

Chapter 02 Test Bank – Static Key

1. Identify all of the types of plate boundaries that are associated with active volcanism.

- Divergent
- Ocean-Ocean Convergent
- Transform
- Continent-Continent Convergent
- Ocean-Continent Convergent

Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

2. Identify all of the different observations Alfred Wegener used to support his theory of continental drift.

- Seafloor magnetic anomalies.
- Geographic fit of the continents.
- Studies of fossil plants and animals.
- Dipping zones of earthquakes at ocean trenches.
- Patterns of glaciation.
- Shallow earthquakes along transform faults.
- Matching bodies of rock on either side of the Atlantic.
- Alignment of mountain ranges when the Atlantic is closed.
- High heat flow at oceanic ridges

Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Review the evidence in a written summary Alfred Wegener used to support his hypothesis of continental drift and the evidence supporting plate tectonics.
Section: 02.02 History of a Theory: Continental Drift
Topic: History of a Theory: Continental Drift

3. Identify all of the different observations used to support Harry Hess' theory of seafloor spreading.

- Seafloor magnetic anomalies.
- Geographic fit of the continents.
- Studies of fossil plants and animals.
- Dipping zones of earthquakes at ocean trenches.
- Patterns of glaciation.
- Shallow earthquakes along transform faults.
- Matching bodies of rock on either side of the Atlantic.
- Alignment of mountain ranges when the Atlantic is closed.
- High heat flow at oceanic ridges.

Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Understand the evidence for seafloor spreading.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

4. Earth's inner core is liquid whereas its outer core is solid.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

5. The refraction and shadow patterns of seismic P-waves and S-waves indicate the dimensions and properties of Earth's layers.

TRUE

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Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.
Section: 02.01 Earth's Interior
Topic: Earth's Interior*

6. Shear waves do not pass through a solid-liquid boundary between Earth's layers. Compressional waves can pass this type of boundary.

TRUE

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Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.
Section: 02.01 Earth's Interior
Topic: Earth's Interior*

7. Oceanic-type crust is more dense than continental-type crust.

TRUE

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Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior*

8. The continental landmasses are less dense than the mantle and are buoyed up by depressing the underlying mantle.

TRUE

*Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior*

9. The midocean ridges and rises are spreading centers where new oceanic crust is created.

TRUE

*Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics*

10. The thickness of deep-sea sediments increases with distance from a spreading center.

TRUE

*Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Discuss evidence in support of seafloor spreading.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading*

11. The largest lithospheric plate is the Pacific plate.

TRUE

*Accessibility: Keyboard Navigation
Blooms: 1. Remember*

Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Identify the major plates.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

12. The edge of an active continental margin bordered by a deep-sea trench is wide and shallow with deep deposits of land-derived sediments.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

13. Volcanic activity associated with subduction zones is more gentle and less explosive than volcanic activity associated with hot spots and midocean ridges.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain the relationship between volcanism and plate tectonics.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

14. The steeper profile of the Mid-Atlantic Ridge compared to the East Pacific Rise indicates that the Mid-Atlantic Ridge is the faster spreading center.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

15. The age of the seamounts from Hawaii to Midway Island increases in age from east to west.

TRUE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Describe how hotspots create island chains.
Section: 02.05 Motion of the Plates
Topic: Motion of the Plates

16. The North Atlantic Ocean was the first modern ocean to open during the breakup of Pangaea.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Review the evidence in a written summary Alfred Wegener used to support his hypothesis of continental drift and the evidence supporting plate tectonics.
Section: 02.02 History of a Theory: Continental Drift
Topic: History of a Theory: Continental Drift

17. Isostatic columns of crustal material produce equal pressures deep within the mantle.

TRUE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.

18. The San Andreas fault is an example of a transform fault.

TRUE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

19. Epicenters are points on Earth's surface directly above a hot spot.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

20. Deep Earthquakes (below 100km or 60mi) are usually associated with oceanic ridges.

FALSE

Accessibility: Keyboard Navigation
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Topic: Evidence for a New Theory: Seafloor Spreading

21. The deep mantle below the asthenosphere is called the mesosphere.

TRUE

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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

22. P waves travel more quickly than S waves.

TRUE

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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

23. P waves travel only along the Surface of the Earth.

FALSE

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Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

24. S waves are able to travel through both solid and liquid.

FALSE

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Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

25. Continental crust is generally thicker and less dense than oceanic crust.

TRUE

Accessibility: Keyboard Navigation
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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

26. The taller a mountain is, the deeper its root will extend into the asthenosphere.

TRUE

Accessibility: Keyboard Navigation
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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

27. Hess's 1960s theory of mantle convection and seafloor spreading was essentially correct.

TRUE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

28. The oldest oceanic crust is generally in the center of the ocean basin near the mid-ocean ridge or rise system.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

29. Sediment thickness on the oceanic crust tends to be greatest in the center of ocean basins

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

30. Based on the current directions of plate motion, China and the West Coast of the U.S. are getting closer.

TRUE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram relative plate motions.

31. Volcanic activity is common at transform plate boundaries.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

32. The thickness of oceanic crust increases with age.

TRUE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

33. The deepest earthquakes occur in subduction zones at oceanic-oceanic plate convergent boundaries.

TRUE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

34. California is an example of a passive continental margin.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

35. Deposits of sediments are usually thicker along passive continental margins.

TRUE

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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

36. Spreading at mid ocean ridges tends to occur in increments rather than continuously.

TRUE

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Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

37. The density of Earth materials _____ as the core is approached.

A. remains the same

- B. decreases
- C.** increases
- D. increases then decreases
- E. decreases then increases

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Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

38. The Moho is located between the

- A. lithosphere and the asthenosphere.
- B.** crust and the mantle.
- C. mantle and the outer core.
- D. inner and outer cores.
- E. continental margin and the abyssal plain.

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Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

39. Which of the following help us believe that Earth's mass is distributed spherically and uniformly around Earth's center?

- A. Lack of roughness of Earth's surface
- B. Earth's spherical shape
- C. Lack of rotational wobble
- D.** Earth's spherical shape and lack of rotational wobble.
- E. Lack of roughness of Earth's surface, Earth's spherical shape, and lack of rotational wobble are correct

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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

40. Which of Earth's layers contains the greatest volume of material?

- A. Inner core
- B. Outer core
- C.** Mantle
- D. Lithosphere
- E. Outer crust

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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

41. The deepest portion of the lithosphere is formed from

- A. oceanic basalt.
- B. terrestrial granite.
- C. a combination of basalt and granite.
- D.** mantle material.
- E. the Moho.

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Blooms: 1. Remember

42. The theory of drifting continents was proposed by

- A. John Murray.
- B. Matthew F. Maury.
- C. Alfred Wegener.**
- D. Charles Darwin.
- E. Robert Ballard.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Chapter: 02 Earth Structure and Plate Tectonics

Gradable: automatic

Learning Outcome: Review the evidence in a written summary Alfred Wegener used to support his hypothesis of continental drift and the evidence supporting plate tectonics.

Section: 02.02 History of a Theory: Continental Drift

Topic: History of a Theory: Continental Drift

43. The mechanism causing lithospheric plates to move is thought to be

- A. convection in the mantle.
- B. "slab pull" caused by subducting lithosphere.
- C. tidal forces.
- D. Earth's rotation.
- E. a combination of convection in the mantle and "slab pull" caused by subducting lithosphere.**

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Chapter: 02 Earth Structure and Plate Tectonics

Gradable: automatic

Learning Outcome: Distinguish between continental drift and plate tectonics.

Section: 02.05 Motion of the Plates

Topic: Motion of the Plates

44. Higher seafloor heat flow values are found

- A. along coastlines.
- B. in the middle of ocean basins.
- C. near ocean ridge systems.**
- D. associated with abyssal hills.
- E. along the edges of trenches.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Chapter: 02 Earth Structure and Plate Tectonics

Gradable: automatic

Learning Outcome: Distinguish between continental drift and plate tectonics.

Section: 02.03 Evidence for a New Theory: Seafloor Spreading

Topic: Evidence for a New Theory: Seafloor Spreading

45. Which of the following are found along subduction zones?

- A. Oceanic trenches
- B. Active earthquake zones
- C. Island arc systems
- D. All of these are correct.**
- E. None of these are correct.

Accessibility: Keyboard Navigation

Blooms: 1. Remember

Chapter: 02 Earth Structure and Plate Tectonics

Gradable: automatic

Learning Outcome: Diagram the three types of plate boundaries.

Section: 02.04 Plate Tectonics

Topic: Plate Tectonics

46. Magnetic stripes on the seafloor are created at

- A. subduction zones.
- B.** spreading centers.
- C. abyssal plains.
- D. subduction zones and spreading centers.
- E. subduction zones, spreading centers, and abyssal plains.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Illustrate the formation of magnetic stripes on the sea floor.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

47. Plates move horizontally past each other along

- A.** transform faults.
- B. convergent plate boundaries.
- C. divergent plate boundaries.
- D. the rift valley.
- E. hot spots.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

48. The Pacific plate is carrying Baja California and the coastal cities of Southern California _____ the continent of North America.

- A. away from (west)
- B. toward (east)
- C. southward along
- D.** northward along
- E. None of these are correct; there is no motion in this region.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

49. Thinning of Earth's crust and the resulting faulting is called

- A. convection.
- B. subduction.
- C. folding.
- D.** rifting.
- E. trailing.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

50. The deep-ocean trenches are usually associated with

- A. volcanism.
- B. island arc systems.
- C. earthquakes.
- D.** All of these are correct.
- E. None of these are correct.

Accessibility: Keyboard Navigation
Blooms: 1. Remember

Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

51. Seafloor spreading is continuing at a rate of approximately

- A. 1 to 10cm/year.
- B. 1 to 10m/year.
- C. 1 to 10km/year.
- D. 1 to 100cm/year.
- E. 1 to 100m/year.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.05 Motion of the Plates
Topic: Motion of the Plates

52. A fixed volcanic hot spot on Earth tends to produce a _____ on a moving plate.

- A. series of volcanic peaks
- B. high landmass with a fixed location
- C. transform fault system
- D. submarine canyon and associated abyssal hills
- E. trench

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.05 Motion of the Plates
Topic: Motion of the Plates

53. The present oceans have been created during the last

- A. 2250 million years.
- B. 225 million years.
- C. 20 million years.
- D. 2 million years.
- E. 2 billion years.

Accessibility: Keyboard Navigation
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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

54. Which of the following occurred during the Paleozoic era?

- A. Landmasses were strung along Earth's equator.
- B. Landmasses drifted across the South Pole.
- C. Landmasses came together to form Pangaea.
- D. All of these are correct.
- E. None of these are correct.

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Learning Outcome: Review the evidence in a written summary Alfred Wegener used to support his hypothesis of continental drift and the evidence supporting plate tectonics.
Section: 02.02 History of a Theory: Continental Drift
Topic: History of a Theory: Continental Drift

55. A program of deep-sea drilling for cores from the ocean's bottom is carried out by the

- A. Kon-Tiki.
- B. Fram.
- C.** JOIDES Resolution.
- D. Calypso.
- E. Beagle.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

56. The oceans' oldest sediments are found

- A. adjacent to a rift valley.
- B.** on top of the basalt layer, far from spreading centers.
- C. adjacent to a transform fault.
- D. at the surface of sediment layers, far from spreading centers.
- E. in hot spots.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

57. During the next magnetic reversal, the magnetic force field surrounding Earth will shift by about

- A. 45°.
- B. 90°.
- C.** 180°.
- D. 270°.
- E. 360°.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Illustrate the formation of magnetic stripes on the sea floor.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

58. The motion between the two sides of a transform fault is greatest

- A. outside the adjacent ridge axes.
- B. north of the adjacent ridge axes.
- C.** between the adjacent ridge axes.
- D. south of the adjacent ridge axes.
- E. east or west of the adjacent ridge axes.

Accessibility: Keyboard Navigation
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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

59. The trailing margin of a continental landmass _____ than its leading margin.

- A. is wider
- B. shows less tectonic activity
- C. is more stable
- D.** All of these are correct.
- E. is wider and is more stable

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic

*Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics*

60. Which method is being used to investigate the structure of the mantle?

- A. Isostasy
- B. Measurement of seafloor heat flow
- C. Seismic tomography**
- D. Subduction
- E. Radiometric dating

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Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.
Section: 02.01 Earth's Interior
Topic: Earth's Interior*

61. The crust and the mantle are divided into the following layers in order of increasing depth:

- A. mesosphere, lithosphere, asthenosphere
- B. asthenosphere, lithosphere, mesosphere
- C. lithosphere, mesosphere, asthenosphere
- D. lithosphere, asthenosphere, mesosphere**
- E. asthenosphere, mesosphere, lithosphere

*Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Differentiate among the lithosphere, asthenosphere, and mesosphere.
Section: 02.01 Earth's Interior
Topic: Earth's Interior*

62. The east coast of the United States is an example of a(n) _____ continental margin.

- A. passive
- B. active
- C. trailing
- D. leading
- E. passive and trailing**

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Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
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63. Seafloor spreading can be detected by

- A. changes in water temperature.
- B. changes in water chemistry.
- C. acoustic monitoring.
- D. submersible observation of the seafloor.
- E. All of these are correct.**

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Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading*

64. Which of the Earth's layers has the greatest density?

- A. Core**
- B. Mantle

- C. Crust
- D. Lithosphere
- E. Asthenosphere

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
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65. Which layer of the Earth contains the greatest mass?

- A.** Core
- B. Mantle
- C. Crust
- D. Lithosphere
- E. Asthenosphere

Accessibility: Keyboard Navigation
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Chapter: 02 Earth Structure and Plate Tectonics
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66. Which layer is believed to behave most like a liquid?

- A.** Outer Core
- B. Mantle
- C. Crust
- D. Lithosphere
- E. Inner Core

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
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Topic: Earth's Interior

67. Which statement is true about continental crust?

- A. It is composed of granitic-type rock and has a higher density than oceanic crust.
- B. It is composed of basaltic-type rock and has a higher density than oceanic crust.
- C.** It is composed of granitic-type rock and has a lower density than oceanic crust.
- D. It is composed of basaltic-type rock and has a lower density than oceanic crust.
- E. It is composed of granitic-type rock and has the same density as oceanic crust.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

68. When talking about plate tectonics, which of the Earth's layers comprises the plates?

- A. Crust
- B. Mantle
- C. Core
- D.** Lithosphere
- E. Asthenosphere

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Differentiate among the lithosphere, asthenosphere, and mesosphere.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

69. What is the approximate length of the mid ocean ridge system that extends around the globe through all of the major ocean basins?

- A. 6,500,000km
- B. 650,000km
- C. 65,000km**
- D. 6,500km
- E. 650km

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Diagram the three types of plate boundaries.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

70. Volcanic activity occurs at all of the following except

- A. convergent boundaries between two oceanic plates.
- B. continental rift valleys.
- C. convergent boundaries between two continental plates.**
- D. mid ocean ridges.
- E. convergent boundary between a continental and oceanic plate.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

71. Earthquakes occur at all of the following except

- A. convergent boundaries between two oceanic plates.
- B. continental rift valleys.
- C. convergent boundaries between two continental plates.
- D. mid ocean ridges.
- E. Earthquakes occur at all of the above settings.**

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

72. The density of the inner core reaches a maximum of about ____ grams/cm³.

- A. 150
- B. 70
- C. 52
- D. 31
- E. 16**

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

73. List the following plates in order of largest to smallest:

- A. North American, Pacific, Australian, Caribbean, Indian
- B. Pacific, Indian, North American, Australian, Caribbean
- C. Indian, Pacific, North American, Caribbean, Australian

- D. Pacific, North American, Australian, Indian, Caribbean
- E. Pacific, Australian, North American, Indian, Caribbean

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.04 Plate Tectonics
Topic: Plate Tectonics

74. Throughout time, continents break apart and collide and ocean basins open and close. This cyclical process is known as the

- A. Wilson cycle.
- B. Wegener cycle.
- C. lithospheric cycle.
- D. Benioff cycle.
- E. Richter cycle.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.06 History of the Continents
Topic: History of the Continents

75. Before Pangaea, there was an earlier supercontinent we call

- A. Panthalassa.
- B. Gorda.
- C. Rodinia.
- D. Lefse.
- E. Neogenia.

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Distinguish between continental drift and plate tectonics.
Section: 02.06 History of the Continents
Topic: History of the Continents

76. Seismic surface waves travel at about the same speed as ocean waves.

FALSE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.
Section: 02.01 Earth's Interior
Topic: Earth's Interior

77. Over 170 reversals of Earth's magnetic field have been recorded in the past 80 million years.

TRUE

Accessibility: Keyboard Navigation
Blooms: 1. Remember
Chapter: 02 Earth Structure and Plate Tectonics
Gradable: automatic
Learning Outcome: Illustrate the formation of magnetic stripes on the sea floor.
Section: 02.03 Evidence for a New Theory: Seafloor Spreading
Topic: Evidence for a New Theory: Seafloor Spreading

Chapter 02 Test Bank - Static Summary

	<u>Category</u>	<u># of Questions</u>
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Chapter: 02 Earth Structure and Plate Tectonics	77
Gradable: automatic	77
Learning Outcome: Describe how hotspots create island chains.	1
Learning Outcome: Diagram relative plate motions.	1
Learning Outcome: Diagram the three types of plate boundaries.	19
Learning Outcome: Differentiate among the lithosphere, asthenosphere, and mesosphere.	3
Learning Outcome: Discuss evidence in support of seafloor spreading.	1
Learning Outcome: Distinguish between continental drift and plate tectonics.	15
Learning Outcome: Explain how seismology has provided critical data for modeling Earth's interior.	10
Learning Outcome: Explain the relationship between volcanism and plate tectonics.	1
Learning Outcome: Identify the major plates.	1
Learning Outcome: Illustrate the formation of magnetic stripes on the sea floor.	3
Learning Outcome: Review the evidence in a written summary Alfred Wegener used to support his hypothesis of continental drift and the evidence supporting plate tectonics.	4
Learning Outcome: Sketch Earth's internal structure and label the thickness of each region.	17
Learning Outcome: Understand the evidence for seafloor spreading.	1
Section: 02.01 Earth's Interior	26
Section: 02.02 History of a Theory: Continental Drift	4
Section: 02.03 Evidence for a New Theory: Seafloor Spreading	15
Section: 02.04 Plate Tectonics	25
Section: 02.05 Motion of the Plates	5
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Topic: Earth's Interior	26
Topic: Evidence for a New Theory: Seafloor Spreading	15
Topic: History of a Theory: Continental Drift	4
Topic: History of the Continents	2
Topic: Motion of the Plates	5
Topic: Plate Tectonics	25