

Practice Problems: Currents & Water Cycle

Name: _____

Date: _____

*Test on Thursday February 5th

*Study homework pages from weeks 1, 2 and 3 as well as labwork, note pages and webquest.

*Copy of class notes & homework pages at: <http://feldmannscience.weebly.com>

*Tutoring offered after school on Wednesday February 4th

*Turn in completed practice problems on the day of the test to receive extra credit points

1. The drilling for freshwater increases along a coastal area. What is a likely consequence of this action?

- A. an intrusion of salt water into aquifers
- B. the loss of water resources in estuaries
- C. the destruction of estuaries because of an increase in sea levels
- D. a decrease in salt concentration in inlet waterways

2. Which landform is produced at the mouth of a river by deposition?

- A. Delta
- B. Cavern
- C. Dome mountain
- D. Underwater canyon

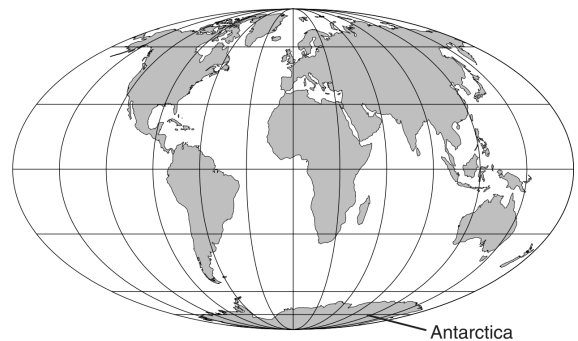
3. In which location along a river is erosion *most likely* to be the greatest?

- A. at the widest part
- B. at the flattest part
- C. at the place with the fastest flow
- D. at the place with the fewest rocks

4. Carolyn's relatives live in Canada and the northern part of the United States. Her uncle told her that glaciers once covered both of these regions. What is a result of glaciers having once covered these regions?

- A. Heavy frost occurs year round.
- B. Temperatures always remain cold.
- C. New oceans and seas were formed.
- D. Many lakes and streams were created.

5. Earth has a variety of environments. Each has different resources.



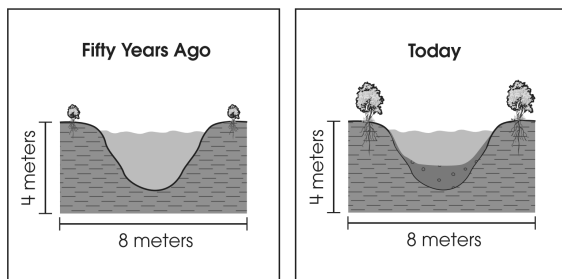
The glaciers of Antarctica _____.

- A. provide salts that maintain the pH of ocean water
- B. influence worldwide water temperatures
- C. prevent volcanic eruptions in Antarctica
- D. cause air currents to rise over the South Pole

6. Dams produce power by allowing water to flow through them and over giant turbines. Which site description offers the best location for an energy-producing dam?

- A. Narrow river that is winding
- B. Wide river with a steep drop
- C. Wide river with a gradual drop
- D. Several rivers that merge into a delta

7. The diagrams below show what a river looked like fifty years ago and what it looks like today.



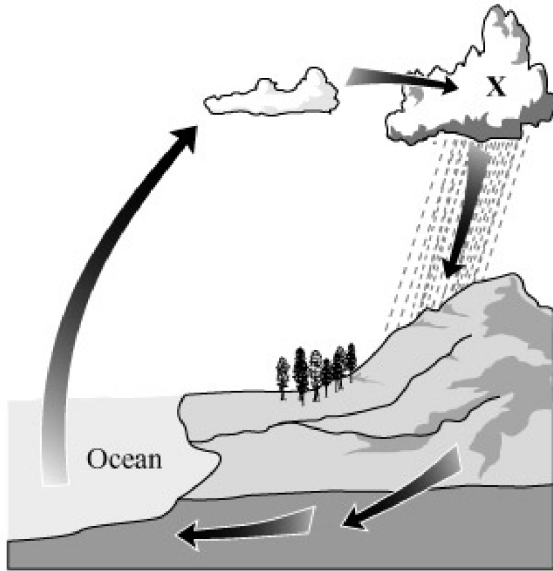
Which statement describes how a process acting slowly could have caused the river to become shallow over time?

- A. A heavy rainfall raised the water level and flooded the river.
 - B. A glacier melted upstream and the water flowed into the river.
 - C. A large amount of soil was moved into the river during an earthquake.
 - D. A small amount of soil was deposited each time the river current slowed down.
8. Above a continent, a warm air mass slowly passes over a cold air mass. As the warm air begins to cool, clouds form. What will *most* likely happen next?
- A. Rain will fall.
 - B. Hurricanes will form.
 - C. Lightning will strike.
 - D. Hail will form.

9. Over 6 billion people on Earth use water every day, yet Earth's water supply remains relatively constant. This is because _____.

- A. the sea level is rising
 - B. water exists in three phases on Earth
 - C. water is constantly recycled by the hydrologic cycle
 - D. global warming melts ice to replace water that is used
10. Why is water from an aquifer more likely to be cleaner than water from other sources?
- A. because it forms where fresh and salt water meet
 - B. because it receives water directly from precipitation
 - C. because it rises to the surface near the ocean
 - D. because pollutants are filtered by rock and soil deep within Earth
11. Clouds are formed from tiny drops of water that are light enough to float in the air. As these drops bump into each other, they form larger drops. What happens when these drops become too heavy to float in the air?
- A. The drops form fog.
 - B. The drops evaporate.
 - C. The drops fall as rain.
 - D. The drops become air.
12. Some sinkholes and caves are created when water dissolves certain rocks and minerals below ground. Which two parts of the water cycle are *most* directly responsible for the formation of sinkholes and caves?
- A. evaporation and infiltration
 - B. evaporation and transpiration
 - C. precipitation and infiltration
 - D. precipitation and transpiration

13. The picture below shows the water cycle.



Water on Earth cycles in different forms and in different locations. Which process occurs at the location labeled X on this diagram of the water cycle?

- A. condensation
- B. evaporation
- C. runoff
- D. transpiration

14. Some of the water in Lake Erie may one day fall as rain in the city of Boston. The map below shows the locations of Lake Erie and Boston.



Describe how the water cycle could cause some of the water in Lake Erie to one day fall as rain in the city of Boston. Be sure to identify *each* part of the water cycle in your response.

15. In a city near the ocean, fog often forms on summer mornings. Which of the following statements *best* explains how this fog forms?

- A. Ocean water evaporates and then condenses in the air.
- B. Crashing waves spray tiny drops of ocean water into the air.
- C. Water runoff moves toward the ocean and collects near the shore.
- D. Rain clouds move in from the ocean and evaporate as they reach the shore.

16. The water cycle would *not* occur if which of the following were missing?

- A. animals
- B. bacteria
- C. ice caps
- D. solar energy

17. A student set up a terrarium, watered the soil, and covered the terrarium tightly with a lid. The next day, the student observed water droplets on the inside of the lid.

The droplets provide evidence that which of the following steps of the water cycle had occurred in the terrarium?

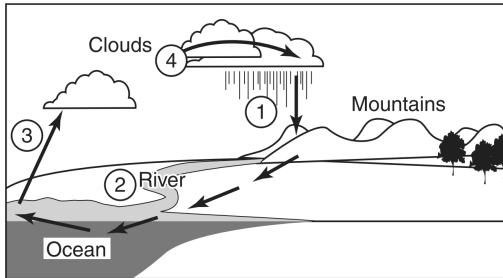
- A. runoff and evaporation
- B. precipitation and runoff
- C. evaporation and condensation
- D. condensation and precipitation

18. An area received six inches of snow during the winter. Before the snow can continue through the water cycle as ground water or runoff, it must first

- A. condense.
- B. evaporate.
- C. freeze.
- D. melt.

19. Use the information below to answer the following question(s).

The diagram below shows water moving through the environment.



Which of these statements *best* describes the purpose of the arrows in the diagram?

- A. The arrows show how clouds form.
- B. The arrows show how erosion occurs.
- C. The arrows show the processes of the water cycle.
- D. The arrows show the movement of water to the ocean.
20. Which number in the diagram represents condensation?
- A. 1 B. 2 C. 3 D. 4
21. Glaciers cover about 10% of the total land area on Earth. The role of glaciers in the water cycle is to
- A. filter salt water
- B. store fresh water
- C. move liquid water
- D. precipitate solid water
22. A student walks to school one morning and notices the grass is wet but the streets are dry.

Which of these processes *most likely* caused the grass to be wet?

- A. condensation B. erosion
- C. evaporation D. precipitation

23. Besides providing Earth with fresh water, how else is the water cycle important to Earth?

- A. It keeps water from freezing in the ocean.
- B. It helps prevent acid rain in the mountains.
- C. It helps change the shape of mountains and canyons.

24. Sometimes the weather in North Carolina is affected by air masses moving from the Gulf of Mexico. Which *best* describes these air masses?

- A. cold and moist B. warm and moist
- C. cold and dry D. warm and dry

25. Which describes the hydrosphere?

- A. Most of it contains salt.
- B. It is made of only freshwater.
- C. All of it is located above ground.
- D. It is formed by a climate change.

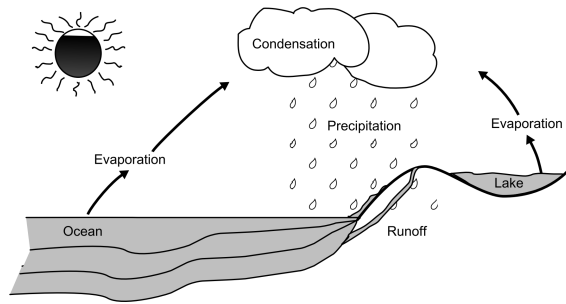
26. How can the atmosphere be considered part of the hydrosphere?

- A. It is a source of water.
- B. It blocks ultraviolet rays from the sun.
- C. It contains the oxygen necessary for life on Earth.
- D. It traps pollutants that would otherwise harm the earth.

27. Which process is happening when plant leaves release water vapor?

- A. transpiration B. condensation
- C. precipitation

28.



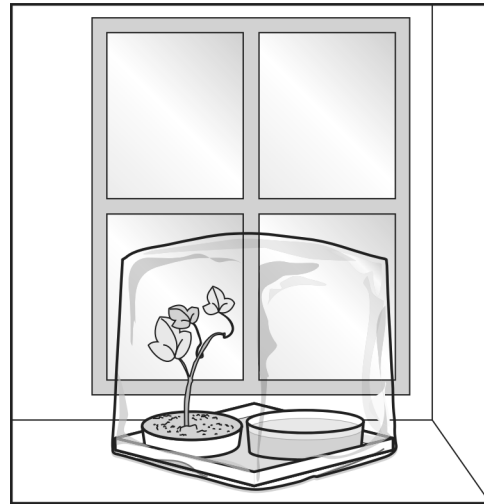
The picture shows the water cycle. What would probably happen if all evaporation of water stopped?

- A. There would be a build up of clouds.
 - B. There would be increased runoff.
 - C. There would be no more precipitation.
 - D. There would be no lake.
29. Which of the following best explains how minerals get into stream water?
- A. Rainwater dissolves minerals out of the rocks and soil during runoff.
 - B. Rainwater that is high in minerals from the atmosphere falls into the stream.
 - C. The stream water absorbs minerals from the plants growing in it and along its banks.
 - D. When water evaporates from the ocean, it takes minerals with it and redeposits them as rainwater into the stream.
30. Plants and animals require large amounts of water in order to survive. Although vast numbers of plants and animals have lived throughout time, the water in our environment has not been used up.

Which of the following explains why?

- A. Vast quantities of water are created by lightning in clouds.
- B. Organisms return water to the environment after they use it.
- C. Organisms combine hydrogen and oxygen to make their own water.
- D. Water continually flows from the center of the earth.

31. A student made a model of the water cycle by covering a plant and a tray of water with a clear plastic bag. The student placed the bag near a sunny window and left it there for several days. The picture below shows the student's model.



Which two processes can make the water in the tray available to the plant?

- A. precipitation and runoff
 - B. heating and evaporation
 - C. cooling and precipitation
 - D. evaporation and condensation
32. Which statement correctly describes a water cycle process?
- A. Evaporation can occur when water gains energy from the Sun and changes into water vapor.
 - B. Condensation can occur when liquid water molecules in clouds lose energy and fall to Earth.
 - C. Transpiration can occur when atmospheric water vapor gains energy and moves higher in the atmosphere.
 - D. Precipitation can occur when atmospheric water vapor loses energy and forms liquid water droplets.

Practice Problems: Currents & Water Cycle 02/03/2015

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|---------|---|---------|---|
| 1. | | 21. | |
| Answer: | A | Answer: | B |
| 2. | | 22. | |
| Answer: | A | Answer: | A |
| 3. | | 23. | |
| Answer: | C | Answer: | C |
| 4. | | 24. | |
| Answer: | D | Answer: | B |
| 5. | | 25. | |
| Answer: | B | Answer: | A |
| 6. | | 26. | |
| Answer: | B | Answer: | A |
| 7. | | 27. | |
| Answer: | D | Answer: | A |
| 8. | | 28. | |
| Answer: | A | Answer: | C |
| 9. | | 29. | |
| Answer: | C | Answer: | A |
| 10. | | 30. | |
| Answer: | D | Answer: | B |
| 11. | | 31. | |
| Answer: | C | Answer: | D |
| 12. | | 32. | |
| Answer: | C | Answer: | A |
| 13. | | | |
| Answer: | A | | |
| 14. | | | |
| Answer: | | | |
| 15. | | | |
| Answer: | A | | |
| 16. | | | |
| Answer: | D | | |
| 17. | | | |
| Answer: | C | | |
| 18. | | | |
| Answer: | D | | |
| 19. | | | |
| Answer: | C | | |
| 20. | | | |
| Answer: | D | | |