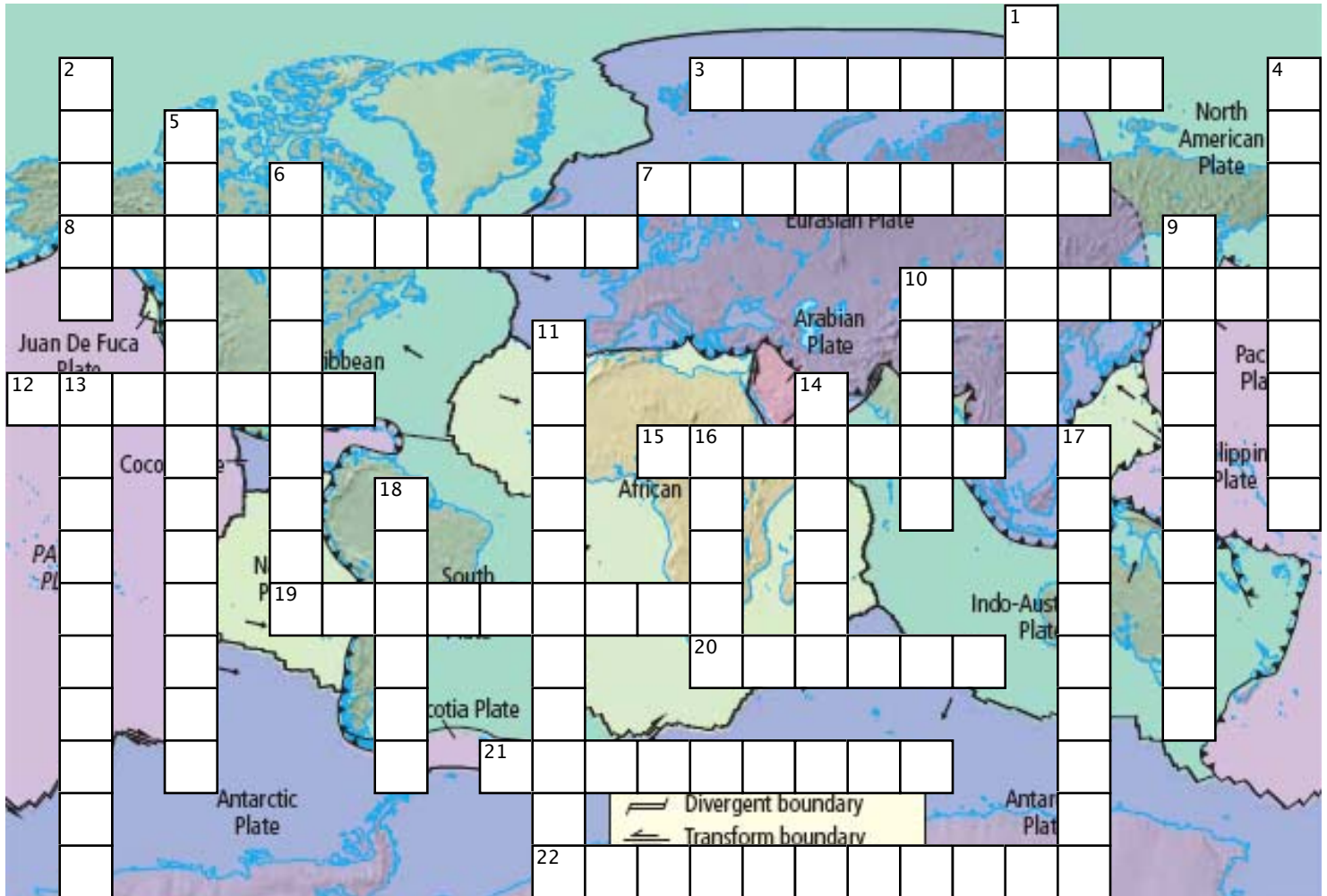


12.2 Features of Plate Tectonics



Across

3. A famous _____ fault on land is the San Andreas Fault of California in the United States.
7. Plates at the East African Rift are slowly breaking Africa into pieces. These are called _____ plates.
8. Made up of the crust and the uppermost mantle, tectonic plates form the _____.
10. As the edge of a tectonic plate subducts deep into the mantle, it pulls the rest of the plate with it, a process called _____.
12. Continental plates and the continents themselves contain large amounts of this type of rock.
15. _____ plates contain the dense rock basalt.
19. Three quarters of Earth's crust is made from the elements silicon and oxygen, which combine to form a group of rocks called _____.
20. A deep underwater valley, called a _____, forms where tectonic plates make contact.
21. As new material at a ridge or rift pushes older material aside, the tectonic plates move away from the ridge, a process called _____.
22. The islands of Japan are examples of volcanic island arcs. Such regions can experience _____ of various magnitudes.

Down

1. A region where two tectonic plates are in contact is known as a plate _____.
2. A break in a rock layer due to movement on either side.
4. The youngest and highest mountain range in the world.
5. Convection currents from the _____ push magma to Earth's surface, causing tectonic plates to move and sometimes converge.
6. When tectonic plates converge, one plate may slide beneath the other or the edges of the plates may crumple, forming _____.
9. The action of one plate pushing below another.
10. Although temperatures at Earth's core range from 5000°C to 6000°C—four times the melting point of iron—the incredible pressures keep it _____.
11. The temperature of the asthenosphere varies throughout. Geologists believe that this is because large quantities of _____ elements such as uranium occur in some areas.
13. If a spreading centre occurs on land, it is called a _____.
14. Earth's thickest layer, about 2900 km thick.
16. When early Earth cooled, the lighter elements separated from the molten material, floated to the top, and formed the layer we know today as the _____.
17. _____ occur at tectonic plate boundaries or over geologic hot spots, where magma is coming up through Earth's crust.
18. The upper mantle is composed of partly _____ rock, containing iron and magnesium, that flows like thick toothpaste.