

Comparing soil POROSITY

T18

PURPOSE & HYPOTHESIS

I wanted to compare soil porosity.

I *thought* clay would hold the least water. I *thought* gravel will hold the most water.

RESEARCH

Soil is different mixes of air, water, organic matter, and minerals. This is a way that scientists categorize soil. Soil is made of different size particles. Gravel has big particles, sand has small particles. Clay has microscopic particles. The sizes of the soil affects soil porosity. Porosity means how many pores, or holes, the soil has. If the soil is porous it can hold more water

MATERIALS

Clay, sand, gravel, water, measuring cup, graduated cylinder.

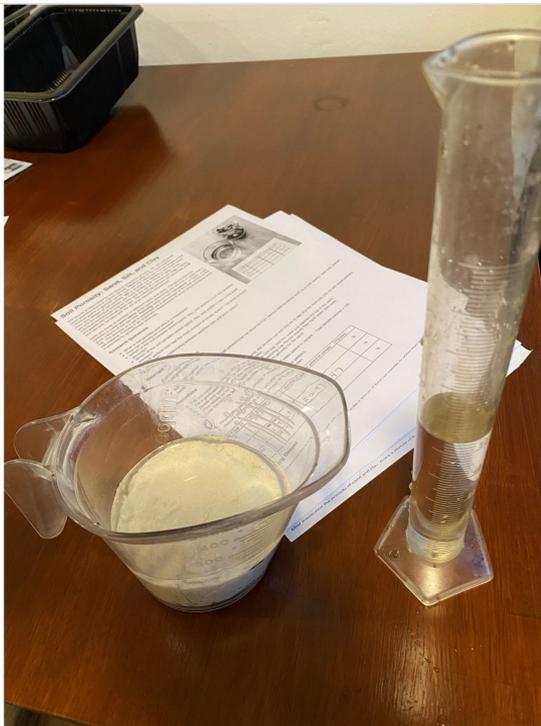
EXPERIMENT

We filled a measuring cup to 150 ml of clay. Then we used a graduated cylinder with water and filled the measuring cup to 200 ml with water.

We filled a measuring cup to 150 ml of sand. Then we used a graduated cylinder with water and filled the measuring cup to 200 ml with water.

We filled a measuring cup to 150 ml of pebbles. Then we used a graduated cylinder with water and filled the measuring cup to 200 ml with water.

PHOTOS



ANALYSIS

To each 150 ml sample we added enough water to total 200 ml.

Soil type	Total sample volume	Amount of water added to sample
sand	150 ml	135 ml
clay	150 ml	47 ml
gravel	150 ml	120 ml

Clay used the least amount of water 47 ml. Gravel used the medium amount of water 120 ml. Sand used the most amount of water 135 ml.

CONCLUSION

The sand is the most porous because when i poured the water in the sand absorbed the water. The clay is the least porous because it can not hold the water that much because there was no holes. My hypothesis was partially correct

REAL WORLD CONNECTION

Farmers need more porous soil they don't need clay and gravel they mostly need dirt and sand. So the air in the pores will help plants grow.

WORKS CITED

Spilsbury R & L (2011). "Lets Rock: soil". Heinemann library,
Chicago IL.