LESSON 5

How Do Plates Interact with Each Other?

ACTIVITY 5.1 – WHAT HAPPENS WHEN PLATES MOVE?

What Will We Do?

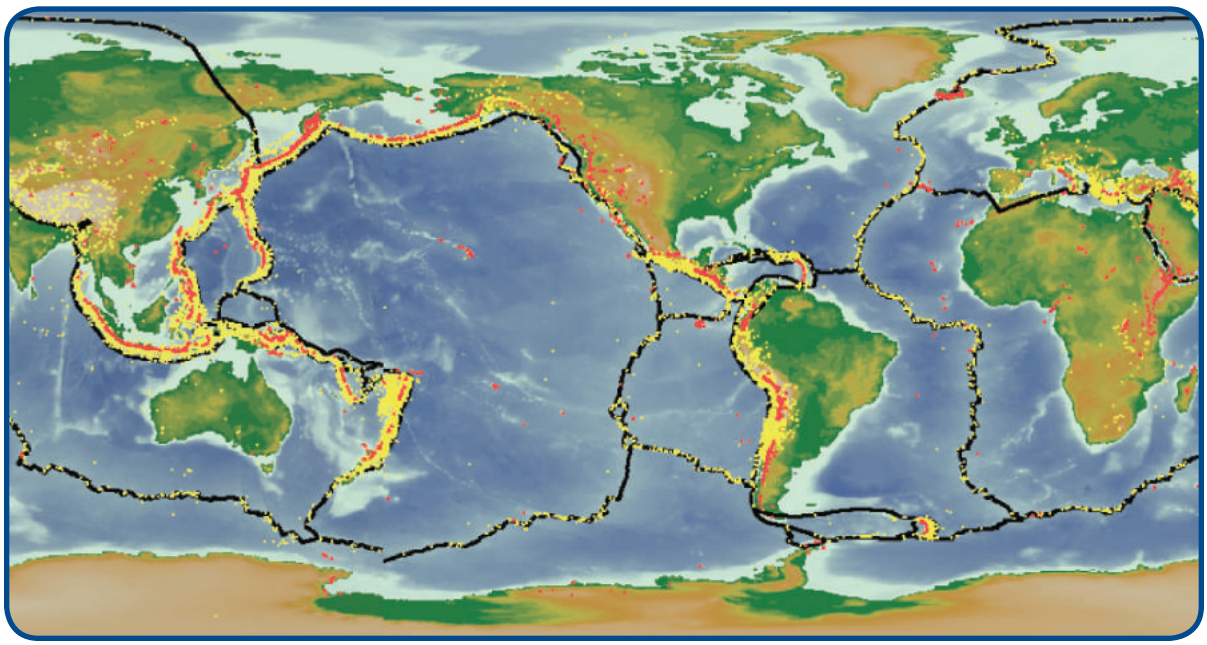
We will determine how the patterns of earthquakes and volcanoes on Earth are related to Earth's plates.

Prior Knowledge

1. What do you already know about earthquakes?

2. What do you already know about volcanoes?

The following map shows the earthquakes (yellow dots) and volcanoes (red dots) plotted on Earth. Use this map to answer the questions that follow.



3. What kind of pattern do you observe on this map?

4. How might geologic events and features (such as earthquakes and volcanoes) be related to plate tectonics? Use any knowledge you have gained.

Procedure

1. Obtain a sheet of graham crackers and (1) cube of gelatin.

2. Break your sheet of graham crackers in half.

3. Place your cube of gelatin on top of one of your squares of graham crackers.

4. Place the two squares of graham crackers next to each other. The graham crackers should be touching.

5. Slowly and gently, slide the crackers past one another while keeping the graham crackers touching.

   a. Record your observations about the graham crackers.

   b. Record your observations about the gelatin.

Making Sense

1. What event did you just simulate? Why do you think this?

2. What do the graham crackers and gelatin represent?

3. What are the similarities of this simulation to the real world? What are the differences?

Volcano Simulation

You will watch a short video clip several times. Watch closely and list some of your observations as you watch.

Making Sense

1. What happens when two plates move toward each other?

2. What happens when two plates move away from each other?

3. Why do you think this happens?

4. What happens when two plates move along side each other? (Hint: Think about the graham cracker and gelatin activity.)