

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Answer Key: Beat the Heat: Tectonic Plate & Volcano Challenge for 4th Grade

Prove you can track shifting tectonic plates and identify eruption patterns before the lava flows! Match landforms to the movements that create them.

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**1. Imagine the Earth is like a giant puzzle. What do scientists call the massive, moving pieces that make up the Earth's outer shell?**

**Answer:** B) Tectonic plates

The Earth's surface is broken into large sections called tectonic plates that float on the softer layer underneath.

**2. True or False: Most earthquakes happen in the middle of a plate rather than along the edges where plates meet.**

**Answer:** B) False

Most earthquakes occur at plate boundaries (the edges) because that is where the plates rub, crash, or pull apart.

**3. When two plates push against each other and the ground crumples upward, it often forms a \_\_\_\_\_.**

**Answer:** B) Mountain range

Mountain ranges, such as the Alps, are created when tectonic plates collide and push the Earth's crust up.

**4. What is the name for the liquid rock that is found \*underground\* before a volcano erupts?**

**Answer:** C) Magma

Liquid rock is called magma while it is under the surface; once it flows out of a volcano, it is called lava.

**5. True or False: Underwater volcanoes can erupt and eventually grow so tall that they form new islands.**

**Answer:** A) True

Surtsey in Iceland is a famous example of an island that was formed by an underwater volcanic eruption.

**6. An earthquake's vibrations travel through the ground in the form of \_\_\_\_\_.**

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**Answer:** A) Seismic waves

Seismic waves are the energy ripples that move through the Earth, causing the ground to shake during an earthquake.

**7. Which tool do scientists use to measure and record the strength of an earthquake?**

**Answer:** B) Seismograph

A seismograph detects the movement of the Earth and draws lines on paper or digital screens to show the shake's size.

**8. True or False: Tectonic plates move very quickly, about the same speed as a car driving on a highway.**

**Answer:** B) False

Tectonic plates move very slowly, usually only about as fast as your fingernails grow each year.

**9. A volcano that has not erupted in a long time but might erupt again in the future is called \_\_\_\_\_.**

**Answer:** C) Dormant

Dormant means 'sleeping.' These volcanoes are quiet now but still have the potential to wake up.

**10. What often forms at a divergent boundary where two plates are pulling apart from each other?**

**Answer:** B) A rift valley

As plates pull apart, the land between them can sink, creating a rift valley or a new ocean floor.