

Soil

What Is Soil?

Soil is the loose material in which plants can grow in the upper layer of Earth. Soil is a mixture of four different materials, weathered rock (minerals), humus, air and water. Soil takes a long time to form. It takes 500 to 1,000 years to make 1 inch of soil!

Humus

Humus is the part of soil made up of decayed parts of once-living things. Many gardeners create humus through a compost pile. Humus is dark and soft. It contains much of what plants need for growth. The more humus a soil has, the better plants will grow!



Types of Soil

There are many types of soil. They differ in color, grain size, amount of minerals, and how much water they can hold. The color of soil depends on what is in it. Black soils have a lot of humus. White soils often form from light rocks, such as limestone.

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Clay is a reddish colored soil. It has small grains, so it feels like smooth powder. It holds water easily. This makes clay sticky when it is wet. Pottery is made from clay.



Sand has large grains, so it feels gritty. It also has large spaces between the grains. This lets water leave it quickly. Sand has less humus than other soils. Glass and concrete are made from sand.

Soil that is good for growing plants is called topsoil. It has the most humus. Good topsoils have the right mixture of minerals and humus.

Loam is one type of topsoil. It has large and small grains. It also has lots of humus, which makes it dark and rich. Loam holds enough water for plants. But it also drains well. Most farm soils are loam.



Other soils do not have all the things that plants needs. Dry clays are too hard. Wet clays are too soggy. Sand is too dry and does not have enough nutrients.

Soil Quick Check

1. What are the four materials that make up soil?

2. What is humus?

3. Write down at least two characteristics of each type of soil.

Sand	Clay	Loam

4. What is the best type of soil for farmers to plant their crops? Why?

Vocabulary Quick Check

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|---|-------------------|
| 1. _____ the leaf or a piece of a stem used to grow a new plant | a) adaptation |
| 2. _____ a baby plant | b) chlorophyll |
| 3. _____ when the seed leaves a plant | c) cutting |
| 4. _____ living things that grow and can make their own food | d) dissemination |
| 5. _____ to live and grow | e) flower |
| 6. _____ the chemical that makes plants green. | f) germination |
| 7. _____ when a small plant breaks out of a seed. | g) humus |
| 8. _____ the part of the plant that grows from the stem and absorbs light | h) leaf |
| 9. _____ a plant's food making process | i) plant |
| 10. _____ the loose material in which plants can grow | j) photosynthesis |
| 11. _____ special features that allow a plant to live a particular place | k) root |
| 12. _____ the part of the plant that holds the plant in the ground | l) seed |
| 13. _____ the part of soil made up of decayed parts of once living things | m) seedling |
| 14. _____ supports the plant | n) soil |
| 15. _____ the reproductive part of plant | o) stem |
| 16. _____ the first stage of growth in plants. | p) survive |