Slip Sliding Away

Objectives:

Students will make a model of the mantle of the earth.
Students will manipulate lab materials safely.
Students will observe the model and draw conclusions.

Materials:

Colored liquid, white liquid, tablespoon, teaspoon, zip bag, graduated cylinder

Procedure:

1. Put 30 ml (2 tablespoons) of the white liquid into the zip bag.
2. Add 10 ml (2 teaspoons) of the colored liquid. Knead until all the liquid is absorbed.
3. Remove the material from the bag and make observations.

Results:

1. What happened as you kneaded the materials together?

2. Is this material a solid or a liquid? How do you know?

3. If there were two solid objects sitting on this material and it moved, what would happen to the two solid objects?

4. The mantle of the earth is said to be semi-solid. How is the mantle like the material you have just made?

Slip Sliding Away
Teacher's instructions

Objectives:

Students will make a model of the mantle of the earth.
Students will manipulate lab materials safely.
Students will observe the model and draw conclusions.

Materials:

4% Borax® solution, glue mixture, tablespoon, teaspoon, zip bag, food color, water, cup measure, Borax®, Elmer's White Glue®, 2 2-liter bottles

Procedure:

1. Dissolve ½ cup of Borax® in 1 quart of tap water; add several drops of food color. Pour this into one of the 2-liter bottles.
2. Prepare a 50:50 mixture of glue and water. Pour this into the other 2-liter bottle.
3. CAUTION! Do not allow students to eat or drink either of these solutions.
4. Solutions may be stored indefinitely; but be sure to shake each bottle before performing the experiment. Once the solutions are mixed together, they may be stored in small plastic zip bags.
5. All materials will clean up with water, except the food coloring.