GRADE 6 SCIENCE

Earthquakes & Volcanoes

Name: Date:

INQUIRY

In 2011, an earthquake in Japan triggered a tsunami that reached the Korean coastline. How can one event affect an entire region?

Discuss with your partner. Write your initial ideas below:

Key Vocabulary

Term	Definition
Focus	The point underground where an earthquake starts.
Epicentre	The point on the surface directly above the focus.
Richter Scale	Measures earthquake magnitude (energy released).
Ring of Fire	Zone around the Pacific with 75% of the world's volcanoes.
Shield volcano	Wide, gentle slopes. Runny lava. Less explosive.
Composite volcano	Steep cone. Thick lava. Very explosive.

Part A — Knowledge

1. Explain the difference between the focus and the epicentre of an earthquake. [2 marks]

2. Why do most earthquakes and volcanoes occur at plate boundaries? [2 marks]

3. Compare shield volcanoes and composite volcanoes. Give one example of each. [4 marks]

Part B — Regional Connections

4. Japan, South Korea, and eastern China are all near the Ring of Fire. Compare how each country prepares for earthquakes. [4 marks]

5. Nanjing's Zifeng Tower was designed with earthquake resistance. Germany rarely builds earthquake-resistant structures. Explain why. [3 marks]

6. Mount Hallasan on Jeju Island (Korea) is a shield volcano. What does this tell us about: (a) its shape (b) lava type (c) eruption style? [3 marks]

Part C — Inquiry Extension

7. A M 8.0 earthquake releases ~32× more energy than M 7.0. The 2008 Sichuan earthquake was M 8.0 and the 2016 Gyeongju (Korea) earthquake was M 5.8. Explain why the impacts were so different. [4 marks]