

8th Grade Science

Hydrology Common Assessment

Multiple Choice

Directions: Identify the letter of the choice that best completes the statement or answers the question.

- (8.E.1.4) Why is it important for people to understand how to properly dispose of wastes in a watershed?
 - Proper disposal of wastes will regulate Earth's climate
 - Proper disposal of wastes will eliminate the need for additional landfills
 - Improper disposal of wastes in a watershed affects the amount of water flowing downstream
 - Improper disposal of wastes in a watershed affects the organisms living in the water downstream
- (8.E.1.1) Most of Earth's freshwater is found
 - as a liquid in the ground
 - as vapor in the atmosphere
 - as liquid in rivers, oceans, and lakes
 - solidified as ice in glaciers and icebergs
- (8.E.1.2) The two kinds of coastal wetlands that border estuaries are called
 - coral reefs and mangrove forests
 - kelp forests and salt marshes
 - salt marshes and mangrove forests
 - coral reefs and kelp forests
- (8.E.1.3) Which event will most likely cause increased *turbidity* in a lake or pond?
 - Increase in runoff
 - Decrease in runoff
 - Increase in aquatic plants
 - Decrease in aquatic plants
- (8.E.1.3) Which is the **best** example of point-source pollution?
 - Runoff from farms and fields
 - A chemical company dumping chemicals into a nearby bay
 - Smoke from multiple industries in large cities
 - Pesticides sprayed from into the air
- (8.E.1.2) As you go deeper in the ocean depth, what happens to the pressure and temperature?
 - The water temperature and pressure both increase
 - The water temperature decreases and the pressure increases
 - The water temperature increases and the pressure decreases
 - The remain constant regardless of the depth of the water
- (8.E.1.3) Which of the following would be considered the **worst** conditions of a body of water?
 - high turbidity, high temperature, and acidic
 - high turbidity, low temperature, and neutral pH
 - low turbidity, high temperature, and neutral pH
 - low turbidity, low temperature, and basic
- (8.E.1.2) How does "upwelling" in the ocean compare to "lake turnover"?
 - Both bring oxygen from the lower water layers to the upper water layers
 - Both take nutrients down from the top of the layer of water to the lower water layer
 - Both take oxygen down from the top layer of water to the lower water layers
 - Both bring nutrients from the lower water layers to the upper water layers

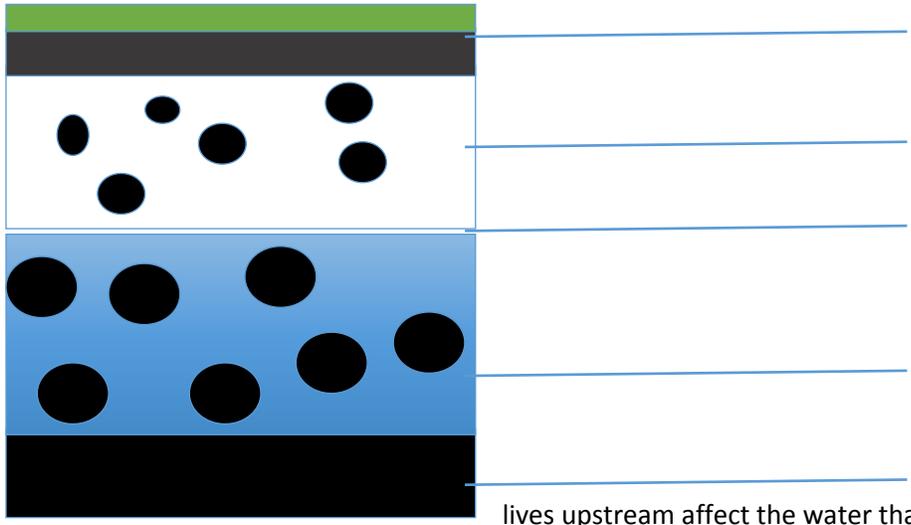
9. (8.E.1.3) Which **best** explains why there is a greater concentration of oxygen located near the ocean's surface?
- Sunlight warms the ocean's temperatures and stimulates oxygen production near the surface
 - Plankton produce excess amounts of nutrients that remove oxygen levels from the atmosphere
 - Plants, which release oxygen, live near the surface of the ocean, where they receive large amounts of sunlight
 - Marine life gives off oxygen instead of carbon dioxide, which makes the ocean water rich in oxygen
10. (8.E.1.4) How can humans most directly influence what happens in a river basin in a positive way?
- Develop a task force for creating estuaries
 - Protect soil, water, air, plants, and animals
 - Promote public awareness through education
 - Drain swamps, wetland, marshes, and bogs
11. (8.E.1.3) Which of the following is an example of nonpoint-source pollution?
- A spill of toxic waste on the side of a road
 - Discharge pipe from a meatpacking plant
 - Fertilizer used on a family garden
 - Storm water runoff in a community
12. (8.E.1.3) How does the use of a pH meter help monitor the hydrosphere?
- By indicating whether the water is too acidic or basic
 - By indicating there is too much sediment in the water
 - By indicating whether microorganisms are living in the water
 - By indicating if there is enough dissolving oxygen in the water
13. (8.E.1.2) To which condition do all species living in the deep ocean near hydrothermal vents have to adapt?
- Lower salinity
 - low pressure
 - Swift ocean currents
 - Hot water temperatures
14. (8.E.1.3) Which water quality data indicates *eutrophication*?
- Increase in nitrates and phosphates
 - Decreased turbidity
 - Increase in oxygen levels
 - Neutral pH level
15. (8.E.1.4) Which is used by sewage treatment plants to kill harmful bacteria in water?
- chlorine
 - filters
 - detergents
 - fluoride
16. (8.E.1.1) Which of these correctly describes water on Earth?
- About 70% freshwater and 30% saltwater
 - About 70% saltwater and 30% freshwater
 - About 97% freshwater and 3% saltwater
 - About 97% saltwater and 3% freshwater
17. (8.E.1.4) Why is *filtration* an important part of water treatment?
- Filtration removes small particles from the water
 - Filtration adds chlorine to water to kill microorganisms
 - Filtration adds vitamins and minerals to drinking water
 - Filtration guarantees a clear coloring in water

18. (8.E.1.2) SONAR measures ocean depth by means of
- Weighted lines
 - Light waves
 - Sound waves
 - Magnets
19. (8.E.1.2) An area where rivers flow into the oceans and freshwater and saltwater mix is a(n)
- Tide pool
 - Hydrothermal vent
 - Estuary
 - Kelp forest
20. (8.E.1.3) What type of technology would a scientist use to monitor surface changes over a large area?
- SONAR
 - Scuba divers
 - Satellite imagery
 - Submersibles
21. (8.E.1.1) Which local river basin provides drinking water for a half million people in Wake County, including Wake Forest?
- Neuse River Basin
 - Cape Fear River Basin
 - Falls Lake
 - Lake Gaston
22. (8.E.1.3) Global warming causes Earth's surface temperatures to rise, even water temperatures. In the summer, when we notice a significant increase in temperature, what water quality variable(s) would be useful to test in order to determine if populations of aquatic organisms are becoming stressed or harmed?
- Dissolved oxygen
 - Temperature
 - Nitrates and phosphates
 - Turbidity
23. (8.E.1.4) Water pollution is detrimental to natural resources. Which of the following is the **best** reason for monitoring and preventing water pollution?
- Fresh water is a limited resource
 - Pollutants are ugly or smell bad
 - Pollution suffocates some aquatic life
 - Pollution is difficult to clean up
24. (8.E.1.3) Organisms or parts of organisms that are used to assess the health of a water source are called
- Index fossils
 - Bio-indicators
 - Plants
 - Fish kills
25. (8.E.1.2) Which best describes the photic ocean zone?
- Sunlight penetration increases photosynthesis and provides food for a variety of organisms
 - The long water column protects small organisms from being eaten by large predators
 - Cooler water temperatures cause a decrease in dissolved oxygen needed by organisms
 - Hydrothermal vents provide heat and dissolved minerals needed by some organisms to survive

Choose 3 of the following short answer questions:

- Explain how you can use the same water to brush your teeth as your great-great grandmother used to boil potatoes.
- Create an illustration of an aquifer. In your drawing, be sure to draw (and label) the following:

- a. saturated, permeable layer
- b. unsaturated, permeable layer
- c. impermeable layer
- d. ground covering/dirt
- e. water table



3. How can a family who lives upstream affect the water that a family who lives downstream

uses?

4. List three things that you can do to practice water stewardship.

5. Create an illustration of the water zones learned in class. In your drawing, be sure to draw (and label) the following. Additionally, list adaptations that animals would need to survive in these zones.

- a. Abyssal plain
- b. Aphotic zone
- c. Twilight zone
- d. Photic zone
- e. Intertidal zone
- f. Neritic zone