Chapter 2 Reading Guide Name _____

Section 2.1

1. Look at the vocabulary list on page 39. Which of those words do you not know the meaning of?
2. How does an extensive property differ from an intensive property?
3. Matter that has a uniform and definite composition is called a _____ .
4. Is the following sentence true or false? All samples of a substance have different physical properties. Explain.
5. A physical property is a quality or condition of a substance that can be _____ or _____ without changing the substance's composition.
6. Circle the letter of the term that is NOT a physical property.
   a. hardness b. color c. boiling point d. melting
7. Look at Table 2.1 on page 40. What is the melting point of bromine?
8. Look at Table 2.1 on page 40. Circle the letter of the substance that is a yellow solid and melts at 115°C.
   a. sulfur b. chlorine c. gold d. copper
9. Copy and complete the table about properties of three states of matter. Use these terms: definite, indefinite, easily, and not easily.

Properties of the States of Matter			
Property	Solid	Liquid	Gas or Vapor
Shape			
Volume			
Can be compressed			

10. Match each arrangement of the particles in matter with a physical state.

Physical State	Arrangement
_____ gas	a. packed tightly together
_____ liquid	b. close, but free to flow
_____ solid	c. spaced relatively far apart

11. What does vapor describe?
12. What are four words that describe physical changes?
13. What is true about all physical changes that involve a change of state?
14. Go back to the "Connecting to you World" at the beginning of section 2.1. List four of the properties of bamboo. And say if they are intensive or extensive properties and if they are chemical or physical properties?

Property	Intensive or Extensive	Physical or Chemical

Section 2.2

1. What is a mixture?
2. What is another name for a homogeneous mixture?
3. Circle the letter of the term that describes a part of a sample with uniform composition and properties.
   a. solution b. mixture c. state d. phase
4. How many phases exist in a homogeneous mixture? In a heterogeneous mixture?
5. In general, what is used to separate mixtures?
6. The process that separates a solid from a liquid in a heterogeneous mixture is called _____.
7. What happens during a distillation?

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Section 2.3

1. What are the two groups into which substances can be classified?

2. Is the following sentence true or false? Elements can be easily separated into simpler substances. Explain.

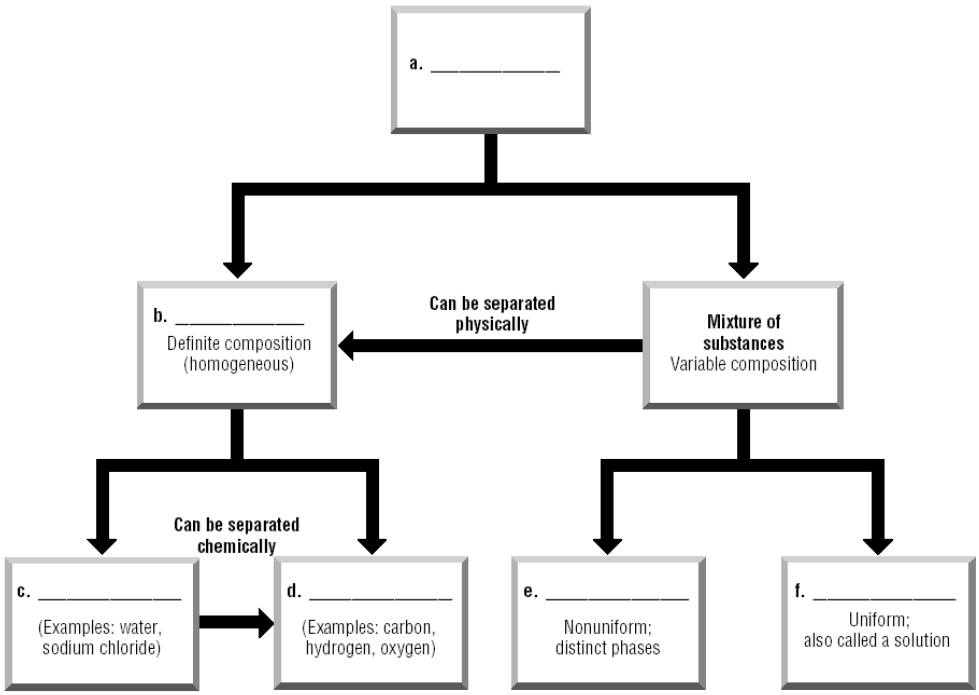
3. Compounds are substances that can be separated into simpler substances only by _____ means.

4. Is the following sentence true or false? The properties of compounds are different from those of their component elements. Explain

5. Complete this sentence. Sodium chloride (table salt) is a _____ of sodium, which is a soft _____ , and chlorine, which is a pale yellow _____ .

6. Describe one way to decide whether a sample of matter is a substance or a mixture.

7. Copy and complete the labels in the diagram below.



8. What are chemical symbols used for?

9. Subscripts in chemical formulas are used to indicate the relative proportions of the elements in

10. Is the following sentence true or false? The elements that make up a compound are always present in the same proportions. Explain.

Section 2.4

1. What is a chemical property?

2. Is the following sentence true or false? Chemical properties are observed only when a substance undergoes a chemical change. Explain.

3. What happens during a chemical reaction?

4. In chemical reactions, the substances present at the start of the reaction are called _____ and the substances produced are called _____ .

5. Circle the letter of the term that best completes the sentence. A change in the composition of matter _____ occurs during a chemical reaction.

a. sometimes b. rarely c. always d. never

6. Define a precipitate.

7. During a chemical reaction, the mass of the products is always equal to the mass of the _____. The law of conservation of mass states that in any physical change or chemical reaction, mass is neither _____ nor _____ .

8. Look at Figure 2.15 on page 55. How do you know that mass was conserved?