

# Dynamic Planet Tryout Test



Score: /108.5

By JT  
North Hollywood High School

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Name: \_\_\_\_\_

Grade: \_\_\_\_\_

There is a guessing penalty for questions where you are given clear choices. If you were to guess on every one of those questions, you should theoretically get 0 on those sections. I don't care about spelling

### True/False

- \_\_\_\_ 1. Oceanic crust is younger than continental crust.
- \_\_\_\_ 2. Continental shelves can only be found on passive continental margins.
- \_\_\_\_ 3. Island arcs are created on a convergent plate boundary.
- \_\_\_\_ 4. The hot liquid water emitted by hydrothermal vents can reach temperatures of 350 °C.
- \_\_\_\_ 5. Calcareous ooze is a kind of pelagic sediment.
- \_\_\_\_ 6. Water from the poles is often saltier than water from the tropics.
- \_\_\_\_ 7. The California current is a warm current.
- \_\_\_\_ 8. Sand builds up in beaches more in the summertime.
- \_\_\_\_ 9. Oceanic trenches are found on divergent plate boundaries.
- \_\_\_\_ 10. Gyres are clockwise in the northern hemisphere.
- \_\_\_\_ 11. In subtropical waters, differences in salinity are the largest factor in creating density gradients.
- \_\_\_\_ 12. Coastal upwelling is most common on the west coasts of continents.
- \_\_\_\_ 13. Neap tides have the highest tidal range.
- \_\_\_\_ 14. Ekman transport causes water to spiral downwards clockwise below the equator.
- \_\_\_\_ 15. Nutrient levels in the surface water are the lowest in the summer.

### Multiple Choice

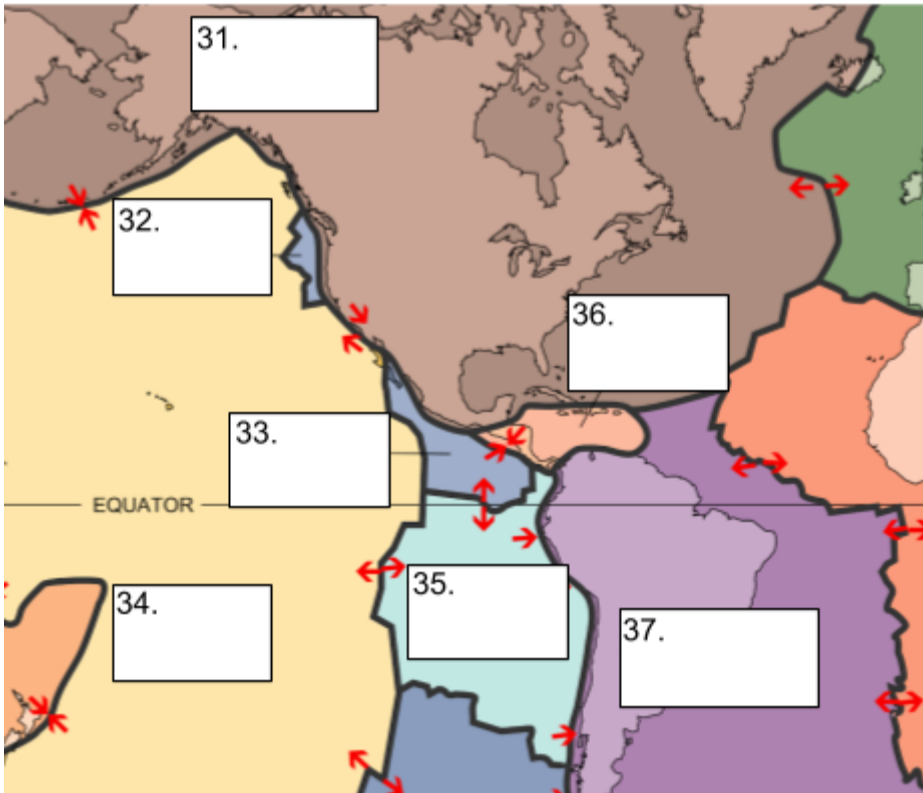
16. Which of the following oceans has the fewest passive continental margins?
- A) Pacific
  - B) Atlantic
  - C) Indian
  - D) Southern

17. Which of the following rocks is the oceanic crust mostly made up of?
- A) Rhyolite
  - B) Granite
  - C) Andesite
  - D) Basalt
18. Which of the following is most likely to contain an accumulation of sediment?
- A) Continental shelf
  - B) Continental slope
  - C) Continental rise
  - D) Oceanic ridge
19. Which of the following areas would a volcanic island most likely be nearby?
- A) Continental rise
  - B) Deep ocean trenches
  - C) Oceanic ridge
  - D) Oceanic plateaus
20. Which of the following oceans is the saltiest?
- A) Pacific
  - B) Atlantic
  - C) Indian
  - D) Southern
21. Which of the following is not a hydrogenous sediment?
- A) Quartz sand
  - B) Manganese nodules
  - C) Calcium carbonates
  - D) Metal sulfides
22. Which of the following elements are you least likely to find in the black smoke of a hydrothermal vent?
- A) Copper
  - B) Zinc
  - C) Calcium
  - D) Lead
23. Which of the following sea currents are cold currents?
- A) Gulf Stream
  - B) Brazil Current
  - C) Agulhas Current
  - D) Canary Current

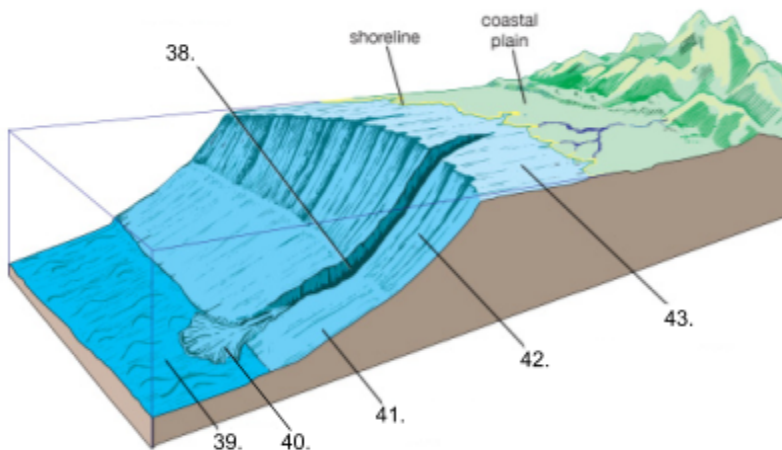
24. Which of the following is the warmest layer of the ocean?
- A) Thermocline
  - B) Halocline
  - C) Epilimnion
  - D) Hypolimnion
25. Which of the following currents completely encircle the Earth?
- A) North Atlantic drift
  - B) North Equatorial current
  - C) Kuroshio current
  - D) West wind drift
26. Which of the following is not a depositional feature?
- A) Spit
  - B) Baymouth Bar
  - C) Sea Arch
  - D) Tombolo
27. During which of the following seasons the concentration of nutrients in surface waters is the highest?
- A) Winter
  - B) Spring
  - C) Summer
  - D) Fall
28. Which of the following is not true of the oceanic ridge?
- A) It's the longest topographic feature on Earth.
  - B) It's created when a divergent plate boundary exposes upwelling from the mantle.
  - C) Not all of the oceanic ridge is a mid-ocean ridge.
  - D) Its average width is about 100m.
29. Which of the following places would you find a diurnal tide pattern?
- A) The coast of California
  - B) The Atlantic coast of South America
  - C) The Bay of Fundy
  - D) The Gulf of Mexico
30. Which of the following places would you find a submerging coast?
- A) Delaware bay
  - B) The coast of California
  - C) Hudson bay
  - D) The coasts of Scandinavia

**Fill in the diagram blank**

Name the tectonic plates. You don't have to write "plate" after the name. (This is kind of just trivia; it won't count for much)

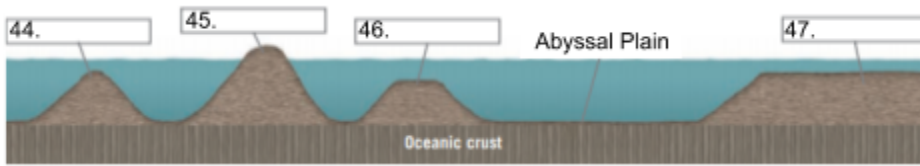


Name these features of the continental plate boundary.



- 38. \_\_\_\_\_
- 39. \_\_\_\_\_
- 40. \_\_\_\_\_
- 41. \_\_\_\_\_
- 42. \_\_\_\_\_
- 43. \_\_\_\_\_

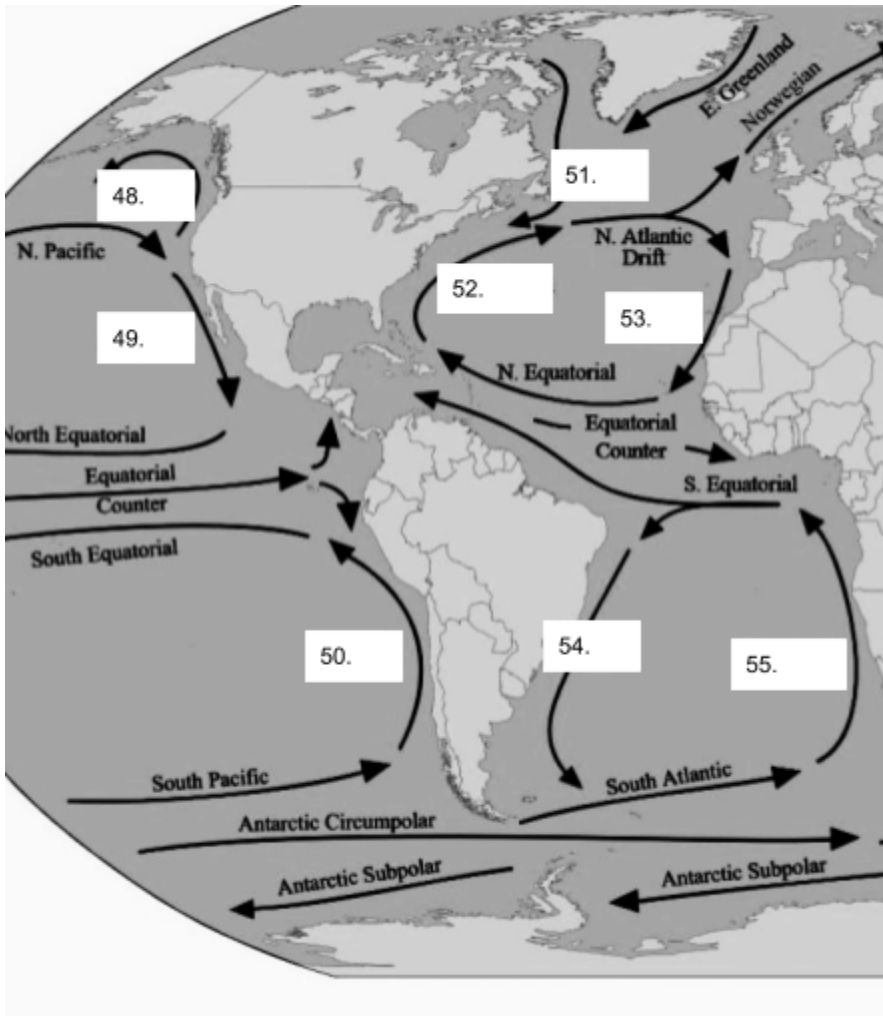
Name these features of deep ocean basins.



44. \_\_\_\_\_ 45. \_\_\_\_\_

46. \_\_\_\_\_ 47. \_\_\_\_\_

Name these currents. Then, circle whether they are warm or cold. (This is kind of just trivia; it won't count for much)



48. \_\_\_\_\_  
(Warm/Cold)

49. \_\_\_\_\_  
(Warm/Cold)

50. \_\_\_\_\_  
(Warm/Cold)

51. \_\_\_\_\_  
(Warm/Cold)

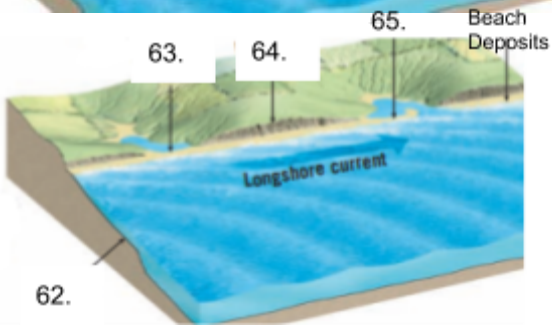
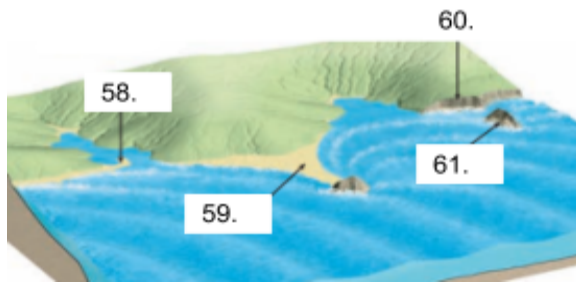
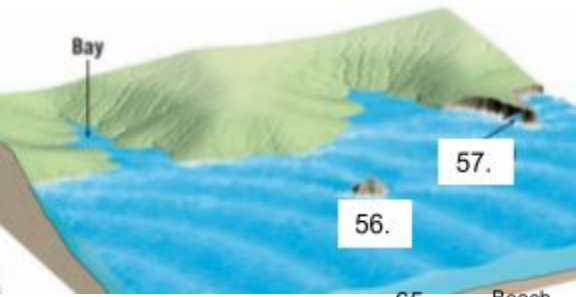
52. \_\_\_\_\_  
(Warm/Cold)

53. \_\_\_\_\_  
(Warm/Cold)

54. \_\_\_\_\_  
(Warm/Cold)

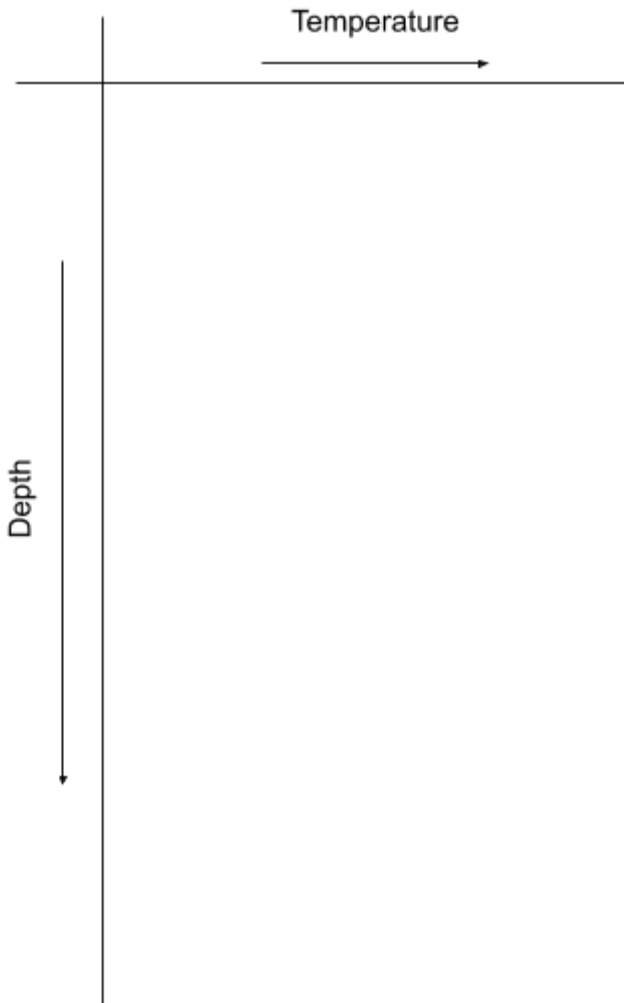
55. \_\_\_\_\_  
(Warm/Cold)

Name these coastal features. You may use terms more than once. #57 has a hole



- 56. \_\_\_\_\_ 57. \_\_\_\_\_
- 58. \_\_\_\_\_ 59. \_\_\_\_\_
- 60. \_\_\_\_\_ 61. \_\_\_\_\_
- 62. \_\_\_\_\_ 63. \_\_\_\_\_
- 64. \_\_\_\_\_ 65. \_\_\_\_\_

66. Draw a temperature vs depth graph. Label the 3 parts.



### Short Answer

67. Ocean sediments are a mixture of 3 kinds of sediments. Identify them, and explain how they form.

68. In order for a new coral reef to begin, one of the factors they require is warm, tropical water no more than 45m deep. However, coral atolls can be thousands of meters deep. Explain why this is, and the process form which atolls form, starting from a volcanic island.

69. a. What is the average salinity of the ocean? Express in ‰. \_\_\_\_\_

b. What does this symbol (‰) mean?

c. Name and explain two sources of salts in the ocean.



70. What is Ekman transport and how does it influence upwelling? Explain why this affects coastal upwelling on the west coasts of continents.

71. Sediment in beaches can be moved both perpendicular and parallel to the shoreline. Explain the processes that allow this to happen.

72. Compare and contrast the Pacific and Atlantic coasts of the United States. (Currents, coast structure, etc). Explain the differing reasons why both coasts are losing more and more sand each year.