

POROSITY

Background:

Students will have a background knowledge of how oil is retrieved from the ground. They will be told that oil is retrieved from certain kinds of soil only and that it is actually recovered from within the "open spaces" of that soil.

Objective:

Students will gain an understanding that pores or 'spaces' exist between all molecules no matter how solid they may seem.

Demonstration:

The teacher will fill a glass beaker with marbles and ask students how much space is between the marbles. The teacher will then fill the beaker with colored water then explain to the students the concept of porosity as it applies to soil.

Student Activity: Students will divide into groups, each group obtaining samples of various kinds of available soils with different levels of porosity. (Sandstone, clay, etc.) Students will fill half of a syringe with one soil, fill it with water and record how long it takes for the water to filter through the syringe. Students will repeat this activity with each type of soil.

Follow-up:

Students will write a paragraph explaining which soil has the most porosity. They will then state which type of soils they think oil might be found in. A class discussion of their responses will follow.