

Skills Worksheet

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Biology and Scientific Methods

Work-Alikes

In the space provided, write the letter of the term or phrase that best describes how each numbered item functions.

- | | |
|---------------------------------|--------------------|
| _____ 1. experiment | a. antacids |
| _____ 2. genes | b. a balancing act |
| _____ 3. minerals in pond rocks | c. test |
| _____ 4. homeostasis | d. instructions |

Cause and Effect

In the space provided, write the letter of the term or phrase that best matches each cause or effect given below.

- | Cause | Effect | |
|----------|------------------------------|---------------------------------|
| 5. _____ | source of energy to the body | a. metabolism |
| 6. _____ | alarm among biologists | b. amphibians' disappearance |
| 7. _____ | scientific investigation | c. hypothesis formed |
| 8. _____ | snow melt | d. changes in species over time |
| 9. _____ | evolution | e. acid released into ponds |

Trade-offs

In the space provided, write the letter of the bad news item that best matches each numbered good news item below.

- | Good News | Bad News |
|---|---|
| _____ 10. Power plants can utilize | a. Interdependence can be disrupted high-sulfur coal to burn. by pollution. |
| _____ 11. Organisms are interdependent | b. "Theory" is not the same as in an environment. "scientific theory." |
| _____ 12. Many students know what "theory" means. | c. Acid rain can result when it is burned. |

- _____ 13. Some mutations help an organism survive. _____ d. Some are harmful and can result in cancer.

Linkages

In the spaces provided, write the letters of the two terms or phrases that are linked together by the term or phrase in the middle. The choices can be placed in any order.

14. _____ hypothesis _____ a. acid snow
15. _____ infection _____ b. AIDS development
16. _____ snow melt _____ c. observations
17. _____ insect-resistant crops _____ d. acidic pond water
18. _____ publication _____ e. information for other scientists
f. reduced need for insecticides
g. HIV exposure
h. experimentation
i. prediction
j. transplanting beneficial genes into plants

Analogies

An analogy is a relationship between two pairs of terms or phrases written as a : b :: c : d. The symbol : is read as "is to," and the symbol :: is read as "as." In the space provided, write the letter of the pair of terms or phrases that best completes the analogy shown.

- _____ 19. reproduction : living things ::
a. change : observation c. homeostasis : weather
b. cells : membranes d. hardness : rocks
- _____ 20. amphibians' disappearance : acidic ponds ::
a. pH : high mineral concentration
b. frog : absorption
c. acid rain : high-sulfur coal burning
d. warm weather : snow melt
- _____ 21. low pH : high pH ::
a. melting : liquid c. acidic : basic
b. freezing : ice d. neutral : acidic
- _____ 22. theory : tested hypothesis ::
a. rejection : prediction c. prediction : hypothesis
b. evidence : rejection d. disagree : agree