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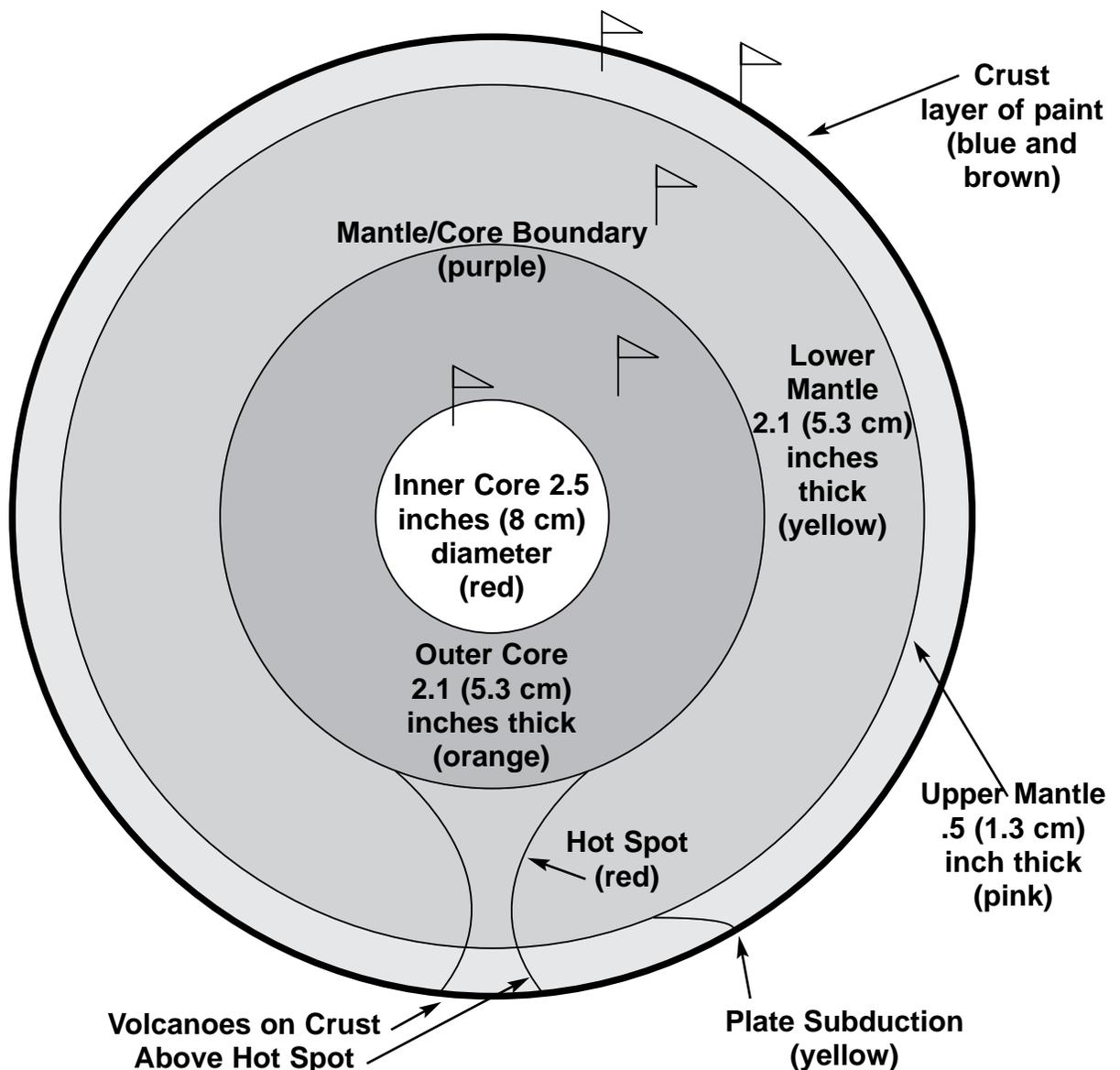
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# Earth's Layers (cont.)

## Earth Pizza (cont.)

### Closure

- Discuss the thickness of each section with the class to help them realize how thin the crust is compared to the rest of the earth.
- Place a marker for each section, using a flag made from a small triangle cut from a file card. This flag should have the name of the section, its thickness, temperature, and state of matter (e.g., solid) of the material. Hold the flags in place with toothpicks or T-pins.
- Use tempera paint to illustrate subduction of crustal plates and fountains of hot spots as shown in the illustration below.



### Extender

The model will dry within 24 hours but remains soft and flexible. This “Earth Pizza” can be divided into sections with a knife or pizza cutter for each student to keep.

# Shifting Crust

**Overview:** *Students will simulate the layers of rock in Earth's crust.*

## Materials (per group)

- 3 pieces whole wheat bread
- smooth peanut butter
- plastic spreading knife
- transparency and copies of page 29
- transparency of page 27
- copies of page 30
- strawberry jam
- 2 Tbs. (30 g) melted plain chocolate bar
- waxed paper and napkin or paper towel

## Lesson Preparation

Melt the chocolate bars in the microwave or over boiling water on a hot plate.

## Activity

1. Review the transparency of page 27.
2. Have the students wash their hands and then divide them into small groups. Distribute the materials to each group.

3. Instruct the students to spread the waxed paper in the middle of their work areas and put the slices of bread on it. Have them work together to make a sandwich as follows:

Spread a thin layer of chocolate on a slice of bread and spread peanut butter over it.

Spread a thin layer of chocolate on a second slice of bread and spread jam over it.

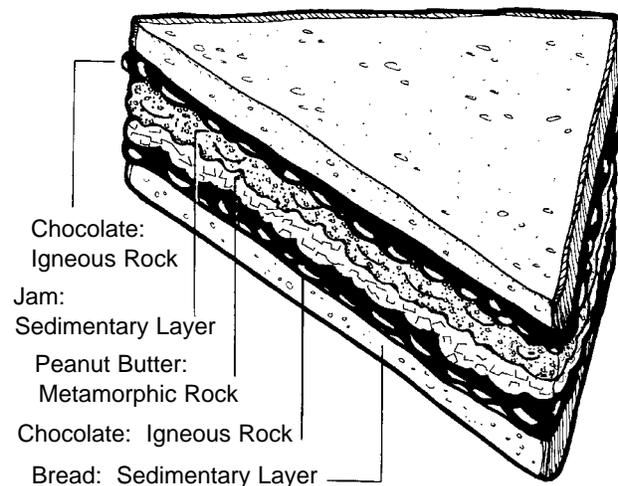
4. Explain to the students what each material represents.

Chocolate—igneous rock that was melted and forced between layers of rock.

Peanut Butter—metamorphic rock, made by rock changed through pressure and heat.

Jam—sedimentary rock with seeds being sedimentary rocks deposited in the ocean

Bread—more sedimentary layers



## Closure

- Tell the students to put their bread together into a sandwich, with the bottom layer being the bread with peanut butter on it. Have them slice their sandwich in half. Show the transparency of The Movement of the Earth's Crust (page 29) and discuss it. Give a copy of it and the Sandwich Faults activity sheet (page 30), to each group and let them manipulate their sandwich to demonstrate the three types of faults. As they do so, have them draw each of these on the Sandwich Faults worksheet. Discuss the drawings with the students.