

Name _____

How Much Do You Really Know About Soil?

1. Is soil an important natural resource?
 - A. Yes, without soil plants and animals would die.
 - B. No, soil is not important...it is just dirt that makes a mess.

2. Is the parent material of soil fossils?
 - A. Yes, soil is made from fossils.
 - B. No, the parent material of soil is rock.

3. Are weathering and erosion exactly the same thing?
 - A. Yes, there is no difference between the two.
 - B. No, weathering is wearing away and breaking down and erosion is moving things like rocks and soil.

4. Are plant roots, freezing and thawing, wind, and moving water all things that cause weathering?
 - A. Yes, all of these things will wear away and break down earth's surface.
 - B. No, these things could never break down rock, they are too weak.

5. Do plants help control erosion?
 - A. Yes, the roots of plants help hold the soil in place so it can't move.
 - B. No, plants make erosion worse.

6. Can soil be formed in just a few days?
 - A. Yes, soil is always manmade in giant factories and it only takes a few days.
 - B. No, soil is made from rocks and the process takes thousands of years.

7. Are there different layers in soil? What are they?
 - A. Yes, there are different layers. You have topsoil, subsoil, the transition layer and bedrock or parent material.
 - B. No, soil is exactly the same whether you dig down just a few inches or twenty feet.

8. Which of these statements gives an accurate description of the composition of soil?
 - A. Soil contains 50% organic material, 20% minerals, 10% air, and 10% water.
 - B. Soil contains 45% minerals, 25% air, 25% water, and 5% organic material.

9. Which of these lists the three main types of soil we studied?
 - A. Bedrock, parent material, organic material
 - B. Sand, silt, and clay

10. Is all the soil the same?
 - A. Yes, all soils have the same colors, textures, and characteristics.
 - B. No, soils in different places will have different characteristics.

11. Of the three types of soil which one has the biggest particles and roughest texture?
 - A. Sand
 - B. Clay

12. Of the three types of soil which one has the smallest particles and smoothest texture?
 - A. Clay
 - B. Silt

13. Water and air are both found in the spaces between the particles in soil. Which soil has the smallest spaces and keeps water from moving through it?
 - A. Sand
 - B. Clay

14. Which soil dries out the fastest because water moves through it quickly?
 - A. Sand
 - B. Clay

15. Which of these is a true statement?
 - A. Water and air occupy all the open spaces between particles in soil. Plants grow better in soils that have the right amount of air and water.
 - B. Plants cannot survive in soil if it has any water or air in it.

16. Organic matter in soil provide nutrients that plants need to live and grow.
 - A. False, organic matter needs to be removed from the soil immediately.
 - B. True, organic matter (living and once living things such as decaying plants and animals such as worms) provides nutrients that plants need to survive.

17. If plants are not growing well there is nothing you can do to the soil to fix it. You just need to give up.
 - A. True, soil cannot be changed because it would take millions of years.
 - B. False, you can fix problems with your soil and help the plants grow better.

18. If your soil is clay and holds too much water and not enough air you can add sandy soil to loosen it up so the water can move through it better.
 - A. True, good soil is usually a combination of the different types and mixing in sandy soil will improve the clay soil.
 - B. False, what you need to do is add lots and lots of organic material and rocks.

19. If your soil is not fertile enough to give the plants the nutrients they need to grow what should you add to your soil?
 - A. You should add as much sand as you can.
 - B. You should add nutrients by adding organic material and fertilizer.

20. Can plants grow without soil?

A. Yes, you can get some plants to grow for a short time with just water. Some scientists are experimenting with hydroponic (water) gardening.

B. No, without soil plants would die instantly. Scientists would make fun of you if you asked them about plants growing without soil.

What is the most interesting thing you learned during our Soil Unit?