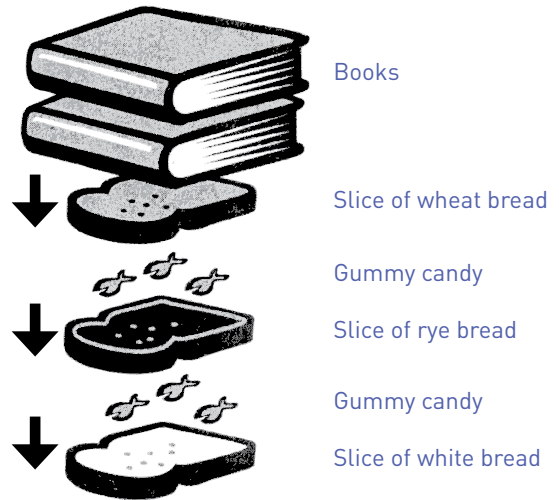


### Materials

- 3 slices of bread (one slice each of white, wheat, and rye)
- Gummy candy fish (or other gummy sea animals or plants)
- Heavy books
- Paper towels
- Magnifying lens
- Clear drinking straws

### Vocabulary Words

- \* **Fossil**—The remains or imprint of marine life embedded and preserved in rock layers deep in the earth.



### Teacher-Guided Procedure

1. Place a paper towel and give 3 to 4 gummy fish on each group's table. Give each group 3 slices of bread (one each of rye, white, and wheat). Instruct students to carefully pull the crust from the bread. What eventually happens to the sea animals and plants when they die? What piece of bread looks like the sandy floor of the ocean? *White*
2. Place a piece of white bread on top of the paper towel. Put a gummy fish on the bread. Explain that ocean currents deposit sediments on top of dead marine life, as they settle on the bottom of the ocean. What layer of bread could we use to represent the sediments? *Rye*
3. Place a piece of rye bread on top of the white bread layer. As millions of years passed, what continued to cover the dead plants and animals? *More sand and sediments were deposited by wind and ocean currents.*
4. Now cover the other layers. What does this last layer represent? *More sediment deposits*
5. Fold the paper towel to cover your bread **fossil**.\* Now, something is still missing to help our fish fossilize. What else could it be? *Pressure*. What could we do to put pressure on the "rock layers" of our bread fossil?
6. *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.
7. After one or two days, observe the bread fossil. Use a clear straw to "extract" a core sample and observe the layers through the straw.
8. Try to separate the layers of the bread. Why do you think the layers are difficult to separate? Try to extract the fish. Can you identify the mold? *impression in the bread* and the cast? *Gummy fossil?*
9. Compare the colored residue of the gummy fish in the bread fossil to the remains of the plants and animals that seep into the rock. The residue left by the gummy fish represents oil deposits left behind by dead ocean plants and animals. Over millions of years, these remains are pressurized to become oil and natural gas deposits.

### Concept Formation

As we journey back in time, let's think about how we can recreate the historical formation of fossils. What eventually happens to the sea animals and plants when they die? *They fall to the ocean floor.* As the plants and animals lie lifeless on the bottom of the ocean, the currents deposit sediments on top of the dead marine life. As these layers increase, the pressure also increases, which creates fossils and fossil fuels.