

# Intermediate Science 7

## Unit 4: Earth Crust

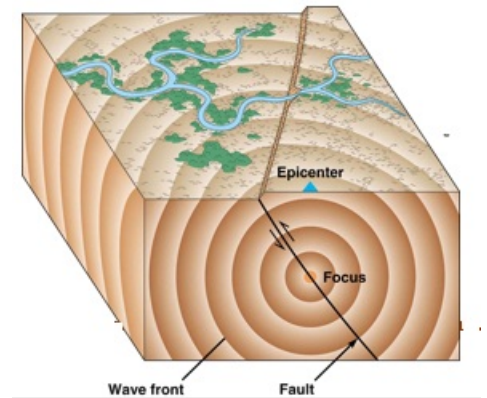
### Topic 3: Earthquakes, Volcanoes and Mountains



Student Name \_\_\_\_\_

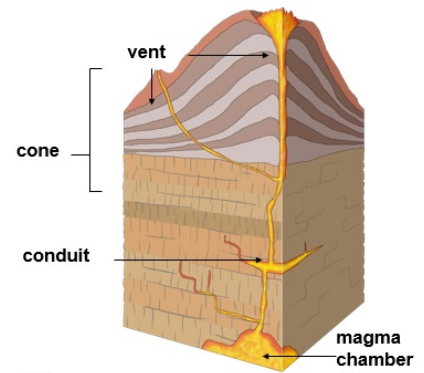
#### What Is An Earthquake?

- Earthquake = Vibration of the Earth produced by the rapid release of energy from forces built up due to plate tectonics in Earth's crust.
- Earthquakes occur on faults. A fault is a thin zone of crushed rock separating blocks of the earth's crust. When an earthquake occurs on one of these faults, the rock on one side of the fault slips with respect to the other.
- When this energy is released, it travels in seismic waves.
- Notice that the earthquakes coincide with plate boundaries
- Seismograph is a device used to measure earthquakes
- Richter Scale measures the strength of the earthquake
- Tsunami spreads out from an earthquake's epicenter and speeds across the ocean.



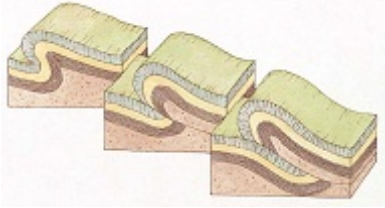
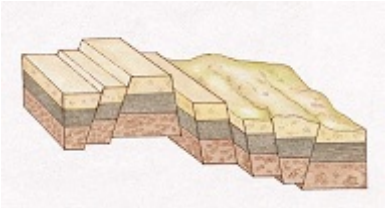
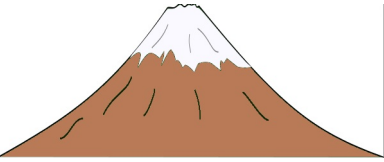
#### What Is A Volcano?

- A volcano is a vent or 'chimney' that connects molten rock (magma) from within the Earth's crust to the Earth's surface.
- The volcano includes the surrounding cone of erupted material.
- Magma is molten rock below the earth's surface
- Lava is molten rock below the earth's surface
- Ring of Fire is the name given to the volcanoes encircling the Pacific Ocean
- Volcanoes are caused by:
  - Converging boundaries
  - Diverging boundaries
  - hot spots



## What Is A Mountain?

- A large mass of rock or landform that rises a great distance above its base (about 300 meters)
- Mountain formation is due to:

Folding	Faulting	Volcanic eruptions
		
<ul style="list-style-type: none"> <li>• Most common type of mountains</li> <li>• A bend in rock layers</li> <li>• Created when plates collide at convergent boundaries.</li> <li>• formed by the folding of rock layers during plate collisions</li> </ul>	<ul style="list-style-type: none"> <li>• These mountains form when faults or cracks in the earth's crust force some materials or blocks of rock up and others down</li> </ul>	<ul style="list-style-type: none"> <li>• When magma is forced up by pressure from deep within Earth, it can uplift the rock and create features on the surface. The magma may erupt as volcanoes.</li> </ul>

## PART A: MULTIPLE CHOICE

*Instructions: Shade the letter of the correct answer on the computer scorable answer sheet provided.*

- Which of the following describes the build up and release in the Earth's crust?
  - Earthquake
  - Fault
  - Mountain
  - Volcano
- How do vibrations radiate from the focus of an earthquake?
  - Longitudinal waves
  - Seismic waves
  - Transverse waves
  - Typanic waves
- What is the name of the instrument used to measure earthquake?
  - Seismograph
  - Typanicgraph
  - Quake meter
  - Quake graph

4. What is used to calculate the magnitude of energy released by an earthquake?
  - (A) Richter scale
  - (B) Seismic scale
  - (C) Tectonic scale
  - (D) Temblor scale
  
5. Where do earthquakes frequently occur?
  - (A) Plate surface
  - (B) Plate boundaries
  - (C) Plate vacuum
  - (D) Ocean beds
  
6. What is the name of the surface along which rocks break and move during an earthquake?
  - (A) Fault
  - (B) Fold
  - (C) Richter
  - (D) Seismic
  
7. What other area may earthquakes may occur?
  - (A) Frequent civil activities
  - (B) Frequent explosive activities
  - (C) Frequent deforestation activities
  - (D) Frequent volcanic activities
  
8. Which of the following refers to an opening in Earth's crust that can release lava, smoke, and ash when it erupts?
  - (A) Earthquake
  - (B) Fault
  - (C) Mountain
  - (D) Volcano
  
9. What type of boundary causes volcanoes to form as the plates pull apart?
  - (A) Convergent boundary
  - (B) Divergent boundary
  - (C) Separation boundary
  - (D) Transform boundary
  
10. Where do volcanoes occur?
  - (A) Convergent boundaries
  - (B) Divergent boundaries
  - (C) Hot spots
  - (D) All of the above
  
11. Which of the following refers to a large landform that stretches above the surrounding land?
  - (A) Earthquake
  - (B) Fault
  - (C) Mountain
  - (D) Volcano

12. What happens to the plates when a fold mountain is created?

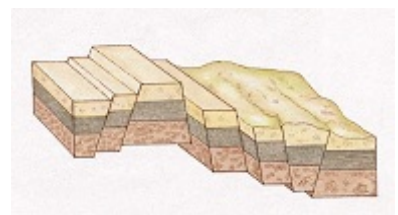
- (A) Collide
- (B) Diverge
- (C) Stationary
- (D) Transform

13. How are mountains formed?

- (A) Fault
- (B) Fold
- (C) Volcanic Eruption
- (D) All are correct

14. How are the mountains form in the picture below?

- (A) Fault
- (B) Fold
- (C) Volcanic Eruption
- (D) None are correct



15. Which event caused the change to the mountain?

- (A) Eruption
- (B) Flood
- (C) Hurricane
- (D) Landslide



**PART B : MATCHING**

**[5]**

Match each thermometer on the left with the best Descriptor on the right. Each Descriptor may be used only once. Place your answer on the scantron

<u>Term</u>	<u>Descriptor</u>
16. ___ Earthquake	A. A machine used by scientist to measure the strength of an earthquake
17. ___ Mountain	B. An opening in Earth’s crust that can release lava, smoke, and ash when it erupts.
18. ___ Volcano	C. A large landform that stretches above the surrounding land
19. ___ Fault	D. The surface along which rocks break and move during an earthquake.
20. ___ Seismograph	E. Shaking of the ground caused by the sudden release of energy stored in the bedrock