Name **Earth’s Interior HW Packet**

**HW #1 Plate Tectonics** **(pages 676–683)**

**1.** Is the following sentence true or false? According to the theory of
plate tectonics, Earth’s plates move about quickly on top of the
crust.

**Continental Drift (page 677)**

**2.** The process by which the continents move slowly across Earth’s
surface is called .

**Sea-floor Spreading (pages 678–679)**

**3.** Is the following sentence true or false? The theory of sea-floor
spreading explains why rocks of the ocean floor are youngest near
the mid-ocean ridge.

**4.** Circle the letter that completes the sentence. Sea-floor spreading
 new oceanic crust at mid-ocean ridges.

|  |  |
| --- | --- |
| a. creates | b. destroys |

**The Theory of Plate Tectonics (pages 679–680)**

**5.** Heat from Earth’s interior causes convection currents in Earth’s
 .

**6.** Circle the sentences that are true about the theory of
plate tectonics.

a. The ocean floor sinks back into the mantle at subduction zones.

b. The heat that drives convection currents comes from solar energy.

c. Hot rock rises at mid-ocean ridges, cools and spreads out as
ocean sea floor.

d. Plate motions are the surface portion of mantle convection.

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**Plate Boundaries (pages 681–682)**

**7.** Identify each type of plate boundary.



|  |  |  |
| --- | --- | --- |
| a.  | b.  | c.  |

**Exceeds -** Use plate tectonics to explain where mountains form.

**HW #2 Section 22.5 Earthquakes (pages 684–689)**

**1.** An earthquake releases energy that is carried
by vibrations called .

**Stress in Earth’s Crust (page 685)**

**2.** Name three ways that stress can affect rocks.

a.

b.

c.

**3.** Is the following sentence true or false? Stress from moving tectonic
plates produces faults and folds in Earth’s crust. \_\_\_\_\_\_\_\_

**Earthquakes and Seismic Waves (pages 686–687)**

**4.** Why do earthquakes occur?

**5.** Is the following sentence true or false? The location underground
where an earthquake begins is called the focus.

**6.** The location on Earth’s surface directly above the focus of an
earthquake is called the .

**7.** Circle the sentences that are true about the physics of earthquakes.

a. Stress builds in areas where rocks along fault lines snag and
remain locked.

b. In an earthquake, rocks break and grind past each other,
releasing energy.

c. Potential energy is transformed into kinetic energy in the form
of seismic waves.

d. Potential energy increases as rocks break and move.

**8.** Typically, the first seismic waves to be detected at a distance are
 waves.

**Measuring Earthquakes (page 687)**

**9.** What devices do geologists use to record seismic waves?

**Seismographic Data (page 689)**

**10.** Most earthquakes are concentrated along .

**11.** Is the following sentence true or false? Some earthquakes will
occur in the interior of plates.

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**12.** Is the following statement true or false? When seismic waves
interact with boundaries between different kinds of rock within
Earth, they can be reflected, refracted, or diffracted.

**Exceeds -** How can earthquakes be used to map the location of a plate
boundary?

**HW #3 Section 22.1 Earth’s Structure (pages 660–663)**

**A Cross Section of Earth (pages 661–663)**

**4.** Circle the letters of the major layers of Earth’s interior.

a. crust

b. atmosphere

c. mantle

d. core

**5.** Scientists divide Earth’s interior into the crust, mantle, and core
based on the .

1. Much of the Earth’s crust is made up of .

**9.** The layer of Earth called the is found
directly below the crust.

**10.** Circle the letters of each sentence that is true about Earth’s mantle.

a. It is the thickest layer of Earth.

b. It is divided into layers based on the physical properties of rock.

c. It is less dense than the crust.

d. It is made mainly of silicates.

**11.** The lithosphere includes the uppermost part of Earth’s mantle and
Earth’s .

**12.** Is the following sentence true or false? Rock flows slowly in the
asthenosphere.

**13.** The stronger, lower part of the mantle is called the .

**14.** The sphere of metal inside Earth is called the .

**15.** Is the following sentence true or false? The outer core of Earth is
liquid.

**16.** Label the main layers of Earth’s interior in the diagram below.

a.

b.

d.

c.

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**Exceeds -** Describe the physical properties of the three layers of the mantle.

**HW #4 Section 22.6 Volcanoes** **(pages 690–696)**

**Formation of a Volcano (page 691)**

**2.** Is the following sentence true or false? Liquid magma is formed
when small amounts of mantle rock melt.

**3.** Describe how a volcano forms.

**4.** Describe how a volcano erupts.

*Match each feature of a volcano to its correct description.*

**Feature**

 **6.** pipe

 **7.** vent

 **8.** crater

 **9.** magma chamber

 **10.** caldera

**Description**

a. A narrow, vertical channel where
magma rises to the surface

b. An opening in the ground where
magma escapes to the surface

c. A huge depression created if the shell
of the magma chamber collapses

d. A bowl-shaped pit at the top of a
volcano

e. A pocket where the magma collects

**Location and Types of Volcanoes (page 693)**

**15.** Where do most volcanoes occur?

**16.** Is the following sentence true or false? A region where hot rock
extends from deep within the core to the surface is called a hot
spot.

**17.** Is the following sentence true or false? A composite volcano is
produced by a quiet eruption of low-viscosity lava.

**18.** An eruption of ash and cinders will produce a volcano called a(n)
 .

**19.** Is the following sentence true or false? A composite volcano is
formed from an explosive eruption of lava and ash.

**Other Igneous Features (page 696)**

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**20.** Circle the letters of the igneous features that are formed
by magma.

a. dikes

b. sills

c. volcanic necks

d. batholiths

**Exceeds -** How does the subduction of an oceanic plate result in the
formation of a volcano?

**HW #5 Section 22.3 Rocks and the Rock Cycle**

**(pages 670–675)**

*This section describes how rocks are classified. It also explains how rocks*
*change form in the rock cycle.*

**Reading Strategy (page 670)**

**Comparing and Contrasting** After you read, compare groups of rocks
by completing the table. For more information on this Reading
Strategy, see the **Reading and Study Skills** in the **Skills and**
**Reference Handbook** at the end of your textbook.

|  |
| --- |
| **Groups of Rocks** |
| **Rock Group** | **Formed by** | **Example** |
| Igneous |  |  |
|  |  | Sandstone |
|  | Heat and pressure |  |

**Classifying Rocks (page 670)**

**1.** Circle the letters of the major groups into which rocks are classified.

|  |  |
| --- | --- |
| a. sedimentary  | b. igneous  |
| c. calcite  | d. metamorphic  |

**2.** Scientists divide rocks into groups based on .

**The Rock Cycle (pages 674-675)**

**19.** Circle the letters of the sentences that are true about the rock cycle.

a. A metamorphic rock that melts and cools to form a new rock
becomes an igneous rock.

b. Forces within Earth and at the surface cause rocks to change
form in the rock cycle.

c. In the rock cycle, rocks may wear away, undergo
metamorphism, or melt and form new igneous rock.

d. The rock cycle is a series of processes in which rocks change
from one type to another continually.

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**Exceeds -** Describe the rock cycle