

**Objective** sight words (nutrient, ground down, finer grains, deposit, geology, climate, topography, biology); concepts (bacteria, algae, fungi, chlorophyll, organic matter, simple/complex life forms, living organism, life processes)



Vocabulary	
<b>nutrient</b>	<b>geology</b>
<b>ground down</b>	<b>climate</b>
<b>finer grains</b>	<b>topography</b>
<b>deposit</b>	<b>biology</b>

## About Soils

By: Sue Peterson

Soil is found on the upper most layer of the Earth. It is made up of a mixture of rock, minerals, plants, and some living/dead animals (mostly insects). This nutrient-rich layer of soil extends downward a few feet. This is about how far the roots of plants grow.

Soil is made up of all the nutrients needed by plants to live. Some areas of the world like desert regions have very poor soil. Here, it is difficult for complex plant life to take hold. Tropical rainforests also have poor soil. Yes, the rainforest region gets enough rainfall to grow plants, but the poor soil

found in rainforests is caused by so many living plants. These plants have the nutrients right inside themselves, so nutrients are not abundantly found in the soil.

For over a million years, the soil of the Earth has been developing. Weather has played an important role in shaping the soil. The top rocky layer of the Earth has been ground down into smaller and finer grains. Plants and animals (mostly insects) have helped to deposit nutrients.

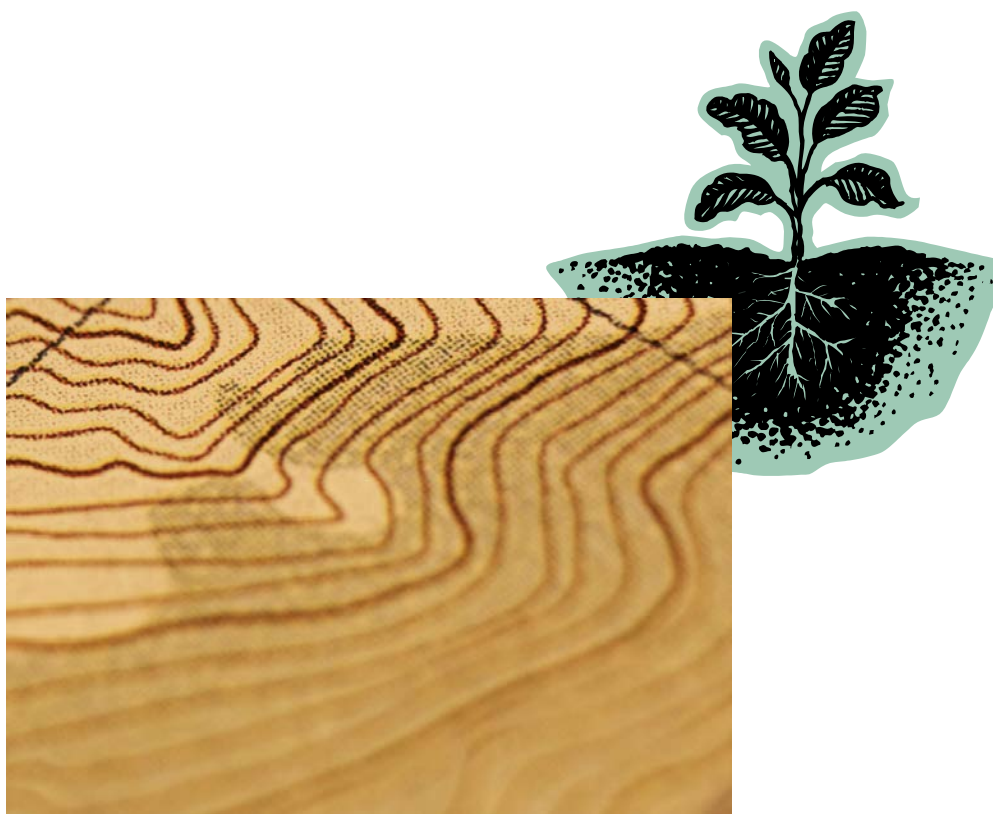
An important part of the soil is the living part. Bacteria (any microscopic plant that lives in soil, water, or organic matter), algae (any plant as a seaweed of a group that forms the lowest division of the plant kingdom and includes mostly plants growing in water that are usually brown or red coloring), and fungi (any group of flowerless plants like molds, rusts, mildews, and mushrooms that lack chlorophyll and live on dead or decaying organic matter) are living parts of the soil. They help more complex life forms live.

The soil under our feet has a darker color than the dirt. This darker color is caused by the plants and animals (living and dead) that are found within it.

Soil is formed from geology, climate, topography, biology, and by passing time.

- ◆ Geology is the land.
- ◆ Climate is the temperature and weather conditions.
- ◆ Topography is the type of landform.
- ◆ Biology deals with the living organisms and their life processes.
- ◆ And, time is the period of an action.

Maybe the next time when you sit on the grass to have a picnic, get your shoes dirty or walk barefoot, you will be reminded of the importance that soil has on life in this world.



## Practice

### Language Work

A. Write the words.

ground down

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finer grains

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algae

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fungi

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chlorophyll

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organic matter

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organisms

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B. Use each word in a sentence. Underline the word used.

nutrient

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deposit

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geology \_\_\_\_\_

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climate \_\_\_\_\_

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biology \_\_\_\_\_

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topography \_\_\_\_\_

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- C. Phonics work. The prefix “geo” means earth. So, “geology” is “the science that deals with the earth’s crust and the layers of the earth”. Write **three** additional words that use the prefix “geo” to mean earth. Circle the prefix “geo” and write the meaning of each word.

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**Multiple-Choice Questions** (Put an X in front of the correct answer.)

1. Soil is made up of a mixture of \_\_\_\_\_.
  - a. rock, minerals, tree trunks, shrubs, and blacktop
  - b. rock, dirt, sand, water, plants, and metal
  - c. rock, minerals, plants, and some living/dead animals
  - d. rock, sand, water, tree trunks, and plastic
  
2. How long has it taken for the Earth's soil to develop?
  - a. 10 years
  - b. 100 years
  - c. 1000 years
  - d. a million years
  
3. What is the name given to any microscopic plant living in soil, water, or organic matter?
  - a. fungi
  - b. algae
  - c. bacteria
  - d. topography

**Definitions** (Write the meaning of each word as it is used in the text.)

1. nutrients

2. deposit

3. geology

**Extended Response** (Answer in complete sentences.)

1. What is soil made out of and where is it found?

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2. Why do deserts and rainforests have poor soil?

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### 3. How does weather shape soil?

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## Answer Sheet

Answers for Matching, Multiple-Choice Questions and Extended Response

### About Soils

#### Multiple-Choice Questions

1. c
2. d
3. c

#### Extended Response (Accept reasonable answers.)

1. See text for detailed information about soil's composition and where it's found.
2. See text for detailed information about poor soil found in deserts and also the rainforests.
3. See text for detailed information about weather shaping the soil.