

Water Systems Study Guide

You should be able to define each of the following terms :

groundwater, water vapour, water cycle, hydrosphere, evaporate, condensate, precipitation, salinity, freezing point, runoff, drainage basin, tributary, porosity, aquifer, water table, weathering, physical weathering, chemical weathering, biological weathering, erosion, karst, striations, landslide, erratic, esker, moraine, outwash, deposition, glacier, ice age, delta, ocean basin, continental margin, trench, mid-ocean ridge, continental shelf, continental slope, continental rise, abyssal plain, plankton, current, surface current, deep current, Coriolis effect, pacific garbage patch, density current, thermocline, upwelling, swell, tsunami, headland, bay, tide, neap tide, spring tide, heat capacity, climate, weather, phytoplankton, zooplankton, habitat, estuary, pelagic zone, benthic zone, sunlight zone, twilight zone, midnight zone, abyssal zone, hadal zone, bioluminescence, pollution, point sources, non-point sources, acid precipitation.

You should be able to answer each of the following in full detail:

1. Explain how water is distributed on Earth, giving the percentage of water in the ocean, glaciers, underground, in lakes and rivers, and in the air.
2. Give the percentage of the Earth which is covered in water.
3. Explain why Earth is called "the blue planet."
4. Describe the water cycle using the terms: **evaporation, condensation, precipitation and runoff.**
5. Explain why the oceans are salty.
6. Give two reasons exploring the ocean is difficult.
7. Give the percentage of ocean water which is salt.
8. Give the two elements which combine to form salt.
9. List the freezing points of ocean and fresh water.
10. Compare the densities of ocean and fresh water.
11. Explain why oceans in warmer parts of the world have higher salinity.
12. List the rivers water from Fort Nelson will flow through starting with the Muskwa and where it will eventually end up.
13. Explain what separates one drainage basin from another.
14. Explain the effect planting trees would have on runoff.
15. Explain the effect paving an area would have on runoff.
16. Compare the water table in the spring or fall to the water table in the summer.
17. Give an example of physical, chemical and biological weathering.
18. Give an example of physical weathering which is also biological weathering.
19. Give an example of chemical weathering which is also biological weathering.
20. Explain the difference between weathering and erosion.
21. Explain how caves are formed.

22. Sketch a river flowing into delta.
23. Explain the connection between weathering/erosion and deposition.
24. Draw and label a diagram of the sea floor showing the continental shelf, continental slope and continental rise.
25. Draw and label a diagram of the sea floor showing continental margins, a mid-ocean ridge, and a trench.
26. Explain what is happening to the tectonic plates on either side of a mid-ocean ridge.
27. What is the largest animal?
28. List the 5 oceans.
29. Give the largest and the smallest of the 5 oceans.
30. List and briefly describe the 2 main ocean zones, and the 5 subzones.
31. Explain why most ocean organisms live near the surface of the ocean.
32. List the 3 main factors which affect surface currents.
33. List the 2 main factors which affect deep currents.
34. Give a reason humans study currents
35. What would the Coriolis effect cause currents to do in the Northern Hemisphere? In the Southern?
36. Explain why some beaches are sandy, while other coast lines have steep cliffs.
37. Draw and label a diagram of a coast line showing a bay and a headland.
38. Explain what causes tides.
39. Label a diagram with the moon and the Earth, showing where on the Earth high tides will occur.
40. Draw how the sun and moon are aligned during a spring tide.
41. Draw how the sun and the moon are aligned during a neap tide.
42. Explain the difference between weather and climate.
43. Explain how oceans moderate temperatures, use the term **heat capacity**.
44. Explain why the coast gets more rain than the interior of the province.
45. Create a labelled diagram of a rain shadow, include an ocean, a mountain range and an area marked as rain shadow.
46. Explain the difference between the two main types of plankton.
47. Give an example of a wetland.
48. Give 3 examples of point sources of pollution.
49. Give 3 examples on non-point sources of pollution.
50. Explain how acid precipitation forms.
51. Explain why acid precipitation could be a problem.

