Name: _____ **Date:** _____

Answer Key: Your Minecraft Survival Guide to Earthquakes & Volcanoes for 3rd Grade

Evaluate geological hazard zones beyond simple facts by analyzing tectonic plate boundaries and constructing disaster prevention strategies.

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1. If you are building a 'survival base' near the Ring of Fire, why is the ground more likely to shake there than in the middle of a country?

Answer: B) Giant tectonic plates are colliding or sliding past each other

Earthquakes and volcanoes occur most often at plate boundaries where massive sections of Earth's crust interact.

2. Imagine a tectonic plate is like a giant floating cracker. Scientists call the hot, melted rock that stays deep underground ___.

Answer: C) Magma

Molten rock is called magma while it is underground; it only becomes lava once it breaks through the surface.

3. True or False: If an earthquake happens under the ocean, it can create a giant, dangerous wave called a tsunami.

Answer: A) True

The sudden movement of the sea floor during an earthquake displaces water, creating powerful tsunami waves.

4. You see a mountain with a wide, flat shape like a warrior's shield. What does this tell you about the lava that formed it?

Answer: B) The lava was thin and runny, spreading out far

Shield volcanoes, like those in Iceland or Hawaii, form from runny lava that flows easily over long distances.

5. When two plates get stuck and then suddenly 'snap' into a new position, the energy released travels in ___.

Answer: A) Seismic waves

Seismic waves are the vibrations that carry the energy of an earthquake through the Earth.

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6. True or False: Volcanoes can only form on land and are never found at the bottom of the deep ocean.

Answer: B) False

Many volcanoes and lava vents exist along the ocean floor, especially at mid-ocean ridges where plates pull apart.

7. An engineer wants to build a house that won't fall during an earthquake. Which design would be the smartest to use?

Answer: C) A building with a flexible base that can wobble without breaking

Flexibility allows a building to absorb the energy of seismic waves rather than snapping or collapsing.

8. If you find a rock that has many tiny holes in it (like a sponge) near a mountain, what most likely happened?

Answer: B) Gas bubbles were trapped in lava as it cooled quickly

Volcanic rocks like pumice or scoria have holes because gas was trapped in the molten rock as it hardened.

9. The tool scientists use to measure and record the strength of an earthquake's vibrations is called a ___.

Answer: B) Seismograph

A seismograph detects and graphs the intensity of the ground shaking during tectonic movements.

10. True or False: Some islands, like the Galápagos or Hawaii, were actually created by volcanoes erupting from the ocean floor.

Answer: A) True

Volcanic activity can build up layers of lava over time until the mountain rises above the sea level to form an island.