Answer Key

Directed Reading A

SECTION: WHAT IS MATTER?

1. They are all made of matter.
2. Matter is anything that has mass and takes up space.
3. B
4. D
5. Volume is the amount of space taken up by an object.
6. volume
7. meniscus
8. cubic
9. length, width, and height
10. Answers may vary. Sample answer: The volume could be measured by placing the object in a graduated cylinder with water. The volume of water displaced is the volume of the object.
11. because 1 milliliter of water is equal to 1 cubic centimeter
12. D
13. C
14. A
15. D
16. The only way to change the mass is to change the amount of matter it contains.
17. mass
18. weight
19. weight
20. mass
21. weight
22. weight
23. mass
24. C
25. Something must act on an object to change the motion of the object.
26. The more mass an object has, the greater its inertia.
27. Answers may vary. Sample answer: A full cart has more mass than an empty one. More mass means the cart has more inertia. Because it has more inertia, a full cart is harder to put into motion.

SECTION: PHYSICAL PROPERTIES

1. B
2. C
3. D
4. A
5. F
6. C
7. B
8. E
9. G
10. physical property
11. density
12. density
13. The densest layer will settle on the bottom.
14. The least dense layer will be found on top.
15. because 1 kg of lead would take up less space than 1 kg of feathers
16. The object will sink.
17. Answers may vary. Sample answer: If you know the density of the substance, you could compare it with the density of water. If the density of the object is less than the density of water it will float.
18. $D = m/V$
19. density; volume; mass
20. volume
21. Answers may vary. Sample answer: because a substance's density is always the same at a given temperature and pressure and because most substances have different densities
22. physical change
23. changes in state
24. PC
25. X
26. PC
27. PC
28. PC
29. PC
30. identity

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