

inner core

outer core

mantle

crust

plates

fault

subduction

lithosphere

fault-block

folded

upwarped

volcanic

isostasy

1. The _____ is broken into about 30 sections that move around on the asthenosphere.
2. Because the _____ stops one type of seismic wave and slows another, scientists believe it is a liquid.
3. The pushing forces of two plates moving together causes rocks to buckle, forming _____ mountains.
4. A denser plate sinking under a less dense plate is called _____.
5. As erosion removes material from the tops of mountains and the mass of the mountain decreases, the crust is forced upward because of _____.
6. The _____ is thinnest under the oceans and thickest through the continents.
7. A cone-shaped feature made of layers of lava is a(n) _____ mountain.
8. _____ move so slowly that they can take more than a year to travel a few centimeters.
9. The innermost layer of Earth's interior is the _____.
10. Forces inside Earth sometimes push crust upward, creating _____ mountains.
11. Pulling forces form _____ mountains such as the Teton Range in Wyoming.
12. Even though it is solid, the _____ flows slowly.
13. A large fracture in rock along which movement occurs is called a(n) _____.

_____ 1. sea-floor spreading

_____ 2. mid-ocean ridge

_____ 3. supercontinent

_____ 4. reversed polarity

_____ 5. continental drift

a. magnetic field that points south

b. hypothesis stating large landmass broke up into smaller landmasses to form the continents, which then drifted to their present locations

c. process by which new ocean lithosphere forms

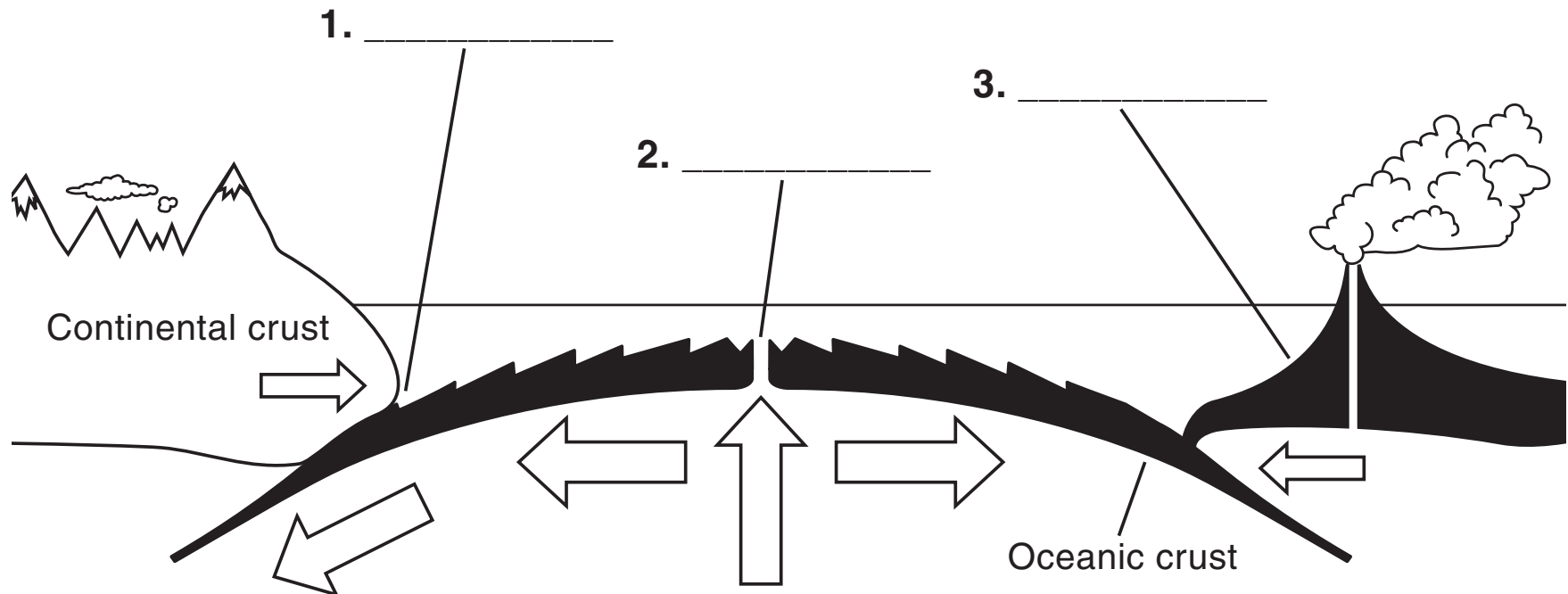
d. single landmass once formed by the continents

- _____ 1. asthenosphere
 - _____ 2. subduction zone
 - _____ 3. plate tectonics
 - _____ 4. lithosphere
 - _____ 5. convection cell
- a. outer layer of Earth made up of the upper part of the mantle and the crust
 - b. cycle in which heated material rises and cooler material sinks
 - c. solid layer of plastic mantle rock that flows very slowly
 - d. theory that explains how large pieces of the lithosphere move
 - e. region along a plate boundary where one plate moves under another plate

- _____ 1. Pangaea
 - a. process by which supercontinents form and break apart over time
- _____ 2. terrane
 - b. piece of lithosphere with magnetic properties different from those of its surroundings
- _____ 3. Panthalassa
 - c. supercontinent formed about 300 million years ago
- _____ 4. supercontinent cycle
 - d. process by which a continent breaks apart
- _____ 5. rifting
 - e. single large ocean covering Earth 300 million years ago

Directions: Study the following diagram. Then label each part with the letter of the correct description below.

- A. A mid-ocean ridge forms whenever diverging plates continue to separate, creating a new ocean basin. As the rising magma cools, it forms new ocean crust.
- B. When an oceanic plate converges with a less dense continental plate, the denser oceanic plate sinks under the continental plate.
- C. When two oceanic plates converge, the denser plate is forced beneath the other plate and volcanic islands form above the sinking plate.



- _____ 1. Pangaea
 - _____ 2. lithosphere
 - _____ 3. rift valley
 - _____ 4. sea-floor spreading
 - _____ 5. paleomagnetism
 - _____ 6. terrane
 - _____ 7. mid-ocean ridge
 - _____ 8. subduction zone
 - _____ 9. continental drift
 - _____ 10. convection cell
- a. region along a plate boundary where one plate moves under another
 - b. piece of lithosphere with a unique geologic history
 - c. crack in the center of a mid-ocean ridge
 - d. supercontinent formed about 300 million years ago
 - e. residual magnetism of rock
 - f. process by which new sea floor forms
 - g. layer that forms the thin outer shell of Earth
 - h. cycle in which heated material rises and cooler material sinks
 - i. undersea mountain range
 - j. hypothesis that the continents once formed a single landmass

- _____ 1. paleomagnetism
- _____ 2. transform boundary
- _____ 3. asthenosphere
- _____ 4. continental drift
- _____ 5. terrane
- _____ 6. sea-floor spreading
- _____ 7. rifting
- _____ 8. convergent boundary
- _____ 9. lithosphere
- _____ 10. divergent boundary

- a. the thin outer shell of Earth that is broken into several blocks
- b. boundary that forms where two plates collide
- c. process by which new sea floor forms as magma rises through a rift
- d. hypothesis that the continents moved to their present positions
- e. study of the alignment of magnetic minerals in rock
- f. boundary where two plates slide past one another horizontally
- g. layer of plastic rock just below the lithosphere
- h. forming of cracks in weakened continental or oceanic crust
- i. boundary at which two plates move away from each other
- j. piece of lithosphere with a unique geologic history

- _____ 1. compression
 - a. ductile stress causing rock layers to bend
- _____ 2. fault
 - b. a break in rock along which the surrounding rock moves
- _____ 3. shear stress
 - c. stress that squeezes and shortens rock
- _____ 4. tension
 - d. stress that distorts rock by pushing parts of it in opposite directions
- _____ 5. fold
 - e. stress that stretches and pulls rock apart

_____ 1. folded mountain

_____ 2. graben

_____ 3. dome mountain

_____ 4. fault-block
mountain

_____ 5. volcanic mountain

a. mountain formed when faults break Earth's crust into blocks that tilt and drop

b. valley formed when faults break Earth's crust into blocks that tilt and drop

c. mountain formed when magma pushes rock layers up

d. mountain formed when magma erupts onto Earth's surface

e. mountain formed when rock is squeezed and uplifted

Pangaea
continents

Arctic
Africa

rock
seafloor spreading

Alfred Wegener was one of the first people to suggest that all of the
1. _____ were joined together in the past. He called the one large
continent 2. _____. Evidence exists to support his hypothesis.
For example, similar fossils have been found in South America and
3. _____. Also, fossils of warm weather plants have been found in
the 4. _____. Similar 5. _____ structures exist in
the Appalachian Mountains and in Greenland and western Europe. But until clues on
the ocean floor led to Harry Hess's theory of 6. _____, scientists
could not think of how the continents might move.

- _____ 1. shear stress
 - _____ 2. folded mountain
 - _____ 3. isostasy
 - _____ 4. fault-block mountain
 - _____ 5. dome mountain
 - _____ 6. fault
 - _____ 7. compression
 - _____ 8. tension
 - _____ 9. fold
 - _____ 10. mountain range
- a. stress that stretches and pulls a body of rock apart
 - b. a series of mountains related in shape and structure
 - c. a bend in rock layers from stress
 - d. distorts by pushing parts of the body in opposite directions
 - e. mountain formed when rock layers are squeezed and uplifted
 - f. equilibrium in gravity and buoyancy between the asthenosphere and the lithosphere
 - g. a break in rock along which rock moves
 - h. stress that squeezes and shortens rock
 - i. forms where faults break Earth's crust into large blocks that tilt and drop
 - j. mountain with rock layers sloping from a central point

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|-------|-------------------------|--|
| _____ | 1. compression | a. type of stress that pulls apart rock |
| _____ | 2. folded mountain | b. a bend in rock layers that results from stress |
| _____ | 3. dome mountain | c. a mountain formed when magma erupts through Earth's surface |
| _____ | 4. tension | d. type of stress that squeezes rock |
| _____ | 5. shear stress | e. a break along which surrounding rock moves |
| _____ | 6. fold | f. a state in which the asthenosphere and lithosphere are in balance |
| _____ | 7. volcanic mountain | g. mountain with circular rock layers that gently slope from the center |
| _____ | 8. fault-block mountain | h. mountain that forms where rock layers are squeezed and bent |
| _____ | 9. isostasy | i. type of stress that distorts rock by pushing parts of it in opposite directions |
| _____ | 10. fault | j. a mountain that forms where large blocks of Earth's crust tilt and drop along faults relative to other blocks |

