

4.2 Assessment

Match each geological feature or process on the left with the plate boundary or boundaries it is associated with on the right. A geological feature or process can be present at more than one type of plate boundary.

Geological Feature or Process	Plate Boundary
1. ____ subduction	A. divergent plate boundary
2. ____ plate separation	B. convergent plate boundary
3. ____ mountain formation	C. transform plate boundary
4. ____ creation of new crust	
5. ____ plates sliding past one another	
6. ____ plate collision	
7. ____ deep sea trenches	
8. ____ volcanoes	
9. ____ mid-ocean ridge	
10. ____ earthquakes	
11. ____ continental rifting	
12. ____ sea floor spreading	

Circle the letter of the best answer for questions 13 to 24.

13. Which of the following best describes the lithosphere?

- A. It comprises of only the crust.
- B. It comprises of only mantle material.
- C. It comprises of crust and part of the upper mantle.
- D. It comprises of parts of all of Earth's layers.

14. Which of the following best describes the asthenosphere?

- A. The material that makes up tectonic plates.
- B. A material that flows.
- C. Partially melted crust.
- D. Liquid outer core.

15. Which statement best describes the relationship between the lithosphere and asthenosphere?
- A. The lithosphere and asthenosphere are fused (joined) together.
 - B. The lithosphere and asthenosphere do not interact.
 - C. The asthenosphere floats on the lithosphere.
 - D. The lithosphere is broken into tectonic plates that float on the asthenosphere.
16. At a divergent plate boundary,
- A. subduction occurs
 - B. sea floor spreading occurs
 - C. plates collide
 - D. deep sea trenches form
17. At a convergent plate boundary,
- A. subduction occurs
 - B. rifts are present
 - C. plates move apart
 - D. new oceanic crust is made
18. At a transform plate boundary,
- A. subduction occurs
 - B. there are volcanoes
 - C. plates slide past each other
 - D. mid-ocean ridges form
19. Deep sea trenches
- A. form at subduction zones
 - B. form at convergent plate boundaries
 - C. are the deepest parts of the oceans
 - D. All of the statements are correct

20. Subduction occurs
- A. when plates slide past each other
 - B. when tectonic plates are not moving
 - C. at mid-ocean ridges
 - D. when dense crust goes below less dense crust
21. The movement of tectonic plates
- A. can be measured using satellites
 - B. is measured in cm/year
 - C. causes plates to interact
 - D. All of the statements are correct
22. Which statement best describes convection?
- A. Cool fluid rises, while warm fluid sinks.
 - B. Warm fluid stays at the surface, while cool fluid stays at the bottom.
 - C. Warm fluid rises, while cool fluid sinks.
 - D. Cool fluid stays at the surface, while warm fluid stays at the bottom.
23. Which statement best describes slab pull?
- A. Occurs at subduction zones.
 - B. Leading edge of plate pulls rest of plate down.
 - C. Gravity assists with plate movement.
 - D. All of the statements are correct.
24. Which statement best describes ridge push?
- A. Occurs where convection is moving mantle material down.
 - B. Occurs at convergent plate boundaries.
 - C. Pushes tectonic plates apart.
 - D. All of the statements are correct.

25. Use a graphic organizer like the one below, or another of your choosing, to compare and contrast the three types of plate boundaries.

Convergent Plate Boundary	Divergent Plate Boundary	Transform Plate Boundary
Definitions _____ _____ _____ _____ _____	Definitions _____ _____ _____ _____ _____	Definitions _____ _____ _____ _____ _____
Characteristics _____ _____ _____ _____ _____	Characteristics _____ _____ _____ _____ _____	Characteristics _____ _____ _____ _____ _____
Examples _____ _____ _____ _____ _____	Examples _____ _____ _____ _____ _____	Examples _____ _____ _____ _____ _____
Non-Examples _____ _____ _____ _____ _____	Non-Examples _____ _____ _____ _____ _____	Non-Examples _____ _____ _____ _____ _____