

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

Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.  **1. How does the density of liquid water compare with the density of ice?**

**5. 2. If samples of silver and lead each had volumes equal to 1 cm3, which sample would have the greater mass? What would the difference in the masses be?**

**6. 3. A 54-gram sample of an unknown material has a volume equal to 20 cm3. Based on its density, could the sample be aluminum? Explain.**

**7. 4. If gasoline is poured carefully into liquid water, will it sink or float? Explain why.**

**8. 5. What is the mass of 150 cm3 of liquid water? Explain.**

**9. 6. If a sample of a material has a mass of 21 grams and a volume equal to 2 cm3, could it be one of the substances listed in the table? Explain.**

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**Section 1 Measuring Matter**

**Write the letter of the correct answer on the line at the left.**

**1.** \_\_\_ A balloon filled with air does not rise  
as high as a balloon filled with helium.  
What does this tell you about the density  
of helium?

A helium is more dense than air.

B helium is less dense than air.

C the two gases have the same density.

D When heated, helium becomes more dense.

**3.** \_\_\_ The formula for calculating density is

A Mass × volume

B Mass × Weight

C 

D 

**2.** \_\_\_ The amount of matter in an object  
is a measure of its

A volume

B density

C weight

D mass

**4.** \_\_\_ Which of the following statements  
about the mass of an object is correct?

A Mass changes with location.

B Mass remains constant.

C Mass changes with altitude.

D Mass changes with gravity.

**If the statement is true, write *true.* If the statement is false, change the underlined word  
or words to make the statement true.**

**5.** \_\_\_\_\_\_\_\_\_\_\_\_\_ The SI unit of mass is the cubic meter.

**6.** \_\_\_\_\_\_\_\_\_\_\_\_\_ One liter is equal to 100 milliliters.

**7.** \_\_\_\_\_\_\_\_\_\_\_\_\_ An object’s weight is less on the moon than on Earth. On the  
moon, the object’s mass decreases.

**8.** \_\_\_\_\_\_\_\_\_\_\_\_\_ An object that floats in water has a density less than 1 g/mL.

**9.** \_\_\_\_\_\_\_\_\_\_\_\_\_ Four measurable properties of matter are mass, weight,  
volume, and pressure.

**10.** \_\_\_\_\_\_\_\_\_\_\_\_\_ The SI unit of volume is the kilogram.

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**Section 3 Physical and Chemical Changes**

**Fill in the blank to complete each statement.**

**1.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a chemical change that happens naturally in plants.

**2.** New substances are produced during a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ change.

**3.** Fruit ripening is an example of a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ change.

**4.** A substance that undergoes a chemical change produces a new substance with new   
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**5.** Only the form or appearance of matter is altered during a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ change.

**If the statement is true, write *true*. If the statement is false, change the underlined word  
or words to make the statement true.**

**6.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Iron rusting is an example of a(n) physical change.

**7.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Glass breaking and sugar dissolving are examples of chemical  
changes.

**8.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A substance that undergoes a physical change is still the same  
substance after the change.

**9.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Liquid water changing into gas is an example of a(n) physical  
change.

**10.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ The chemical change that occurs when fuels are burned is  
called oxidation.