

TEST NAME: **Science Warmups 121117**
TEST ID: **2071421**
GRADE: **08 - Eighth Grade**
SUBJECT: **Life and Physical Sciences**
TEST CATEGORY: **My Classroom**

Student: _____

Class: _____

Date: _____

1. If a large amount of fertilizer enters a lake, which will **most likely** happen?
 - A. The fish population in the lake will increase.
 - B. The temperature of the lake water will increase.
 - C. The number of fish dying in the lake will increase.
 - D. The available food supply for the fish in the lake will increase.

2. A measure of the natural populations of algae, plants, fish, and other wildlife provides evidence of the health of a body of water. By which term are these measures known?
 - A. pH indicators
 - B. bio-indicators
 - C. abiotic factors
 - D. turbidity factors

3. Which **best** determines the health of a lake used as a source of freshwater?
 - A. its depth and width
 - B. its temperature and pH
 - C. its location and depth
 - D. its temperature and depth

4. Which is the **most likely** result of an increase in the level of nitrates in a body of water?
 - A. increase in turbidity
 - B. increase in plant growth
 - C. increase in fish population
 - D. increase in water temperature

5. How do nitrate levels affect the health of a water system?
- A. As nitrates decrease, there is an increase in plant growth.
 - B. Nitrates cause bacteria to consume large protein molecules.
 - C. Nitrates cause aquatic organisms to die due to oxygen depletion.
 - D. As nitrates increase, there is an increase in dissolved oxygen levels.
6. After analyzing data collected from a pond, there is a significant decrease in dissolved oxygen. Which **most likely** caused the decline?
- A. an increase in minerals
 - B. an increase in sediment
 - C. an increase in algae growth
 - D. an decrease in fish population
7. Which **best** explains why a scientist would use nets to capture and count organisms in a river?
- A. to measure pH
 - B. to measure turbidity
 - C. to measure biodiversity
 - D. to measure temperature
8. How does the use of fluoride in drinking water affect the human population?
- A. It helps to prevent tooth decay.
 - B. It kills bacteria in the water.
 - C. It regulates pH of the water.
9. Why is it necessary to have public water treatment systems?
- A. to collect and redistribute nutrients in the water cycle
 - B. to maintain the good health of environments and organisms
 - C. to manage the runoff from erosion of topsoil and city streets

10. Why do lakes, rivers, and streams **most likely** require more treatment than groundwater?
- A. They are classified as surface water resources.
 - B. They experience fewer governmental regulations.
 - C. They are exposed to a greater variety of contaminants.
11. In the United States, which is responsible for ensuring the safety of the country's drinking water?
- A. Environmental Protection Agency (EPA)
 - B. Food and Drug Administration (FDA)
 - C. National Oceanic and Atmospheric Administration (NOAA)
 - D. Center for Disease Control (CDC)
12. Which **best** explains why most prescription and over-the-counter drugs should not be disposed of in the sink or toilet?
- A. The drugs can clog drains.
 - B. The drugs may not dissolve.
 - C. The drugs may enter the water cycle.
 - D. The drugs may become less effective.
13. Which is the **most likely** reason wind energy is not widely used as a replacement for fossil fuels?
- A. Energy from wind is too expensive to produce.
 - B. Wind energy is an indirect form of solar energy.
 - C. Producing energy from wind causes too much pollution.
 - D. Few places are windy enough to produce sufficient energy.

14. **Fluorescent light bulbs use less energy than incandescent light bulbs use to produce the same amount of light. Despite this advantage, many people continue to use incandescent light bulbs. Which fact MOST likely causes some people to continue favoring incandescent light bulbs over fluorescent light bulbs?**
- A. Fluorescent light bulbs last longer than incandescent light bulbs.
 - B. Fluorescent light bulbs cost more to purchase than incandescent light bulbs.
 - C. Fluorescent light bulbs cost less to operate than incandescent light bulbs.
 - D. Fluorescent light bulbs produce less heat than incandescent light bulbs.
15. Which **best** describes the main concern with using nuclear fission as an alternative energy source?
- A. The number of accidents in power plants using nuclear fission is higher than for other power plants.
 - B. The raw materials for power plants using nuclear fission are more expensive than for other power plants.
 - C. The temperatures required for power plants using nuclear fission cannot be easily achieved and controlled.
 - D. The disposal of waste from power plants using nuclear fission is potentially more hazardous than for other power plants.
16. Which will **most likely** negatively impact the environment when coal is burned for energy?
- A. iron
 - B. water
 - C. nitrogen
 - D. carbon dioxide
17. **Coal is used for generating about 53% of the electrical energy in the United States. Which of these environmental issues is directly contributed to by the burning of coal?**
- A. beach erosion
 - B. ozone depletion
 - C. overfishing
 - D. air pollution

18. **Which of the following is an example of how the production of hydroelectric power could potentially harm the environment?**
- A. The dam causes silt and sediment buildup.
 - B. The radioactive waste is a threat to wildlife.
 - C. The dam changes the salt content of the water downstream.
 - D. The generators make a loud noise that disrupts the migration patterns of birds.
19. **Which human activity will help decrease air pollution?**
- A. burning crops
 - B. driving a hybrid car
 - C. burning household garbage
 - D. using coal to produce energy
20. A sea creature releases a liquid into the ocean that reacts with the water to form a seashell. Which process does this represent?
- A. freezing
 - B. gas formation
 - C. change of state
 - D. precipitate formation
21. What is the importance of a closed container in a chemical reaction?
- A. to observe the mass before and after the reaction occurs
 - B. to keep any materials from interfering with the reaction
 - C. to observe the loss of mass after the reaction occurs

22. Sam followed the lab procedures below in completing an experiment.

- Place samples of iron filings and sulfur into a test tube.
- Cover the test tube with a rubber sheet and seal it.
- Measure and record the mass of the test tube and contents.
- Heat the test tube until the contents glow red.
- Allow the test tube to cool.
- After cooling, remeasure and record the mass of the test tube and contents.

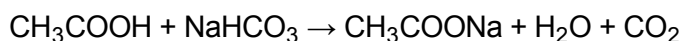
Which **best** describes Sam's conclusion?

- A. A change in mass occurred after heating.
- B. No change in mass occurred after heating.
- C. A physical change occurred, producing new products.
- D. A chemical change occurred, producing new reactants.

23. Which statement **BEST** describes the formation of rust?

- A. Rust results from a physical mixing of iron with water.
- B. Rust forms from a chemical breakdown of old metal.
- C. Rust results from a chemical reaction between iron and water.
- D. Rust forms from a physical change when wind blows against metal.

24. What is the total number of oxygen atoms on the reactant side of the equation shown below?



- A. 2
- B. 3
- C. 5
- D. 7

25. Which is a homogeneous mixture?

- A. pizza
- B. vinegar
- C. concrete
- D. woven fabric

