will find the Student Learning Outcomes documents organized there by grade level.

What Is in Soil?

Rocks are all around you. The soil under your feet has rocks in it. Some of the tiny rocks in soil are called silt. Silt is smaller than sand, but bigger than clay. Sand, clay, gravel, and pebbles can be in soil, too.



When plants and animals die, they become part of the soil. Plants and animals decay into tiny pieces called humus. Humus provides nutrients for plants. It also helps the soil hold water.



What is this animal that lives in soil?
A worm! Worms are good for soil.
They burrow through the soil. They
break it apart and eat the humus.
Worms help plants grow by mixing
and turning the soil.





Not all soil is alike. Some soil has more humus. Some has more clay or sand. Some has more pebbles and gravel. What differences do you see in these soils?

Testing Soil

Do plants grow better in soil or sand?
Here's what some students did to find out.



1. They used cups that were all the same size.
2. They filled some cups with potting soil that had lots of humus. They filled the other cups with sand.
3. They planted a few sunflower seeds in each cup.
4. They put the same amount of water in each cup.
5. They kept the cups in a sunny window.



6. Look at the pictures on page 23. Use a T-chart to compare the soils in the pictures.

| Soil (left side) | Soil (right side) |
|------------------|-------------------|
| | |

7. Imagine you are an oak tree. Looking at the pictures on page 23, which soil will provide a healthier environment for you to grow? Use evidence from the text to support your claim.

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Sample Answers

1. What types of rocks can be found in soil?

Soil contains tiny rocks called silt (and bigger rocks as well). Sand, clay, gravel, and pebbles can also be in soil.

2. What is humus?

Humus is the part of soil, which consists of decayed plants and animals.

3. According to page 21, what are two reasons why humus is an important part of soil?

Humus provides nutrients for plants and helps the soil hold water.

4. What does the word burrow mean on page 22?

The word “burrow” means to move through soil by breaking it apart and eating it.

5. How does the worm’s burrowing behavior affect plants?

When worms burrow through the soil they break it apart and eat the humus. They help plants by mixing and turning the soil.

6. Look at the pictures on page 23. Use a T-chart to compare the soils in the pictures.

| Soil (left side) | Soil (right side) |
|---|---|
| <ul style="list-style-type: none"> • <i>dark brown in color, more humus</i> • <i>a lot of roots</i> | <ul style="list-style-type: none"> • <i>lots of big rocks</i> • <i>grayish in color, lots of sand</i> • <i>roots</i> |

7. Imagine you are an oak tree. Looking at the pictures on page 23, which soil will provide a healthier environment for you to grow? Use evidence from the text to support your claim.

An oak tree would grow better in the soil on the left. The soil on the left has more humus. Humus helps soil hold water, which the oak tree needs to grow. Also, the soil on the left does not have big rocks. This would make it easier for a large oak tree to put down big roots.