Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Benchmark Practice**

Directions: Answer the following questions by filling in the blanks.

1. A series of steps scientists follow to solve problems is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. Three types of scientific models are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3. The best tool for measuring length is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4. The variable that is changed during an experiment is a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

5. The variable in the experiment that you measure or observe is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. All other variables that are kept the same throughout the experiment are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

7. A mixture of gases that surround a planet or moon is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

8. The protective ozone layer is found in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

9. Air pressure decreases as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ increases.

10. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ front brings many days of cloudy, wet weather.

11. The four types of fronts are \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_.

12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an electric discharge between a positively charged area and a negatively charged area.

13. The bottom layer of the atmosphere, where almost all weather occurs, is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

14. The type of cloud that is most likely to produce light to heavy, continuous rain is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

15. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ front forms when a cold air mass displaces a warm air mass.

16. Large thunderhead clouds that produce precipitation are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ clouds.

17. Strong updrafts within a thunderhead can produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

18. A front that forms when a warm air mass is trapped between cold air masses and is forced to rise is a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

19. A severe storm that forms as a rapidly rotating funnel cloud is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

20. The process in which a liquid turns to a gas is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

21. The process in which water vapor turns to liquid is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

22. The distance traveled divided by the time interval during which the motion occurred is called \_\_\_\_\_\_\_\_\_\_\_.

23. The speed of an object in a particular direction is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

24. The rate at which velocity changes over time is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

25. A push or a pull exerted on an object in order to change the motion of the object is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

26. Forces are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when the forces acting on an object produce a net force of 0N.

27. Forces are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when the net force acting on an object is not 0N.

28. A force that opposes motion between two surfaces that are in contact is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

29. The friction between moving surfaces is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

30. A force of attraction between objects that is due to their masses is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

31. The point at which all the mass of an object can be considered to be concentrated is called \_\_\_\_\_\_\_\_\_\_\_\_\_.

32. A measure of the amount of matter in an object is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

33. A measure of the gravitational force exerted on an object is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

34. The force that opposes the motion of objects through the air is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

35. The motion of a body when only the force of gravity is acting on the body is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

36. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ states that an object at rest remains at rest and an object in motion remains in motion at constant speed and in a straight line unless acted on by an unbalanced force.

37. The tendency of all objects to resist any change in motion is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

38. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ states that the acceleration of an object depends on the mass of the object and the amount of force applied.

39. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ states that whenever one object exerts a force on a second object, the second object exerts an equal and opposite force on the first.

40. A quantity defined as the product of the mass and velocity of an object is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

41. In regards to magnets, like poles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ each other and unlike poles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ each other.

42. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the flow of electrons.

43. Materials that want to hold on to their electrons and restrict the flow are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

44. Materials that loosely hold on to their electrons and easily all the flow of electrons are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

45. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are a “bridge” between the negative electrons and the positive atoms.

46. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the ability to do work.

47. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is done when a force causes an object to move in the direction of the force.

48. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the energy of an object that is due to the object’s motion.

49. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the energy that an object has because of the position, shaper or condition of the object.

50. The total energy of an object due to its motion and position is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

51. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is all of the kinetic energy due to random motion of the particles that make up an object.

52. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the energy in food.

53. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the energy of moving electrons.

54. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is produced by the vibrations of electrically charged particles.

55. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the energy that comes from the changes in the nucleus of an atom.

56. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a change from one form of energy to another.

57. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ states that energy cannot be created or destroyed, but can be changed from one form to another.

58. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the rate of which works is done or energy is transformed.

59. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a device that helps do work by either overcoming a force or changing the direction of the applied force.

60. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a number that tells how many times a machine multiplies force.

61. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is calculated to represent the mechanical advantage of the machine with friction.

62. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a simple machine that consists of a bar that pivots at a fixed point called a fulcrum.

63. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a simple machine that consists of a wheel with a rope, chain, or wire is passed over.

64. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a simple machine consisting of two circular objects of different sizes.

65. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a simple machine that is a straight, slanted surface that facilitates the raising of loads.

66. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a simple machine that is made up of two inclined planes that moves.

67. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a simple machine that consists of an inclined plane wrapped around a cylinder.

68. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a machine made of more than one simple machine.