Life Science Chapter 1 Pre-test Studying Life

Modified True/False
Indicate whether the statement is true or false. If false, change the identified word or phrase to make the statement true.

T 1. Temperature *increases* when particles are moving faster on average. _____

F 2. A *variable* is a prediction that can be tested with an experiment. **Hypothesis**

F 3. *Control* variables are those that are changed in an experiment. **Experimental**

F 4. When you are determining how much space something takes up you are finding its *area.* **Volume**

Completion
Complete each statement.

Select the correct term to complete each sentence. There are extra terms in the list.

graph	*x*	theory
y	meniscus	dependent
length	analysis	mass
scientific method	matter	quantity
variable	unit	volume
life	English System	International System of Measurement

5. **Length** is a measurement of distance.
6. **Mass** is the amount of matter in an object.
7. The downward curve of water in a graduated cylinder is called a **meniscus** .
8. Anything that has mass and takes up space is known as **matter**.
9. The set of measurements that have been agreed upon by scientists around the world is known as the **International System of Measurement.**
10. When you measure the length of a fish to be 12 cm, centimeters is called a(n) **unit.**
11. Biology is the study of **life**
12. The **Scientific Method** is the process that scientists use to answer all questions.
13. A factor that affects how a system works is called a **variable**.
14. The detailed explanation of the results of an experiment is called the **analysis.**
15. An explanation of how a process is thought to occur is called a(n) **theory.**
16. A picture that shows how two variables are related is called a(n) **graph**.
17. On a graph, the independent variable is drawn on the **X** -axis.
18. The **dependent** variable is the variable that may be influenced by the independent variable.

Short Answer

19. List the steps that scientists use to answer questions or solve problems.

1. Make observations or research something.
2. Ask a question or state a problem.
3. State a hypothesis.
4. Test the hypothesis with an experiment.
5. Draw conclusions based on the test.

20. Anthony set up an experiment to test the effect of different temperatures on how fast gold fish can swim. He had 4 different water temperatures and rotated three different goldfish through the temperatures. While the goldfish were in the water he recorded observations on the fish swimming speed and the fish behavior.

a. What is the **experimental variable** in this experiment?
b. What is one **control variable** in this experiment?
c. Write a **hypothesis** for what Anthony may be testing.

a. Temperature of water.
b. Water source, goldfish
c. Goldfish swim faster in warmer water.