

CUPCAKE CORE SAMPLING

Trying to “see” what is beneath the surface of the Earth is one of the jobs of a geologist. Rather than digging up vast tracts of land to expose an oil field or to find some coal bearing strata, core samples can be taken and analyzed to determine the likely composition of the Earth’s interior. In this activity students model core sampling techniques to find out what sort of layers are in a cupcake.

Materials Needed:

Cupcake mix	Plastic knives
Baking cups	Food coloring
Frosting	Drawing paper
Plastic transparent straws	

Directions:

Make cupcakes with at least three layers of colored batter. Provide each student with a cupcake, straw, and drawing paper. Baking cups and frosting will prevent the students from seeing the interior of the cupcakes in much the same way that a geologist can’t see the interior of the Earth. Ask the students how they might get more information about the cupcake without peeling the foil or cutting it open with a knife. Someone may suggest using the straw to take a core sample. Show them how to drill the straw into the cupcake using a rotating motion and pull out a sample. The students should make a drawing of the cross section of their cupcake based on the information from the core samples. Each new sample should be carefully labeled and drawn in a different section of the recording paper. Finally, the students should cut open the cupcakes with a knife to compare them to the drawings.

Teacher Hints:

Keep relating what the students are doing to what real life geologists do. Nobody eats until the discussion is complete! (Adaptable for K-12)

