

Lesson 8: Modeling Convection in the Mantle

**Purpose:** To model convection in the mantle and to identify movement in the earth's mantle as one cause of plate movement, earthquakes, and volcanoes.

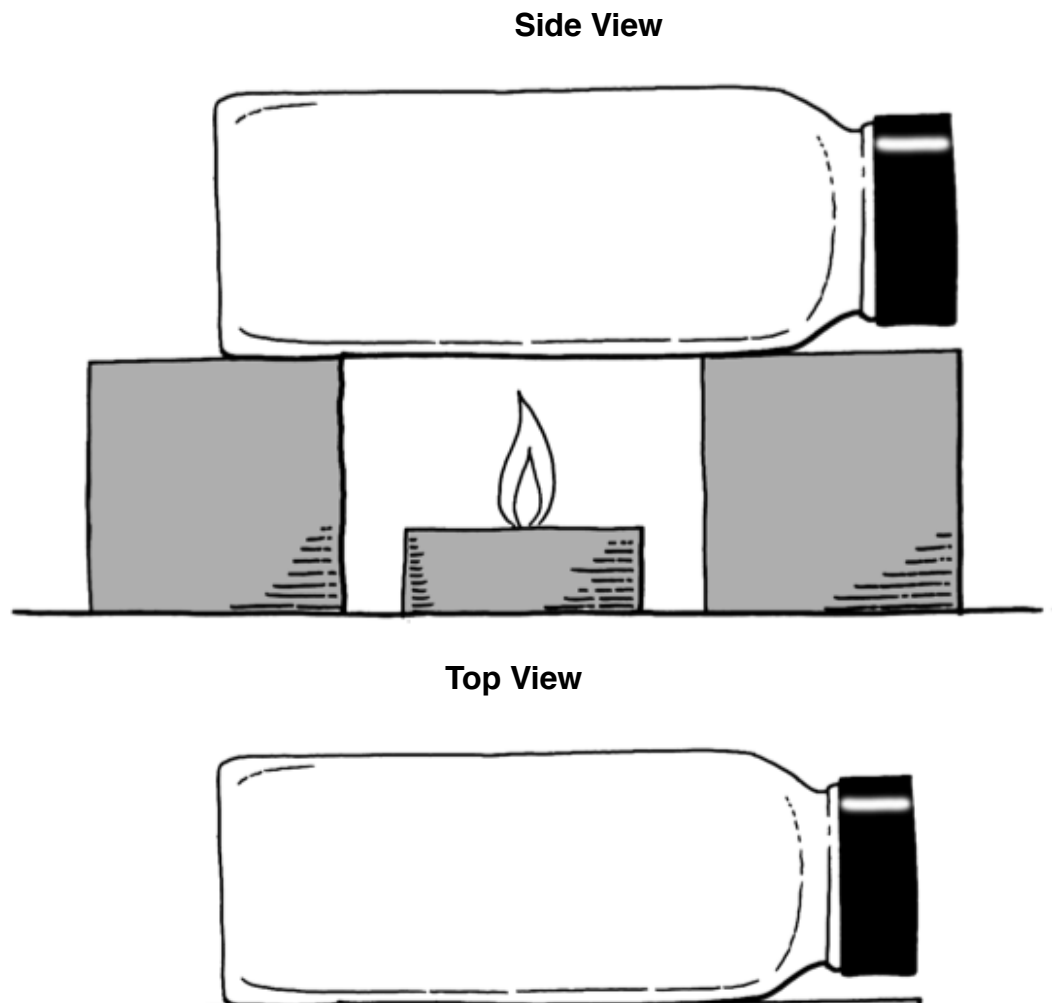
**Guiding Questions:** How is convection connected to plate movement, earthquakes, and volcanoes?

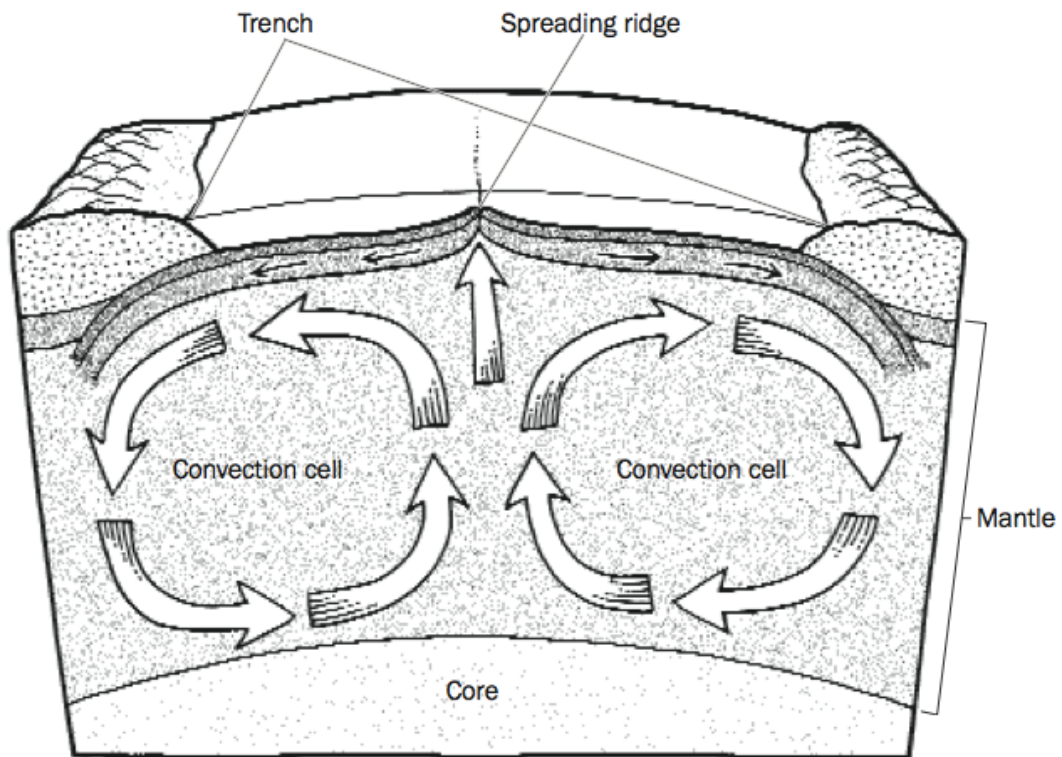
**General Instructions**

- 1. Open the XPT book to page 105. Review the safety tips.
- 2. Collect the necessary materials for the activity. Follow step 4 on page 106 for how to setup your materials.
- 3. Follow steps 5-9 on page 106.

**Diagram**

- 1. Draw arrows on both diagrams to show the movement of the fluid in the jar.
- 2. Add labels in both diagrams to indicate where the fluid is warmer and cooler.
- 3. What observations of the fluid's movement did you make?





4. Compare the diagram on page 1 to the diagram here on page 2. Label your diagram with the parts shown here. You don't need to answer anything here. Just label the diagram on page 1.
- a. Which part would be the mantle?
  - b. What would be the core?
  - c. What is the convection cell?
  - d. What part is/are the trench(es)?
  - e. What part is the spreading ridge?