

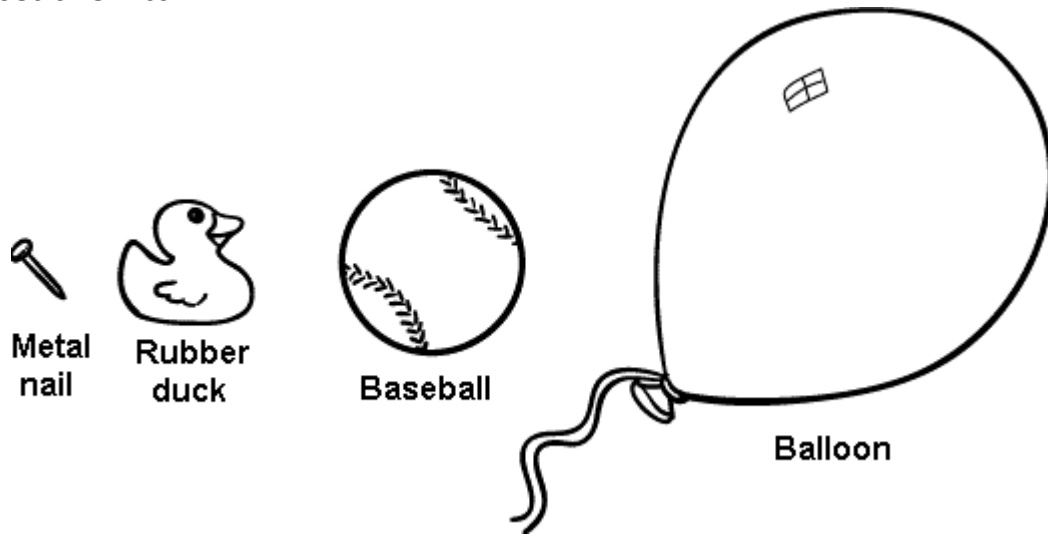
**McGraw-Hill Science © 2000, Texas Edition
TAKS Practice Test**

**Grade 5, Chapter 7
Properties of Matter**

Name _____

Date _____

Use the illustration and your knowledge of science to answer Questions 1 to 4.



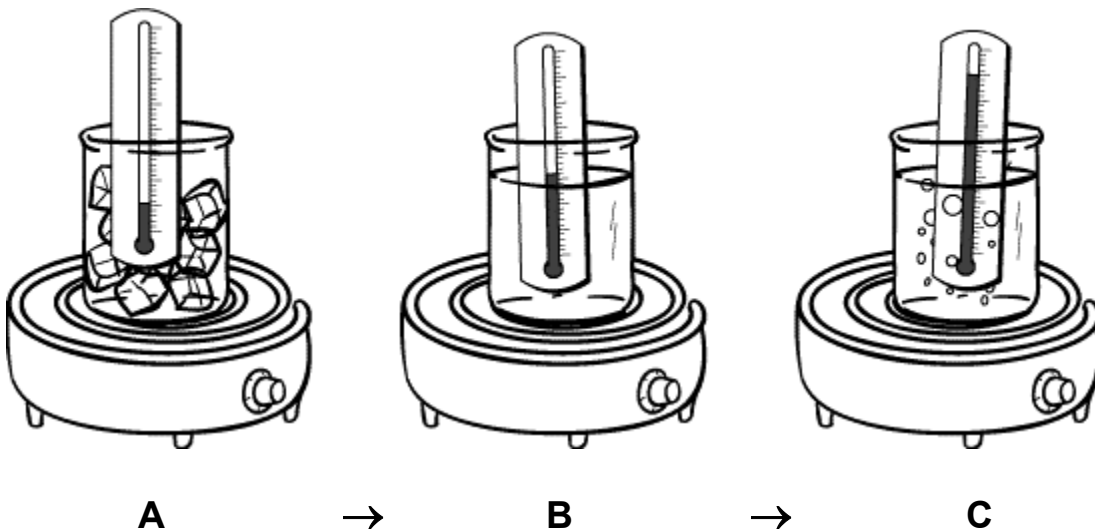
- 1 Of the four objects shown here, does the object with the greatest volume also have the greatest mass?
 - A Yes, the balloon has both the greatest volume and mass.
 - B Yes, the baseball has both the greatest volume and mass.
 - C Yes, the nail has both the greatest volume and mass.
 - D No, the balloon has the greatest volume but not the greatest mass.

- 2 Which tool would be most useful in ordering the objects from least mass to greatest mass?
 - A meterstick
 - B balance
 - C microscope
 - D inclined plane

- 3 Which object would a magnet most likely attract?
 - A metal nail
 - B rubber duck
 - C baseball
 - D balloon

- 4 A student places each object in a large bucket filled with water. By observing the results, the student can compare the objects' _____.
- A masses
 - B weights
 - C heat conduction
 - D densities

Use the illustrations, text, and your knowledge of science to answer Questions 5 to 7.



A student fills a beaker with ice. She places a thermometer in the beaker, then places the beaker on a hot plate. The beaker changes as shown in drawings A, B, and C above.

- 5 By observing the thermometer and the beaker, what can the student measure?
- A The temperature of the hot plate.
 - B The temperature of the air in the room.
 - C The melting point and boiling point of water.
 - D The melting point and boiling point of glass.
- 6 What causes the bubbles to form in Illustration C?
- A Water is changing from solid to liquid.
 - B Water is changing from liquid to gas.
 - C Air mixes with the water.
 - D Glass is escaping from the beaker into the water.

7 The changes in matter observed in this experiment are examples of _____.

- A changes of state
- B changes of boiling point or melting point
- C changes of substance
- D chemical changes

8 Butane melts at -138°C (138 degrees below 0°C).
Butane boils at -0.5°C (one half a degree below 0°C .)

From this information, butane at room temperature (20°C) is a _____.

- A solid
- B liquid
- C gas
- D solid and liquid mixture

9 A flame is heating a metal pan. The metal grows hot, but the wooden handle stays cool. Explain this observation.

- A Metals conduct heat well.
Wood insulates against heat.
- B Metals insulate against heat.
Wood conducts heat well.
- C Metals are elements.
Wood is not an element.
- D Metals have higher boiling points than wood.



Use the text, chart, and your knowledge of science to answer Questions 10 to 12.

A student wants to identify an unknown compound that he calls Compound X.

Some properties of Compound X are listed in the chart.

Properties of Compound X	
Color	clear
Melting point	-90°C
Boiling point	82°C
Made of which elements?	carbon, oxygen, and hydrogen

10 Which of the following substances might be Compound X?

- A Water (H_2O)
- B Iron (Fe)
- C Rubbing alcohol ($\text{C}_3\text{H}_8\text{O}$), a liquid at room temperature (20°C)
- D Table sugar ($\text{C}_{12}\text{H}_{22}\text{O}_{11}$), a solid at room temperature (20°C)

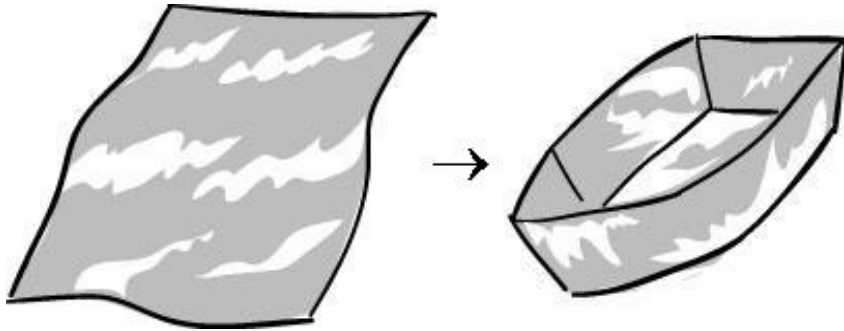
11 Which of the following tests would be most useful in identifying Compound X?

- A Measuring the mass of a sample of Compound X.
- B Measuring the volume of a sample of Compound X.
- C Placing a sample of Compound X next to a magnet.
- D Heating Compound X from 20°C to 100°C .

12 What is a safety precaution that the student should follow?

- A Wear safety goggles.
- B Skip any step of the procedure that is too difficult to follow.
- C Taste Compound X to make sure it is harmless.
- D Sprinkle Compound X onto a test slide.

Use the illustration, text, and your knowledge of science to answer Questions 13 and 14.



A student is exploring the properties of aluminum. She observes that a sheet of aluminum foil sinks in water.

She hypothesizes that if she folds the sheet into the shape of a boat, the boat will float.

- 13** Could a useful boat be made from aluminum? Why or why not?
- A** No, the boat would sink. Folding aluminum does not change its density.
 - B** No, the boat would sink. Folding aluminum does not change its mass.
 - C** Yes, the boat could float. Because of air inside the boat, a boat shape has lower density than a flat sheet.
 - D** Yes, the boat could float. The aluminum in a boat has lower density than the aluminum in a flat sheet.
- 14** On her first trial, the student builds a boat that slowly takes in water, and then sinks. To gather more evidence for or against her hypothesis, what could she do next?
- A** Add cork or balsa wood to the boat that sank.
 - B** Use another material, such as construction paper, to make a new boat.
 - C** Use aluminum foil to make a new boat. Make the boat a different shape than before.
 - D** Conclude that an aluminum boat would not float.

ANSWER KEY and CORRELATIONS:

Question	Answer	TAKS	McGraw-Hill Science Grade 5 textbook
1	D	5.7A	p. 292
2	B	5.4A	pp. 291, 292
3	A	5.4A, 5.7A	p. 301
4	D	5.2B, 5.7A	p. 295
5	C	5.2B, 5.7D	p. 326
6	B	5.2B, 5.7C	p. 327
7	A	5.7D	p. 324
8	C	5.7A	p. 329
9	A	5.3B, 5.7A	p. 300
10	C	5.7A, 5.2C	p. 329
11	D	5.2A, 5.2B, 5.7D	p. 295
12	A	5.1A	p. R4
13	C	5.2D, 5.3B, 5.7D	p. 294
14	C	5.2A, 5.2C	p. 294