

■ SECTION 12.2 ASSESSMENT, p. 537

Check Your Understanding Answers

Checking Concepts

1. Transform boundary, diverging boundary, converging boundary
2. Ridge push occurs at a spreading centre, or ridge, where two plates are being pushed apart by rising magma.
3. The pattern of earthquakes and volcanoes follows the plate boundaries around the world.
4. (a) Convection currents are currents of magma rising and falling in the mantle (asthenosphere).
(b) Mantle (asthenosphere)
(c) Convection currents help drive the motion of plates.
5. Magma bubbles up through weak parts of the lithosphere, forming large shield volcanoes.
6. Lava plateaus (large, flat areas of cooled lava)
7. P-waves
8. Seismometers measure the amount of ground shaking in an earthquake (i.e., magnitude)
9. Time-distance graphs show the amount of time earthquake waves take to travel certain distances.
10. P-waves

Understanding Key Ideas

11. (a) Plates move apart.
(b) Plates move together.
(c) Plates slide past one another.
12. At subduction zones, the subducting plate material melts, forming material that creates volcanoes. At transform boundaries, there is no source of magma.
13. The ground motion of a P-wave is a squeezing and stretching in the direction of travel. For an L-wave, the ground tends to ripple and roll.
14. P-wave = 5000 km, S-wave = 2250 km, L-wave = 1750 km
15. (a) Composite cone (strato)
(b) Rift eruption
(c) Cinder cone. **Note:** This is a challenge question for students.

Pause and Reflect Answer

Answers will vary but should include the idea that oceanic rock gets “recycled” at subduction zones whereas continental rock tends to remain untouched for billions of years.