Name: _____ **Date:** _____

Answer Key: Dare to Map the Moving Earth: 2nd Grade Tectonic Challenge

Young geologists transform into disaster-preparedness experts by analyzing how shifting puzzle-piece plates create deep-sea trenches and mountain peaks.

---

1. Imagine you are building a town near a 'Transform' boundary where plates slide past each other like two cars on a road. What should you build your houses out of to stay safe?

Answer: C) Flexible materials that can wiggle

At transform boundaries, the ground shakes during earthquakes. Flexible materials absorb the energy without snapping or falling apart.

2. When two ocean plates pull apart, hot melted rock called _____ rises up to fill the gap and cools down to make new ocean floor.

Answer: B) Magma

Magma is the name for liquid rock under the Earth's surface. When it reaches a divergent boundary, it creates new crust.

3. Is it true that the giant plates under our feet move about as fast as your fingernails grow?

Answer: A) True

Tectonic plates move very slowly, usually only a few centimeters every year, which is the same speed as fingernail growth.

4. If you found a deep, dark trench at the bottom of the ocean, what is likely happening to the Earth's plates there?

Answer: A) One plate is hiding under another

At convergent boundaries, one plate often slides beneath another (subduction), creating a deep valley called a trench.

5. Volcanoes can only form on land and never under the cold ocean water.

Answer: B) False

Name: _____ **Date:** _____

Many volcanoes, like the ones that formed the island of Surtsey or parts of the Mid-Atlantic Ridge, start on the ocean floor.

6. An earthquake happens because plates get _____ on each other and then suddenly snap free, releasing energy.

Answer: B) Stuck

Friction causes plates to get stuck. Pressure builds up until they 'snap' and move, which causes the ground to shake.

7. You see a mountain range with jagged peaks and no smoke. How did these mountains most likely get there?

Answer: C) Two plates crashed and wrinkled up

When two continental plates collide, they squeeze and fold the crust upward to form tall mountain ranges like the Alps.

8. Scientists use a tool called a _____ to listen to the Earth and measure how big an earthquake is.

Answer: C) Seismograph

A seismograph records the vibrations and waves sent through the ground during an earthquake.

9. Most volcanoes and earthquakes happen in the middle of a plate rather than at the edges.

Answer: B) False

Most geological activity happens at plate boundaries (the edges) where the plates interact and move against each other.

10. Why is the earth's surface like a giant jigsaw puzzle?

Answer: A) Because it is made of many pieces called plates

The Earth's lithosphere is broken into several large and small tectonic plates that fit together but move independently.