Fish, Fossils & Fuel

Student Worksheet 1

**WONDER WHY…**

Do you ever wonder why oil and natural gas are referred to as “fossil fuels”? Do you think oil and natural gas can be made from old fossils? How long do you think it takes fossil fuelsto form?

**MATERIALS**

• 3 slices of bread (one slice of white, wheat and rye)

• Gummy fish candy or crackers

• Heavy books

• Paper towels

• Magnifying lens

• Clear drinking straws

**PROCEDURE**

1. Carefully pull the crust from each slice of bread. Crumble the crusts into very fine crumbs.
2. What eventually happens to microscopic ocean animals and plants when they die?

To illustrate, place the white bread on the paper towel. Put 3 gummy fish and bread crumbs on the bread.

1. As the plants and animals lay lifeless on the bottom of the ocean, the currents deposit sediments on top of the dead marine life. Place the rye bread on top of the white bread layer.
2. As millions of years passed, what continued to cover the dead plants and animals?

To illustrate, add another layer of gummy fish and bread crust on top of the bread.

Ocean and wind currents deposit more sand and sediment over the dead plants and animals.

1. Cover the other layers with the wheat bread. Fold the paper towel to cover your bread fossil.
2. Place textbooks or other heavy objects on top of the bread to simulate pressure. Leave your model one or two days to represent the passage of millions of years.
3. After one or two days, observe the “bread fossil.” Use a clear straw or glass tubing to extract several core samples from your model. Remove the core samples or observe the layers through the straw or tubing. How many extractions were “dry holes” (no evidence of gummy fish) and in how many did you “strike oil” (traces of gummy fish)? On a separate sheet, record your observations and use the data to develop a bar graph to show successful and unsuccessful drilling attempts. Include illustrations of the fossil model, the extracted sample of a “dry hole” and an “oil strike.” Label the parts of the core sample (straw drilling).
4. Try to separate the layers of bread. Why do you think the layers are difficult to separate?
5. Try to extract the fish. Can you identify the mold (impression in the bread) and the cast (gummy fossil)?

**JOURNAL**

Compare the colored residue of the gummy fish in the bread to the remains of the plants and animals that seep into the rock as fossil fuels are formed.

**VOCABULARY**

**Fossil** –

**Fossil Fuels –**

**Sediment** –

**Microscopic** –