Plate Tectonics Trivia: Questions, Answers, and Facts
Printable Trivia Pack

Plate Tectonics trivia explores the theory that Earthâ s lithosphere is broken into moving plates, a framework that transformed geology in the 1960s by explaining earthquakes, volcanoes, and continental drift. From deep-ocean ridges to mountain-building collisions, it offers a smart, family-friendly way to test what you know about one of modern scienceâ s most important ideas.

HARD PLATE TECTONICS TRIVIA
1. What is the name of the seismic boundary that separates Earth’s crust from its mantle?
Answer: The Mohorovi˜ i˜ discontinuity.

2. As newly formed seafloor cools after leaving a spreading ridge, which part of it generally becomes thicker?
Answer: The oceanic lithosphere generally thickens as it cools and moves away from a ridge.

3. Granite-rich rocks are especially common in which major crustal domain?
Answer: They are common in continental crust.

4. Which line of evidence was especially important in establishing plate tectonics by recording past magnetic fields?
Answer: Paleomagnetism.

5. The alternating magnetic patterns preserved in oceanic crust tend to lie in what orientation relative to mid-ocean ridges?
Answer: They are roughly parallel to mid-ocean ridges.

6. Deep-focus earthquakes are most characteristically linked to what tectonic setting?
Answer: Subduction zones.

7. In the term ’Wadati-Benioff zone,’ the ’Benioff’ honors which seismologist?
Answer: Hugo Benioff.

8. Which plate-driving force is widely regarded as a major contributor to plate motions because sinking slabs help pull plates along?
Answer: Slab pull.

9. What is the name for the gravity-driven sliding force acting away from the elevated topography of mid-ocean ridges?
Answer: Ridge push.

10. Which proposed mechanism involves circulation within Earth’s mantle as a contributor to plate motion?
Answer: Mantle convection.

11. What kind of basin can develop behind certain volcanic arcs?
Answer: A back-arc basin.

12. Slices of oceanic crust and upper mantle thrust onto land are known by what name?
Answer: Ophiolites.

13. What term describes the geologic opening and closing of ocean basins through time?
Answer: The Wilson cycle.

14. If you travel outward from a mid-ocean ridge across the seafloor, what general trend do you expect in the crust’s age?
Answer: The age of oceanic crust generally increases with distance from a mid-ocean ridge.

FUNNY PLATE TECTONICS TRIVIA
1. Earth science finally made things official with plate tectonics in what eraâ when bell-bottoms were also having a moment?
Answer: Plate tectonics became widely accepted during the late 1960s.

2. Before â plate tectonicsâ fully took over, what snappy 1960s phrase was used for the new framework?
Answer: The phrase was "New Global Tectonics."

3. What feature forms where one plate basically does a grim dive and bends beneath another plate?
Answer: An ocean trench forms there.

4. At ocean-ocean subduction zones, what usually pops up on the overriding plate: an island arc or a surprise shopping mall?
Answer: An island arc.

5. Above an ocean-continent subduction zone, what volcanic feature tends to form instead of Earth politely staying flat?
Answer: A continental volcanic arc forms there.

6. When two continents crash into each other like the slowest traffic accident ever, what commonly develops?
Answer: Folded mountain belts commonly develop.

7. Roughly how many major tectonic plates make up Earthâ s lithosphereâ give or take a planetary shrug?
Answer: About a dozen major plates.

8. Which major tectonic plate includes Europe and much of Asia, because sharing is geologically caring?
Answer: The Eurasian Plate.

9. True or false: The African Plate is all continent and no oceanic lithosphere, like it refused to get its feet wet.?
Answer: False

10. Which plate surrounds Antarctica and the nearby ocean floor like the planetâ s iciest dinner plate?
Answer: The Antarctic Plate.

11. Which major plate includes most of North America plus part of the Atlantic seafloorâ an extra-large combo order?
Answer: The North American Plate.

12. South America rides on which plate, along with part of the South Atlantic seafloor?
Answer: The South American Plate.

13. Which plate sits between the South American Plate and the Antarctic Plate, like a geologic middle seat nobody asked for?
Answer: The Scotia Plate.

FUN PLATE TECTONICS TRIVIA
1. Back in 1596, who looked at the coastlines of the Americas and Africa-Europe and basically said, 'These pieces used to fit together'?
Answer: Abraham Ortelius

2. Which ancient supercontinent assembled during the late Paleozoic, forming a giant all-in-one landmass?
Answer: Pangaea

3. Before Pangaea took the spotlight, what is the commonly used name for the earlier supercontinent?
Answer: Rodinia

4. What was the name of the superocean that surrounded Pangaea like a truly enormous moat?
Answer: Panthalassa

5. Which ancient ocean lounged between Gondwana and Laurasia?
Answer: Tethys Ocean

6. Hotspot volcanism in the Pacific Ocean built which famous island chain?
Answer: The Hawaiian Islands

7. Which underwater-and-island chain acts like a geologic breadcrumb trail recording motion of the Pacific Plate?
Answer: The Hawaiian-Emperor seamount chain

8. If someone says 'continental hotspot track,' which famous U.S. volcanic area is often brought up?
Answer: Yellowstone

9. The Ring of Fire wraps around much of which ocean?
Answer: The Pacific Ocean

10. True or false: A triple junction is a place where exactly three plate boundaries meet.?
Answer: True

11. What is the name of the famous triple junction in East Africa?
Answer: The Afar Triangle

12. Which major transform fault system slices through the Middle East?
Answer: The Dead Sea Transform

13. New Zealandâ s major plate-boundary fault has a name that sounds scenic. What is it?
Answer: The Alpine Fault

PLATE TECTONICS FAMILY TRIVIA
1. Who popularized the idea of seafloor spreading in the early 1960s?
Answer: Harry Hess popularized seafloor spreading in the early 1960s.

2. Which scientist suggested that mantle convection could drive continents to move?
Answer: Arthur Holmes suggested mantle convection as a driver of continental movement.

3. Who helped map the ocean floor and identified the rift valley along the Mid-Atlantic Ridge?
Answer: Marie Tharp helped map the ocean floor and identified the rift valley along the Mid-Atlantic Ridge.

4. Marie Tharp worked with which scientist on mapping the ocean floor?
Answer: Bruce Heezen worked with Marie Tharp on mapping the ocean floor.

5. In 1963, Frederick Vine and Drummond Matthews connected what seafloor pattern to seafloor spreading?
Answer: They linked magnetic stripes on the seafloor to seafloor spreading in 1963.

6. Which scientist introduced the idea of transform faults in 1965?
Answer: J. Tuzo Wilson introduced the idea of transform faults in 1965.

7. Who was one of the scientists who helped formalize plate tectonics in 1968?
Answer: W. Jason Morgan was one of the scientists who helped formalize plate tectonics in 1968.

8. Which scientist published an influential global plate model in 1968?
Answer: Xavier Le Pichon published an influential global plate model in 1968.

9. Which scientist is associated with deep earthquake zones above subducting slabs?
Answer: Kiyoo Wadati was one of the scientists associated with deep earthquake zones above subducting slabs.

10. What is the name for the slanted zone of earthquake foci that traces a subducting slab?
Answer: A Wadati-Benioff zone is an inclined plane of earthquake foci that traces a subducting slab.

11. What is the deepest ocean trench on Earth?
Answer: The Mariana Trench is the deepest ocean trench on Earth.

12. Which place is a classic example of continental rifting?
Answer: The East African Rift is an example of continental rifting.

EASY PLATE TECTONICS TRIVIA
1. Who proposed the idea of continental drift in 1915?
Answer: Alfred Wegener proposed continental drift in 1915.

2. Plate tectonics says Earthâ s lithosphere is broken into what?
Answer: It is broken into moving plates.

3. Which tectonic plate is the largest on Earth?
Answer: The Pacific Plate is the largest tectonic plate on Earth.

4. Most of Earthâ s volcanoes and earthquakes cluster around what region?
Answer: They cluster around the Pacific Ring of Fire.

5. When two tectonic plates move toward each other, what kind of boundary is it?
Answer: It is a convergent boundary.

6. The Mid-Atlantic Ridge is a major plate boundary in which ocean?
Answer: It is in the Atlantic Ocean.

7. Where does new oceanic crust form?
Answer: New oceanic crust forms at mid-ocean ridges.

8. Old oceanic crust is commonly destroyed at what kind of place?
Answer: Old oceanic crust is commonly destroyed at a subduction zone.

9. Which type of crust is denser than continental crust?
Answer: Oceanic crust is denser than continental crust.

10. Earthquakes commonly occur along what part of Earthâ s surface structure?
Answer: They commonly occur along tectonic plate boundaries.

11. Which plate collided with the Eurasian Plate to help form the Himalayas?
Answer: The Indian Plate.

12. What California fault marks a transform boundary?
Answer: The San Andreas Fault marks a transform boundary in California.

13. Which plate subducts beneath the South American Plate?
Answer: The Nazca Plate subducts beneath the South American Plate.

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