

Georgia  
**CRCT**  
online



## 6th Grade Science Test

Sixth Grade Science  
Test

Practice Test

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### **Instructions:**

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Use the table below to answer question 1.

Substance	Volume (cm <sup>3</sup> )	Mass (g)
brick	71	100
ice	109	100
water	100	100
wax	56	100

- The table lists the volume and mass of four substances. Which substance has the lowest density?
    - brick
    - ice
    - water
    - wax
- 
- If the volumes of blocks made from each substance below are identical, which block would be the heaviest?
    - aluminum
    - ice
    - cork
    - lead
- 
- Lucy noticed that her coin collection had begun to tarnish. Some of the metal in the coins had begun to change color. The formation of tarnish is **most** similar to which of the following changes?
    - shredding a piece of paper into hundreds of tiny strips
    - dropping a dinner plate on the floor
    - melting ice cubes in a glass of juice
    - burning a piece of paper to ashes in a fireplace
-

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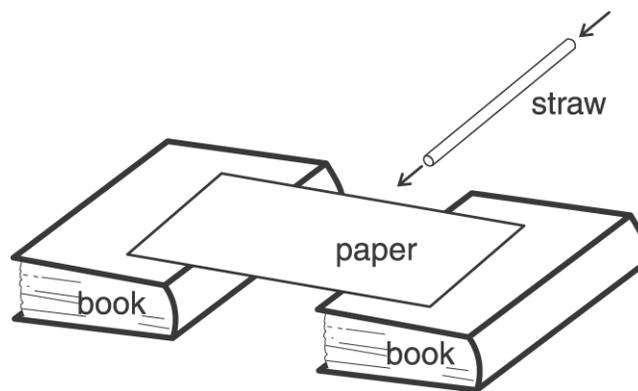
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4. Which symbolizes a molecule of an element?

- A. H<sub>2</sub>O
  - B. O<sub>2</sub>
  - C. NaCl
  - D. CO<sub>2</sub>
- 

Use the picture below to answer question 5.



5. According to Bernoulli's principle what should happen when air is blown through the straw and under the paper bridge?

- A. The paper will sink lower in the middle.
  - B. The paper's position will not change.
  - C. The paper will rise into the air.
  - D. The paper will rise and flip over.
-

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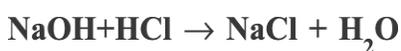
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6. When walking along an asphalt street after sundown, a person often feels heat coming off the pavement. The heat is moving from the asphalt to the person by
- A. conduction.
  - B. convection.
  - C. expansion.
  - D. radiation.
- 

*Use the chemical equation below to answer question 7.*



7. Identify the chemicals reacting in this chemical equation.
- A. NaOH
  - B. NaCl and H<sub>2</sub>O
  - C. NaOH and HCl
  - D. NaCl
- 

8. Which of the following is a scientific attitude toward ideas about how the natural world works?
- A. Some of the ideas will probably have to change when scientists have more information.
  - B. Most of the ideas will never change.
  - C. All of the ideas will have to change to keep up with fast-moving world events.
  - D. None of the ideas will ever change.
- 

9. The solid, liquid, and gaseous states of water differ from each other in
- A. the mass of the individual atoms.
  - B. the size of the individual atoms.
  - C. the net electrical charge of the individual molecules.
  - D. the average speed of movement of the individual molecules.
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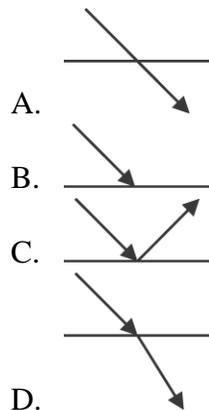
10. What is the main reason for using sand on icy roads?

- A. to create friction between car wheels and the road
  - B. to reduce the glare of headlights or sunlight
  - C. to help melt the ice covering the road
  - D. to dry the road
- 

11. Two jars are placed inside an insulated box. One jar contains ice water and the other contains hot soup. What will happen to the two liquids?

- A. Both the hot soup and the ice water will gain heat.
  - B. Both the hot soup and the ice water will lose heat.
  - C. The hot soup will gain heat and the ice water will lose heat.
  - D. The hot soup will lose heat and the ice water will gain heat.
- 

12. Which drawing is an example of reflection?



13. An anti-static dryer sheet in the clothes dryer works because it

- A. adds electric charge to the clothing.
  - B. lowers the temperature in the dryer.
  - C. reduces friction between the clothes.
  - D. shortens the drying time.
-

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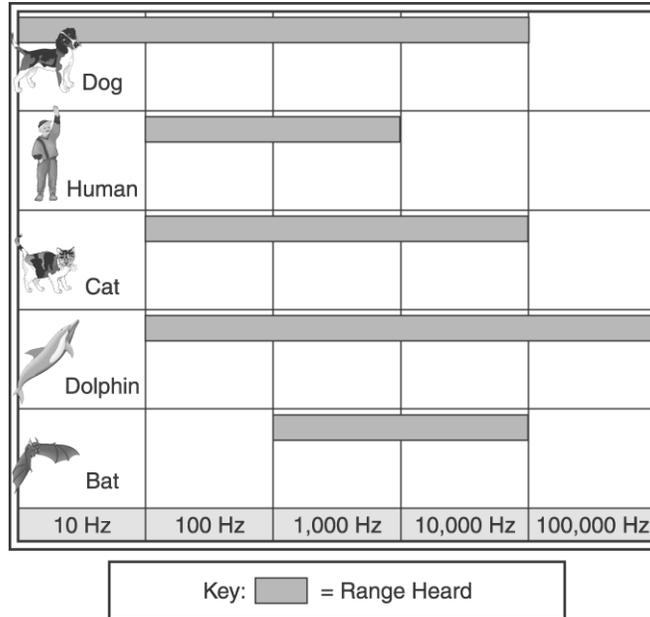
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Use the graph below to answer question 14.



14. According to the graph, a human is capable of hearing all sounds in the

- A. 10 – 10,000 Hz range.
  - B. 100 – 1,000 Hz range.
  - C. 100 – 100,000 Hz range.
  - D. 1,000 – 10,000 Hz range.
-

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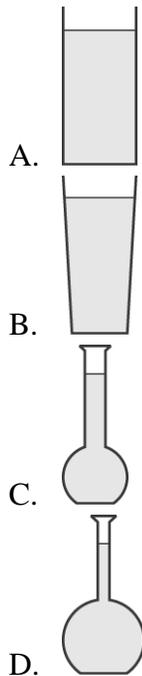
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15. A liter of water at room temperature (20° Celsius) is poured into each of the four containers as shown below. When the water in all four is heated to 65° Celsius, the water level will be highest in which container?



16. When a piece of plastic is placed on the page of a book, the words can be read easily. The plastic can **best** be described as being

- A. opaque.
  - B. translucent.
  - C. transparent.
  - D. reflective.
-

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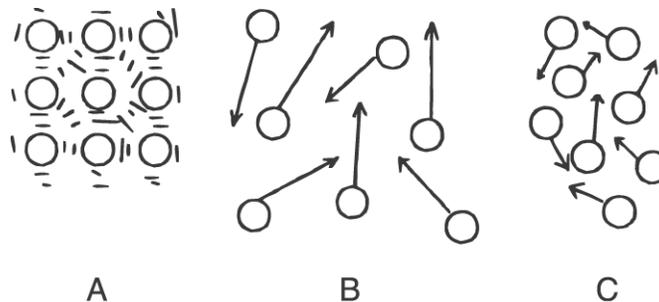
17. In an amusement park a moving bumper car (car 1) collides with a bumper car at rest (car 2) and, after the collision, both cars move. If momentum is conserved, which statement is correct?

- A. The momentum of car 1 increases and the momentum of car 2 decreases.
  - B. The momentum of car 1 decreases and the momentum of car 2 increases.
  - C. The total momentum of both cars increases.
  - D. The total momentum of both cars decreases.
- 

18. Which measurement is equal to 15 cm?

- A. 0.015 m
  - B. 1.5 m
  - C. 150 mm
  - D. 1500 km
- 

Use the diagrams below to answer question 19.



19. The diagrams represent the movement and distribution of particles in different states of matter. Which statement about the diagrams is true?

- A. A is the liquid, B is the solid, and C is the gas.
  - B. A is the liquid, B is the gas, and C is the solid.
  - C. A is the solid, B is the gas, and C is the liquid.
  - D. A is the solid, B is the liquid, and C is the gas.
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20. Which substance name is incorrectly paired with its formula?

- A. table salt, NaCl
  - B. water, H<sub>2</sub>O
  - C. carbon dioxide, CO
  - D. table sugar, C<sub>12</sub>H<sub>22</sub>O<sub>11</sub>
- 

*Use the data below to answer question 21.*

1 milliliter of water has a mass of 1 gram

density of water = 1 gram/milliliter

1 milliliter = 1 cubic centimeter

21. A graduated cylinder is holding 52 milliliters of water. Based on the data table, which statement about the water in the cylinder is correct?

- A. The volume of the water is 52 cubic centimeters.
  - B. The pressure of the water is 52 grams/cubic centimeter.
  - C. The mass of the water is 52 milligrams.
  - D. The density of the water is 52 grams/milliliter.
- 

22. On Earth, a box has a mass of 50 kg. On the Moon, the box would have

- A. greater mass.
  - B. greater weight.
  - C. the same mass.
  - D. the same weight.
-

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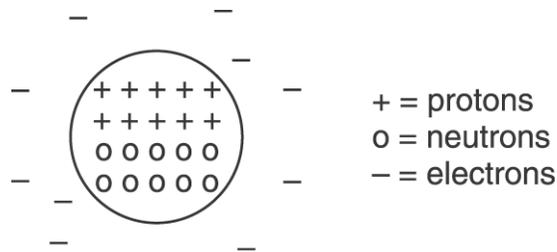
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23. During an experiment, a student boils a liquid for 30 minutes to determine how much mass is lost during that time. The results of this experiment should be reported in

- A. kilometers.
  - B. pounds.
  - C. grams.
  - D. meters.
- 

Use the diagram below to answer question 24.



24. Based on the atomic model, what is the atomic mass of this element?

- A. 10
  - B. 20
  - C. 30
  - D. 40
-

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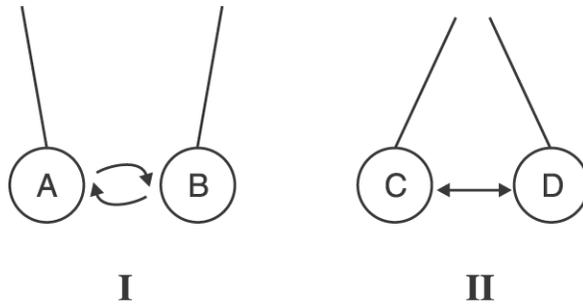
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Use the diagram and information below to answer question 25.



I. Object A and Object B are attracted to each other when they are brought near each other.

II. Object C and Object D are repelled by each other when they are brought near each other

25. In which situation is it possible that the two objects have the same electrical charge?

- A. I only
- B. II only
- C. both I and II
- D. neither I nor II

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26. A teaspoon of salt is dissolved in a quart of water. Which of the following is true?

- A. The salt can be separated from the water by filtering the solution through a fine cloth.
  - B. The salt grains can be seen in the solution with a microscope.
  - C. The salt will eventually settle out.
  - D. The salt can be separated from the water by boiling off the water.
-

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27. Which elements are represented by the symbols in the formula NaCl?

- A. sodium, chlorine
  - B. sodium, oxygen, hydrogen
  - C. hydrogen, chlorine
  - D. chlorine, oxygen
- 

Linda covered the same distance walking, riding a bike, and driving a car. She recorded her average speed and the amount of time required to cover the distance in this table.

MODE	SPEED (kph)	TIME (min)
walking . . . . .	5	120
riding a bike . . . . .	10	60
driving a car . . . . .	60	10

28. According to the table, what is true about speed and time?

- A. As speed increases, time increases proportionally.
  - B. As speed increases, time decreases proportionally.
  - C. As time is increased by 50 minutes, speed is decreased by 50 kph.
  - D. As time is divided in half, speed is divided in half.
- 

29. The mass of individual atoms **mainly** comes from

- A. electrons and ions.
  - B. electrons and neutrons.
  - C. neutrons and protons.
  - D. neutrons and ions.
-

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30. In which situation has heat energy moved mainly by conduction through matter?

- A. A radiator heated with hot water warms a room.
  - B. The person sitting closest to the blazing fire finds it necessary to move farther from the heat.
  - C. The handle of a cast iron skillet being used to cook something becomes too hot to touch.
  - D. The red-hot coil of an electric space heater is used to keep a small room warm.
-