

Materials:

- 1 bag of dark sand
- 1 bag of light sand
- 1 bag of soil
- 1 bag of small gravel
- Ruler
- Water in a spray bottle
- 1 clear plastic cup per student
- Plastic spoons
- 10 clear plastic straws



Background information:

Core sampling is one way that geologists determine the geologic formation of rocks and sediments when exploring for oil and gas.

Instructions:

1. Using the ruler to measure, add a 1 cm layer of one of the earth materials to the cup and mist with the spray bottle until damp, but don't soak. Layer the types of earth materials in any order you choose.
2. Place another earth material 1 cm deep on top of the first layer. Moisten with water until damp.
3. Continue alternating layers of earth materials and water. The layers should be a total of 4 cm deep in the cup.
4. Use a straw to extract a core sample by pushing the straw straight down through the layers of the cup.
5. Place your finger tightly over the top end of the straw and withdraw it from the cup. Observe the layers in the straw core sample.
6. Lay several core samples from different cups side by side. Compare results.

Note: Some pupils will hit rock and find it difficult to continue. This relates to real-world drilling and why drill bits are used to churn up and break rock in the sampling path.

Assessment:

1. What is a core sample?

2. What do petroleum Geologists look for when they examine core samples?
