

Skills Worksheet

Test Prep Pretest

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

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|----------------------|---|
| _____ 1. hypothesis | a. a system of ideas that explains many related observations and is supported by a large body of evidence |
| _____ 2. experiment | b. the act of perceiving objects or events by using the senses |
| _____ 3. observation | c. an explanation that can be tested with observation, experimentation, or both |
| _____ 4. skepticism | d. a procedure that is carried out under controlled conditions to test something in a scientific way |
| _____ 5. theory | e. an attitude that involves questioning and doubt |

Complete each statement by writing the correct term or phrase in the space provided.

6. The official name for the _____
is the International System of Units, which has the abbreviation _____.
7. _____ is the study of life.
8. The study of microscopic organisms is called _____. Scientists working in this field use _____
_____ to grow microorganisms without contamination.
9. _____ is the study of animals. Scientists working in this field might collect data _____ using attached electronic devices.
10. The smallest unit capable of life is the _____. To be able to see most of these structures, you need a(n) _____.
11. The sum of all chemical processes an organism carries out is called the organism's _____.
12. Living organisms are able to maintain a constant state internally even though the external environment is always changing. This is called _____.

Test Prep Pretest *continued*

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

- _____ 13. Which of these is *not* a key step in practicing scientific thought?
- observing small details in the world of nature
 - supporting all conclusions with evidence
 - accepting the opinions of any experienced scientist
 - being willing to change ideas based on new discoveries
- _____ 14. The first step in a scientific investigation is
- forming a hypothesis.
 - running an experiment.
 - constructing a theory.
 - making observations.
- _____ 15. Control groups and experimental groups are identical except for the
- group size.
 - independent variable.
 - dependent variable.
 - conclusions.
- _____ 16. In the International System of Units, measurements are scaled in multiples of
- 2.
 - 5.
 - 10.
 - 1,000.
- _____ 17. If you wanted to measure how much water a maple seedling needs each month to survive, which of these units would you be most likely to use?
- meters
 - liters
 - milligrams
 - kilometers
- _____ 18. Genetics is most closely related to the study of
- heredity.
 - homeostasis.
 - reproduction.
 - responsiveness.
- _____ 19. What properties do all living things exhibit?
- cellular organization, metabolism, homeostasis, reproduction, and heredity
 - multicellular organization, metabolism, homeostasis, reproduction, and heredity
 - metabolism, homeostasis, uniqueness, reproduction, and heredity
 - cellular organization, homeostasis, reproduction, heredity, and variability
- _____ 20. The process by which inherited characteristics present in a species change over generations is called
- growth.
 - development.
 - predation.
 - evolution.

Test Prep Pretest *continued*

Read each question, and write your answer in the space provided.

21. What are three reasons it is important that scientific investigations be conducted ethically?

22. Summarize three ways in which understanding science can help any person.

23. Contrast the two different types of scientific experiments.

24. How does the scientific use of the word *theory* compare with the common use of this word?

25. Of the many rules for staying safe in a science lab, list the three that you think are most important. Give the reasons you chose each safety rule you listed.

26. How are reproduction and heredity similar? How are they different?
