

Directed Reading B *continued*

MEASUREMENT

- c.** 10. Many standardized units of measurement were once based on
- a. the weather.
 - b. mythology.
 - c. parts of the body.
 - d. ancient worldwide standards.

11. What are two advantages of using the International System of Units?

- 1. Scientists can share and compare a standard set of measurements
- 2. The SI system is based on the number 10 (decimal system) making it easy to do calculations.

12. What unit of measurement would a life scientist use to describe the length of an ant?

millimeters

13. A measure of the size of the surface of an object or region is its

area

14. The units for area are called _____ units.

square meter

15. What is the term used to describe the size of something in three-dimensional space?

volume

16. What SI units of measurement are used to describe the volume of liquids and solids?

cubic meters or liters

17. What does 1 mL of a liquid equal in cubic centimeters?

1 cm³ or one cubic centimeter

18. How would you find the volume of a box-shaped object?

volume = length x width x height

19. How would you find the volume of an irregularly shaped object?

by measuring the amount of liquid in liters that the object displaces in a graduated cylinder.

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20. What tool is used in science to measure the volume of a liquid?

a graduated cylinder - a glass tube with a floor and line markings on the side.

21. A measure of the amount of matter of an object is its

mass

22. Why is the mass of an object constant any place in the universe?

mass is the amount of material (PNE's protons, neutrons, and electrons) that the object contains, this stays the same throughout the universe

23. What units of measurement are used to describe an object's amount of matter, or mass?

grams

24. What is weight?

The measure of the force of gravity pulling down on the object.

25. Why is the weight of an object on Earth different from its weight on the moon?

The moon has one sixth the amount of gravity of the Earth, therefore it pulls less weight on objects.

26. What is temperature a measure of?

How hot or cold something is due to the average kinetic energy of the motion of it's particles.

Match the correct description with the correct term. Write the letter in the space provided.

temperature

27. an indication of the amount of energy within matter

a. kelvins

thermometer

28. a tool used to show temperature

b. temperature

kelvins

29. official SI base units for describing temperature

c. degrees Celsius

d. thermometer

degrees Celsius

30. units commonly used by scientists to describe temperature