

Groundwater Resources

How does soil type affect the movement of ground water?

What determines the texture of soil?

The percentage of sand, silt, and clay in the soil.

What is meant by the permeability of a soil? What is porosity and how is it related to permeability?

Porosity is the empty spaces between the soil and permeability is easily fluid can flow in between the soil particles. The more permeable the soil the higher the porosity and higher the amount of fluids that can flow through the soil. Soil with a higher porosity takes longer for the pores to fill up with water.

Based on your experiment, which type of soil is the most permeable? Which is the least permeable? How do you know?

Sand was the most permeable. Heavy Clay was the least permeable. It took less water to become full.

Explain why surface runoff, or rain not absorbed by the soil, occurs much more often in areas with soils with a high clay content.

Soils with high clay content are less permeable therefore it takes the water a lot longer to fully penetrate and fill the pores.

Soil type and texture are very important to farmers. Too little water in the soil may cause plants to wilt and die. Too much water in the soil can disrupt a plant's ability to take in oxygen. Based on your data, which type of soil do you think is best for agriculture? Explain your answer.

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Explain your answer.

A sandy loam would be a good choice. It allows the water to penetrate fairly quickly with minimal runoff and also the smaller pores help retain more of the water.

Farmers often have problems with soil erosion when they clear their fields after the growing season. Soil type is one factor that influences erosion. Some soil types are more prone to erosion than others. Based on the data you gathered in this experiment, which soil types do you think are the most easily eroded, soils with a high sand content or soils with a high clay content? Explain your answer.

Sandy soil has more erosion. the sand particles have little to no binding. Whereas Clay is tightly bound and less porous.