



### Plate Tectonics Lesson 1: “The Solve”

#### Student Handout

#### I. Watch the Mosa Mack Mystery.

Either on your own, in a small group or as a class (your teacher will let you know), watch Mosa Mack’s episode on Plate Tectonics. Then, fill out the questions below. Include a time code in your answer as evidence of where you found your answer.

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

#### Episode Questions

1. What does Mosa notice about the bones in Asia and Antarctica? Are they fakes?
2. Mosa and her team find out that all the receivers in North America have moved west about an inch. What does this prove?
3. What is making the floaty toys move in the bathtub if the bubbles aren’t on?
4. After seeing the magma spill out of an underwater volcano, what does Mosa discover is underneath the plates that is causing them to move?
5. Mosa and her team go back in time 200 million years and try to adjust their map to show what continent they are on. Why is Mosa not able to tell Billy and Dullis exactly where they are?



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6. What did Mosa figure out? How did the fossils separate?

### II. Vocabulary Activity

Note: Your teacher will tell you whether you will complete this activity [online here](#), or offline by following the instructions below.

1. Using the materials at your table, cut out your vocabulary cards along the **solid lines**.

2. Write the definitions on the back of the cards. Then, match the vocabulary word with the correct picture on the “Plate Tectonics Mind Map.” When you’re ready to glue, raise your hand so you can check your Mind Map with your teacher.

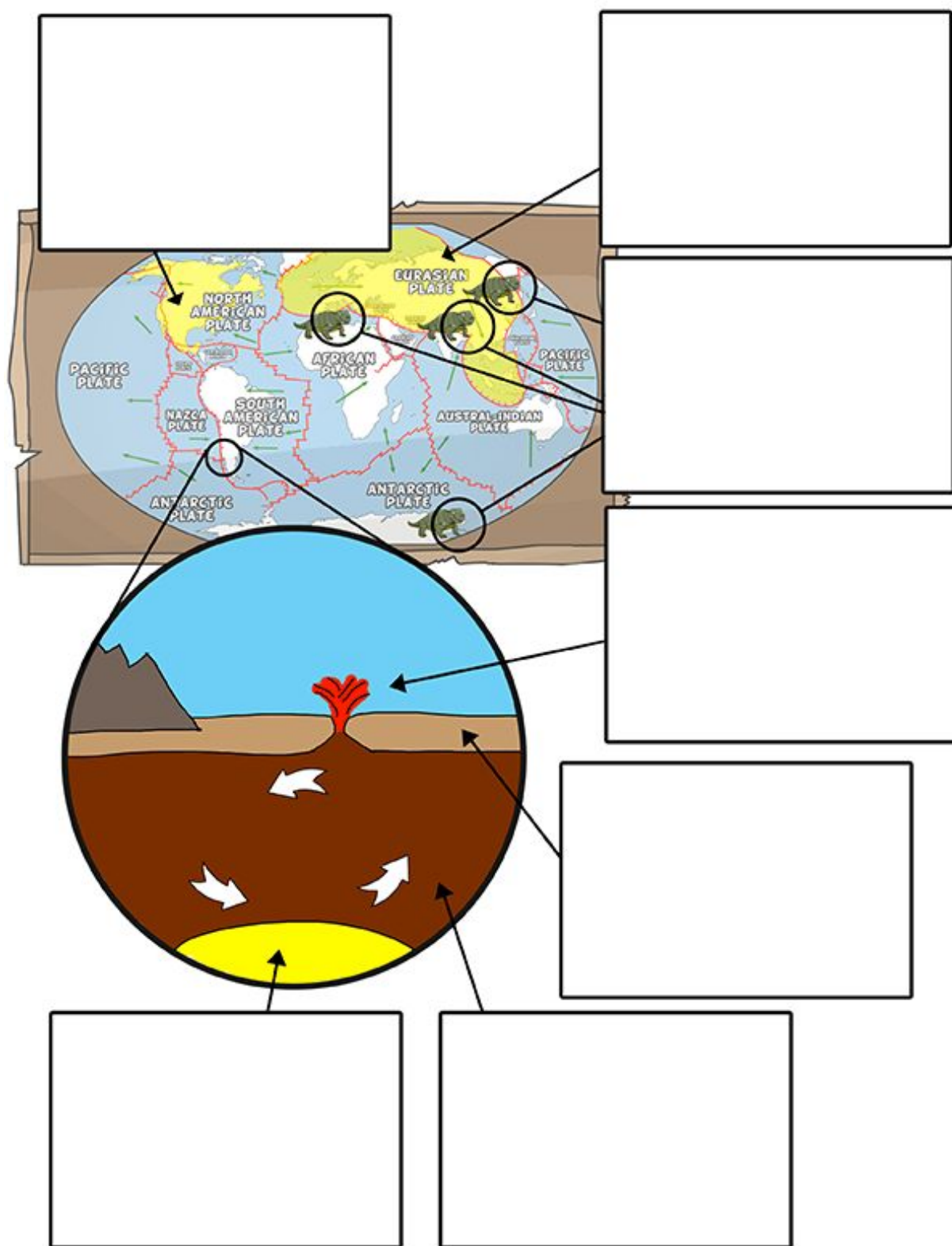


3. Fold along the dotted line on each vocabulary card to create a flap. Put glue **ONLY** on the hinge of your vocabulary cards ( the word should be on top). **You should be able to open the flap to see the definition and the picture underneath.**
4. Discuss with your group:
  - a. What is the difference between a **tectonic plate** and a **continent**?
  - b. How is **magma** different from **lava**?
  - c. Why do you think the “super-hot” Earth’s core is important in this whole process?
  - d. What do you already know about the earth’s plates and their motion?
  - e. If you wanted to go touch an earth’s plate, where would you go?



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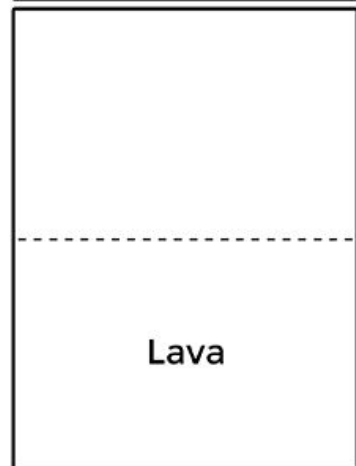
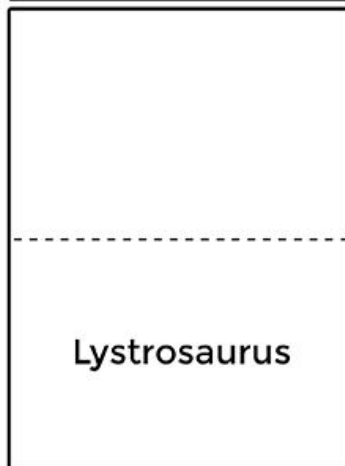
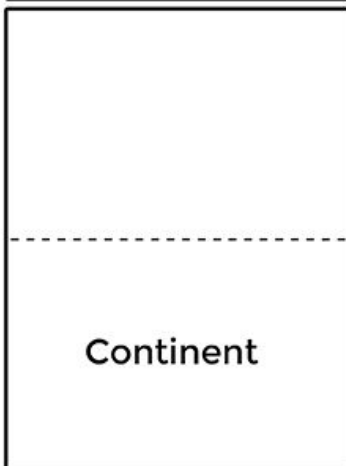
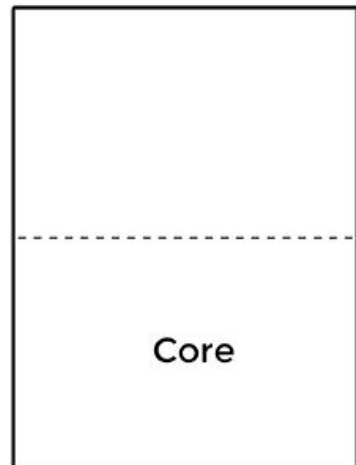
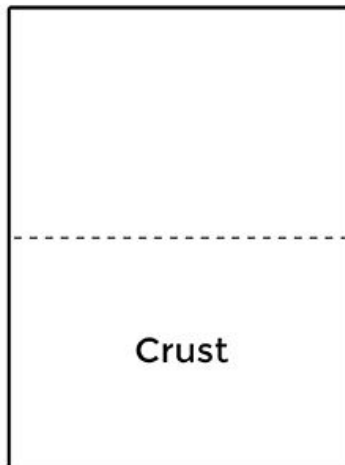
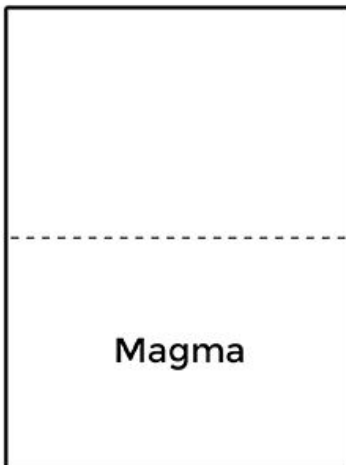
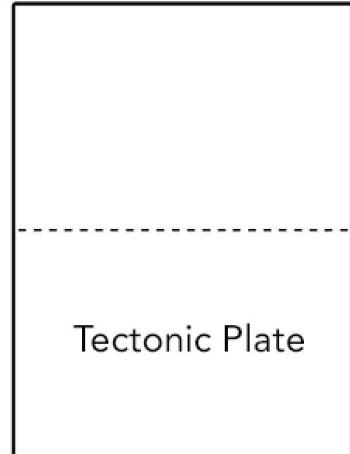


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### Mind-Map Vocabulary

- **Tectonic Plates:** Earth's outer shell, divided into several hard and rigid plates that glide slowly over the mantle
- **Continent:** One of several very large landmasses on Earth
- **Lystrosaurus:** A heavily built, herbivorous animal, approximately the size of a pig
- **Crust:** The outermost layer of Earth
- **Magma:** A mixture of very hot melted or semi-melted rock that is found beneath the surface of the Earth
- **Core:** The deepest, hottest layer of Earth
- **Lava:** The molten rock expelled by a volcano during an eruption





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### III. Quiz: Check for Understanding

Complete the exit ticket below *or* you can take the quiz online!

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

1. What do you call the pieces that are moving on Earth's surface?
  - a. Oceans
  - b. Land
  - c. Fossils
  - d. Plates
2. A continent is the same as a tectonic plate. True or false?
  - a. True
  - b. False
3. Tectonic plates make up the Earth's \_\_\_\_\_.
  - a. Crust
  - b. Core
  - c. Magma
  - d. Lava
4. How far do Earth's plates move a year on average?
  - a. 1 foot
  - b. 10 feet
  - c. 1 centimeter
  - d. 1 inch
5. Why are Earth's plates moving?
  - a. There are vibrations coming from the Earth's core causing them to move.
  - b. The Earth's plates are floating on a liquid called magma, which is moving because of the heat.
  - c. The plates have tiny hair-like legs that move them from side to side.
  - d. There is a magnetic pull on all the plates towards the North Pole.