Name Date Class

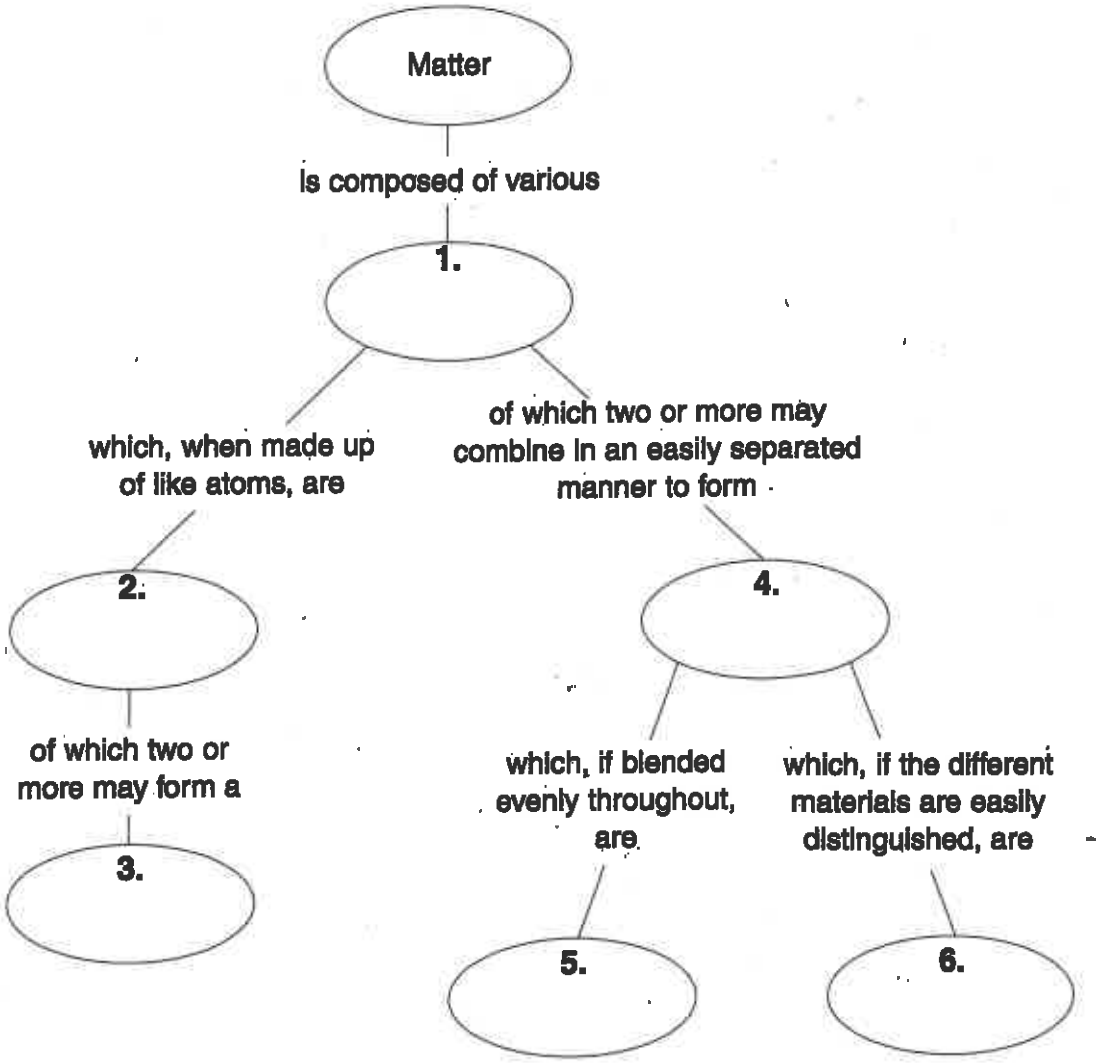
Directed Reading for Content Mastery

Overview
Classification of Matter

CHAPTER 15.1 REVIEW

Directions: *Complete the concept map using the terms in the list below.*

heterogeneous **elements** **homogeneous**
compound **substances** **mixtures**



Directions: *Circle the term in parentheses that makes each statement correct.*

7. A beam of light is (visible, invisible) as it passes through a solution, but (can, cannot) be seen as it passes through a colloid.
8. Appearance and behavior are (chemical, physical) properties.
9. The change of one substance to another is a (chemical, physical) change.
10. When substances go through a chemical change, mass is always (gained, lost, conserved).

Directed Reading for Content Mastery

Section 1 • Composition of Matter

Directions: *Choose the correct category from the list for each item. Each category will be used more than once.*

_____ 1. chalk
_____ 2. copper
_____ 3. granite
_____ 4. vinegar
_____ 5. pond water
_____ 6. water
_____ 7. salt
_____ 8. permanent press fabric
_____ 9. soft drink
_____ 10. paint
_____ 11. gold
_____ 12. a river delta
_____ 13. fog
_____ 14. gelatin
_____ 15. lead

a. element
b. compound
c. suspension
d. heterogeneous mixture
e. homogeneous mixture
f. colloid

Directions: *Complete the sentences by writing the letters of the correct terms on the lines provided.*

_____ 16. All substances are built from _____ .
a. elements
b. atom
c. metal
d. salt

_____ 17. A beam of light can be seen as it passes through a(n) _____ .
a. colloid
b. solution
c. element
d. compound

_____ 18. A _____ is a homogenous mixture of particles so small they cannot be seen and will not settle to the bottom of their container.
a. colloid
b. solution
c. element
d. compound

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SECTION 1 Reinforcement

Composition of Matter

Directions: *Match the terms in Column II with the definitions in Column I. Write the letter of the correct term in the blank at the left.*

Column I	Column II
_____ 1. heterogeneous mixture containing a liquid in which visible particles settle	a. Tyndall effect
_____ 2. contains two or more gaseous, liquid, or solid substances blended evenly throughout the mixture.	b. colloid
_____ 3. substance in which all atoms are alike	c. heterogeneous mixture
_____ 4. any material made of two or more substances that can be physically separated	d. mixture
_____ 5. the scattering of light by colloidal particles	e. element
_____ 6. heterogeneous mixture with larger particles that never settle	f. suspension
_____ 7. a mixture in which different materials can be easily distinguished	g. solution
_____ 8. homogeneous mixture of particles so small they cannot be seen and will never settle to the bottom of their container	h. homogeneous mixture
_____ 9. substance in which two or more elements are combined in a fixed proportion	i. compound

Directions: *Fill in the table below with the element below that matches its description.*

silicon **lead** **titanium**
americium **aluminum** **magnesium**

10. radioactive metal	
11. bendable and resists corrosion	
12. found in windowglass and computer chips	
13. found in chlorophyll	
14. used in body implants	
15. has a high density	

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Directed Reading for Content Mastery

Key Terms
Classification of Matter

Directions: *Unscramble the terms in each of the following statements. Write the term in the blanks at the left of the statements and then circle the term in the word search puzzle.*

_____ 1. A(n) *ethgnesuoereo* mixture has different materials that can be easily distinguished.

_____ 2. A homogeneous mixture with particles so small they cannot be seen without a microscope is a(n) *tuolsion.*

_____ 3. A(n) *ssinnopseu* is a liquid heterogeneous mixture in which visible particles settle.

_____ 4. A(n) *ooudnmpc* is a material made from atoms of two or more combined elements.

_____ 5. If all the atoms in a sample of matter are alike, that kind of matter is a(n) *neemetl.*

_____ 6. A(n) *oogosuenehm* mixture has two or more substances blended evenly throughout.

_____ 7. The scattering of light by colloids and suspensions is called the *lyTdnal* effect.

_____ 8. Size, shape, and melting point are *hsypialc* properties.

_____ 9. A burnt object has undergone a *aheicmcl* change.

_____ 10. The law of *ionrtcvaeson* of mass states that mass is not gained or lost during chemical changes.

B	H	H	E	T	E	R	O	G	E	N	E	O	U	S	N
T	E	O	P	P	R	O	L	O	N	Z	H	C	O	I	O
N	P	M	I	H	M	Q	L	L	N	C	Y	H	I	C	I
R	O	O	C	O	M	P	O	U	N	D	D	E	O	P	S
O	C	G	O	P	E	T	I	M	C	E	R	M	G	H	N
C	S	E	S	A	T	R	D	E	L	M	P	I	M	Y	E
C	O	N	S	E	R	V	A	T	I	O	N	C	S	S	P
E	R	E	L	E	M	E	N	T	U	L	E	A	C	I	S
G	T	O	O	I	S	T	Y	N	D	A	L	L	I	C	U
I	C	U	M	C	A	T	D	M	C	R	Y	M	S	A	S
E	E	S	O	L	U	T	I	O	N	L	I	B	Y	L	I

NAME _____

CLASS _____ DATE _____

Mixtures and Compounds

1. A physical combination of two or more kinds of matter is called a _____.

2. A _____ mixture is one in which the components are uniformly mixed together.

a. heterogeneous
b. homogeneous

3. Elements and compounds are called _____ substances because they cannot be separated by physical changes.

4. According to the concept map on page 393, both mixtures and pure substances can be _____.

a. homogeneous
b. heterogeneous
c. compounds

5. A mixture of elements can be separated physically. List the letters of the ways a mixture of elements could be separated. _____

a. passing electricity through the mixture
b. using paper chromatography
c. filtering
d. cooling the mixture

6. Electric decomposition of _____ breaks it down into hydrogen and oxygen.

a. any element
b. any compound
c. water

7. You can tell from the formula H_2O that water has a ratio of two parts hydrogen to _____ oxygen.

a. one part
b. two parts
c. three parts

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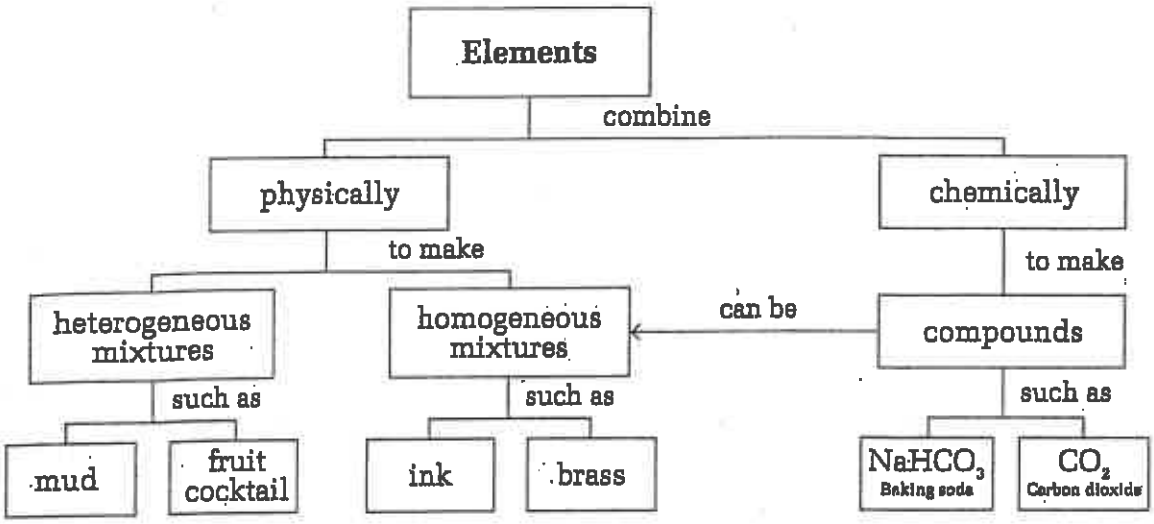
Chemical Relations

Use the diagram to help you classify some common items as *heterogeneous mixtures, homogeneous mixtures, elements,* or *compounds.*



1. wet sand _____
2. water _____
3. aluminum _____
4. sugar _____
5. soda pop _____
6. air _____
7. hydrogen peroxide _____
8. newspaper _____
9. diamond _____
10. baking soda _____
11. The diagram indicates that the parts of a mixture can be separated by physical changes. Give two examples of ways to separate the parts of a mixture.

    _____

12. The elements that are combined in a compound cannot be separated except by chemical means. Give an example of a way to separate the elements in a compound.

    _____