Skills Worksheet

Concept Review

MATCHING
In the space provided, write the letter of the term or phrase that best matches the description.

_____ 1. Mississippi River
_____ 2. area above an aquifer
_____ 3. bottled water
_____ 4. bacteria
_____ 5. multiple sources
_____ 6. fertilizer runoff
_____ 7. law designed to improve water quality
_____ 8. surface water that percolates through soil

MULTIPLE CHOICE
In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

_____ 9. Ninety-seven percent of the world's water resources are found in
   a. fresh water.          c. icecaps and glaciers.
   b. salt water.          d. groundwater.

_____ 10. Earth's surface water is found in
   a. lakes.          c. streams.
   b. rivers.          d. All of the above

_____ 11. Most of the oil that pollutes the ocean comes from
   a. operating boats and personal watercraft.
   b. spills from oil tankers.
   c. runoff from cities and towns.
   d. leaking underground storage facilities.

_____ 12. The three major global uses of fresh water are
   a. manufacturing goods, wastewater disposal, and irrigation.
   b. drinking, bathing, and growing crops.
   c. drinking, manufacturing goods, and generating power.
   d. residential, agricultural, and industrial uses.
13. What is the purpose of adding alum to water during the water treatment process?
   a. to filter and remove large organisms and trash
   b. to form flocs that bacteria and other impurities will cling to
   c. to prevent bacterial growth
   d. to remove unwanted gases

14. How is fresh water used in industry?
   a. in manufacturing processes
   b. in the disposal of waste products
   c. to generate power
   d. all of the above

15. Many areas of the world that do not have adequate fresh water have become habitable because
   a. rainfall patterns have changed.
   b. water management projects have diverted water to the areas.
   c. icebergs have been towed in to provide fresh water.
   d. people have practiced water conservation.

16. A hole that is dug into the ground to obtain fresh water is called
   a. the recharge zone.
   b. a well.
   c. an aquifer.
   d. a watershed.

17. Which of the following is one way that a person can conserve water?
   a. Take a bath instead of a shower.
   b. Wash laundry in small, partial loads.
   c. Use a low-flow shower head to take short showers.
   d. Water the lawn daily and at mid-day.

18. Which of the following is a source of point-pollution?
   a. unlined landfill
   b. runoff from city streets
   c. precipitation containing air pollution
   d. runoff from farms

19. Animal feces would be classified as which type of water pollutant?
   a. pathogens
   b. organic matter
   c. inorganic chemicals
   d. heavy metals

20. Polluted groundwater is difficult to clean up because
   a. groundwater is deep in the ground and dispersed through large areas of rock.
   b. pollutants cling to the materials that make up the aquifer and contaminate the clean water.
   c. the recycling process of groundwater can take hundreds or thousands of years.
   d. All of the above
ANALOGIES

Mark the letter of the pair of terms that best completes the analogy shown. An analogy is a relationship between two pairs of words or phrases written as \(a : b :: c : d\). The symbol : is read “is to,” and the symbol :: is read “as.”

_____ 1. dam : reservoir ::
    a. road closure : traffic jam
    b. braces : teeth
    c. farms : runoff
    d. groundwater : aquifer

_____ 2. fertilizer : artificial eutrophication ::
    a. wastewater : point-source pollution
    b. oxygen : thermal pollution
    c. biomagnification : pesticides
    d. point-source : water pollution

_____ 3. aquifer : land ::
    a. surface water : well
    b. river : ocean
    c. dam : river
    d. potable : pathogen

_____ 4. pathogens : viruses ::
    a. porosity : groundwater
    b. dead fish : thermal pollution
    c. DDT : food chain
    d. ocean pollution : oil spill

_____ 5. non point-source : point-source ::
    a. few : many
    b. few : one
    c. many : one
    d. one : few

_____ 6. salt water : desalinate ::
    a. recharge zone : percolate
    b. nonpotable water : chlorinate
    c. unwanted gases : aerate
    d. alum : coagulate

_____ 7. oil spills : ocean pollution ::
    a. river : water diversion
    b. nutrient runoff : eutrophication
    c. waste : conservation
    d. agriculture : evaporation
INTERRUPTING OBSERVATIONS

Read the following passage, and answer the questions below.

At one time, most of the people living in Bangladesh depended upon surface water for their fresh water needs. This water was contaminated with pathogens that caused a high incidence of disease and death in the population. A system of rural wells was then built to provide safe drinking water for most of the people in Bangladesh. Now Bangladesh is trying to respond to another crisis. These new wells draw groundwater that is contaminated with arsenic. According to the World Health Organization, an estimated 35 to 77 million of the total 125 million residents are at risk of drinking arsenic-contaminated water. Drinking water with a high concentration of arsenic can cause a variety of illnesses, including lung, bladder, and skin cancers. Adding alum is a simple and inexpensive way to remove most of the arsenic from drinking water. This method is one of several temporary solutions that are being used to reduce the level of arsenic and to make the water usable.

8. The diagram in this chapter shows how alum is used in large-scale treatment of drinking water. How could a single household or village use this method to treat well water?

9. Arsenic is one of several heavy metals known to affect supplies of drinking water. Describe a situation in which a heavy metal could affect your local water supply.

10. Identify and describe a possible solution to treating the surface water so that it can be consumed safely.
Water

MATCHING

In the space provided, write the letter of the term or phrase that best matches the description.

_____ 1. land that drains into a river  
_____ 2. area above an aquifer  
_____ 3. bottled water  
_____ 4. bacteria  
_____ 5. phosphates in laundry detergent  
_____ 6. law designed to improve water quality  
_____ 7. leaking gasoline tank  
_____ 8. global uses of fresh water

MULTIPLE CHOICE

In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

_____ 9. Three percent of the world’s water resources are found as  
   a. fresh water.  b. salt water.  c. icecaps and glaciers.  d. groundwater.

_____ 10. Most of the pollutants in the ocean come from  
   a. commercial boats and personal watercraft.  b. spills from oil tankers.  
   c. activities on land.  d. leaking underground storage facilities.

_____ 11. The 1990 Oil Pollution Act requires that all  
   a. underground storage facilities be constructed of composite materials.  
   b. tankers in U.S. waterways be double hulled by the year 2015.  
   c. oil used in the United States be recycled.  
   d. leaking underground storage facilities be repaired in 90 days.

_____ 12. The largest watershed in the United States is the  
13. During the water treatment process, what is the purpose of adding chlorine to water?
   a. to remove large debris
   b. to form flocs
   c. to kill or limit bacterial growth
   d. to remove unwanted gases

14. How is fresh water used in industry?
   a. in manufacturing processes
   b. in the disposal of waste products
   c. to generate power
   d. all of the above

15. Many areas of the world that do not have adequate fresh water have become habitable because
   a. rainfall patterns have changed.
   b. water management projects have diverted water to the area.
   c. icebergs have been towed in to provide fresh water.
   d. people have practiced water conservation.

16. Fresh water is a limited resource because
   a. most water is polluted.
   b. most surface water contains salt.
   c. it is controlled by powerful governments.
   d. dams have limited the flow of fresh water.

17. Which of the following is one way a person can conserve water?
   a. take a long bath instead of a shower
   b. wash laundry in small, partial loads
   c. use a low-flow shower head to take short showers.
   d. water the lawn daily and at mid-day

18. Which of the following is a source of nonpoint-pollution?
   a. unlined landfill
   b. polluted waste-water from a chemical plant
   c. leaking oil tanker
   d. runoff from agricultural feedlots

19. Parasitic worms would be classified as which type of water pollutant?
   a. pathogen
   b. organic matter
   c. inorganic chemicals
   d. heavy metals

20. Polluted groundwater is difficult to clean because
   a. groundwater is deep in the ground and dispersed through large areas of rock.
   b. pollutants cling to the materials that make up the aquifer and contaminate the clean water.
   c. the recycling process of groundwater can take hundreds or thousands of years.
   d. All of the above