

Assessment

# Chapter Test

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

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|-----------------------|--|
| _____ 1. ecology      | a. the maintenance of a stable internal environment despite changing external conditions |
| _____ 2. evolution    | b. the study of the human body   |
| _____ 3. homeostasis  | c. the process by which inherited characteristics change over generations                |
| _____ 4. physiology   | d. the study of how organisms interact with each other and with the environment          |
| _____ 5. reproduction | e. the process of producing offspring, who make up the next generation                   |

Complete the chart by writing the missing information in the numbered spaces.

Prefix	Factor	Base unit	Relationship to base units
<i>micro-</i>	0.000001	meter	There are (6) _____ micrometers in a meter.
(7) _____	0.001	gram	There are (8) _____ (9) _____ in a gram.
<i>centi-</i>	(10) _____	liter	There are (11) _____ (12) _____ in a liter.
<i>deci-</i>	0.1	liter	There are (13) _____ (14) _____ in a liter.
<i>deca-</i>	10	meter	A decameter is 10 meters.
(15) _____	(16) _____	(17) _____	A kilogram is 1,000 grams.

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

18. \_\_\_\_\_ is the study of life. The smallest unit of life is the \_\_\_\_\_, a highly organized structure surrounded by a \_\_\_\_\_.
19. A controlled \_\_\_\_\_ is a procedure run under specific conditions to test a(n) \_\_\_\_\_.

Chapter Test *continued*

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20. Although there are different branches of science, all the branches are governed by \_\_\_\_\_, which are truths that apply to everything. \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ are some examples of these truths.
21. A \_\_\_\_\_ serves as a standard of comparison in a(n) \_\_\_\_\_ because it is identical to the \_\_\_\_\_, except that it receives no \_\_\_\_\_ treatment.
22. A(n) \_\_\_\_\_ variable is the single factor scientists change in a(n) \_\_\_\_\_. Scientists measure how \_\_\_\_\_ variables change in response to the changes they make in the \_\_\_\_\_ variable. By design, there can only be one \_\_\_\_\_ variable in a(n) \_\_\_\_\_.
23. Moral principles and values, or \_\_\_\_\_, are very important in science. One reason is because science needs to be used to help people, not to harm them. For this reason, scientists often perform \_\_\_\_\_ rather than \_\_\_\_\_ when they are working with human subjects to learn more about topics related to health.
24. The seven properties of life are cellular \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, reproduction, \_\_\_\_\_, and growth.

**Chapter Test *continued***

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25. The branches of biology called \_\_\_\_\_ and \_\_\_\_\_ are both related to \_\_\_\_\_ and \_\_\_\_\_ because these two properties of life concern how parents produce offspring and pass their traits from one \_\_\_\_\_ to the next.
26. The branch of biology called \_\_\_\_\_ is the one that most closely focuses on the interdependence of different organisms in nature.
27. The sum of all the chemical process that occur in an organism is called \_\_\_\_\_. Scientists in the field of \_\_\_\_\_ are most likely to make discoveries related to this topic.

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

28. List the four steps of scientific thought, and explain how the steps are related to one another.

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29. Describe three ways that an understanding of science can help people who aren't scientists in their everyday lives. For each, explain whether science content, scientific methods, or both are helpful.

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**Chapter Test *continued***

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30. Describe the method scientists follow as they work. Explain how each step leads to the next. Tell when, why, and how scientists begin the process anew.

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31. How does a hypothesis differ from a theory? Contrast the meaning of the word *theory* in a scientific context and in everyday speech.

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32. List twelve rules for staying safe while doing a science investigation, both in an indoor lab and in the field.

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