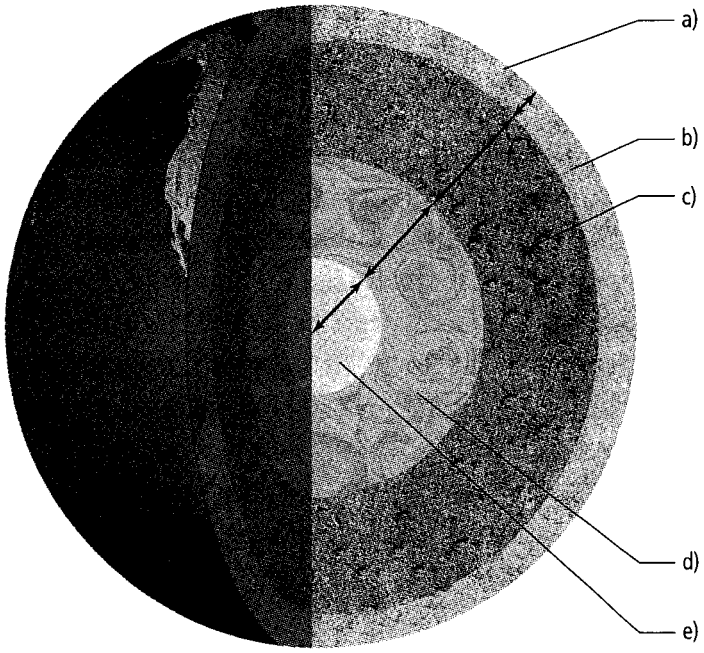
Use with textbook pages 520–522.

Layers of the Earth

Earth is made up of layers with distinct characteristics.

1. Label the layers of the Earth on the following diagram.



Layers of the Earth

2. Each layer of the earth has a varying thickness, state (solid, liquid, gas) and composition. Fill in the following table beginning with the innermost layer in the order that you would find the layers from the inside to the outside of earth.

Layer	Thickness	State	General composition
(a)			
(b)			
(c)			
(d)			
(e)			

3. What is the difference between the lithosphere and the asthenosphere?

Name Date

Comprehention
Section 12.2

Use with textbook pages 522-- 528

Features of plate tectonics

1. What do geologists believe heats the upper mantle portion of the asthenosphere?

2. What is one of the driving forces behind plate movement?

3. What is the difference between a rift valley and a spreading ridge?

4. What occurs when dense oceanic plates collide with a continental plate?

5. What events commonly occur at subduction zones?

6. When geologists record plate boundaries on a map, symbols are used to represent the three main types of plate interactions. Draw and label the three main symbols representing plate interactions.

   (a) _____

   (b) _____

   (c) _____

7. Describe the type of plate interactions that have occurred at the following geographic locations.

Geographic location	Plate interaction
1. East African Rift	
2. Juan de Fuca plate	
3. Islands of Japan	
4, Himalayan mountains	
5. San Andreas Fault	

8. When continental plates collide, does subduction occur? Explain your answer.

Name _____ Date _____

Applying Knowledge
Section 12.2

Use with textbook pages 528–536.

Seismic waves, earthquakes, and volcanoes

Seismic waves can be either body waves that travel underground or surface waves that travel along the surface of the Earth.

1. Fill in the table below, summarizing the different types of seismic waves.

Seismic wave	Abbreviation	General diagram of wave	Description of action	Type of material it travels through	Speed it travels at
primary wave					
secondary wave					
surface wave					

Measurement of Earthquakes

2. What is a seismometer?

_____

3. How does the term magnitude relate to how earthquake activity is recorded?

_____

4. What scale is often used to measure the magnitude of an earthquake?

_____

5. What is the difference between the focus of an earthquake and the epicentre?

_____

6. Explain the classification scale used to describe the depth of origin of earthquakes.

_____

7. For the three geographic locations listed below, classify the type of volcano found there and describe what type of events led to its formation.

Geographic location	Type of volcano	Description of events
Mount Garibaldi volcano		
Anahim Volcanic Belt		
Kraflia volcano		