Name _____ Date _____

Classification of Matter

Section 1 Composition of Matter CHAPTER 15 DRW

Predict *Read the title of Section 1. List three things that might be discussed in this section.*

1. _____
2. _____
3. _____

Review Vocabulary

property

Circle the phrase that comes closest to the meaning of the word **property** *as it is used in your book.*

a piece of land — a quality or attribute

something that is owned — a stage prop

New Vocabulary

Use the terms on the left to fill in the blanks in the sentences.

colloid

A _____ is an _____ if all the atoms in the substance are the same.

compound

A _____ is a substance in which two or more elements are combined in a fixed proportion.

element

heterogeneous mixture

A _____ contains two or more substances blended evenly throughout.

homogeneous mixture

A _____ is a mixture in which different materials can easily be distinguished.

solution

A _____ is a homogeneous mixture of particles too small to see with a microscope and too small to settle.

substance

suspension

The _____ is observed when light passes through a _____, which is a mixture with particles visible under a microscope but not heavy enough to settle.

Tyndall effect

A _____ is a heterogeneous mixture containing a liquid in which you can see particles settle.

Name _____ Date _____

Section 1 Composition of Matter (continued)

Main Idea | **Details**

Substances

I found this information on page _____.

Classify ***each substance as an*** **element** ***or a*** **compound.**

calcium	chalk	hydrogen	salt	water
carbon	chlorine	mercury	sodium	zinc
carbon dioxide	copper	oxygen	sugar	

Elements	Compounds

Mixtures

I found this information on page _____.

Organize ***information about*** **mixtures** ***in the outline below.***

I. Mixtures

A. Heterogeneous mixtures

1. _____
2. _____
3. _____
4. Examples: _____

B. Homogeneous mixtures

1. _____
2. _____
3. _____
4. Examples: _____

C. Colloids

1. _____
2. _____
3. _____
4. _____
5. Examples: _____

Name _____ Date _____

Section 1 Composition of Matter (continued)

Main Idea — **Details**

Mixtures

I found this information on page _____.

Sequence *the types of mixtures according to particle size.*

colloids solutions suspensions

Largest particles _____

_____

Smallest particles _____

Compare and contrast colloids, solutions, *and* suspensions. *Write the characteristics of each in the table.*

	colloids	solutions	suspensions
particles			
appearance			

Predict *what an observer who looks directly into a light source through a colloid will see.*

_____

_____

_____

SYNTHESIZE IT

Classify each substance as a solution, a colloid, or a suspension. Write each name in one of the boxes below.

herbed salad dressing paint pulpy orange juice tea
milk perfume smoke vinegar

colloids	suspensions	solutions

Name _____ Date _____

Classification of Matter

Section 2 Properties of Matter

Skim *Section 2 of your book. Write three questions that come to mind from reading the headings and the illustration captions.*

1. _____
2. _____
3. _____

Review Vocabulary

Use the phrase **boiling point** *in a sentence.*

boiling point _____

_____

New Vocabulary

Read the definitions below, then write the key term for each one in the left column.

_____ a characteristic that can be observed without changing the substance

_____ a change in size, shape, or state of matter

_____ a change of one substance to another

_____ a characteristic that indicates whether a substance can change to another substance

_____ the separaration of substances in a mixture using evaporation

_____ the mass of all substances before a chemical change equals the mass of all substances after the change

Academic Vocabulary

Use a dictionary to define the word **identify.**

identify _____

Name _____ Date _____

Section 2 Properties of Matter (continued)

Main Idea | **Details**

Physical Properties

I found this information on page _____.

Distinguish *between the materials listed below. Describe a unique physical property for each one that is not true for the other materials in this group.*

Material	Unique physical property
rubber	
applesauce	
marble	
copper	

Physical Change

I found this information on page _____.

Describe *how freezing could be used to remove sugar from a mixture of sugar and water.*

_____

_____

_____

_____

_____

Chemical Properties and Changes, Detecting Chemical Change

I found this information on page _____.

Identify *four properties of a substance that will never change.*

_____, _____, _____, _____

Organize *five kinds of physical changes and five kinds of chemical changes.*

Chemical	Physical

Name _____ Date _____

Section 2 Properties of Matter (continued)

Main Idea	Details

Weathering—Chemical or Physical Change?

I found this information on page _____.

Identify *chemical and physical changes that occur as a car ages.*

Physical Changes	Chemical Changes

The Conservation of Mass

I found this information on page _____.

Describe *how the law of conservation of mass could be useful for investigating chemical changes.*

CONNECT IT

Describe some ways that industry and agriculture use physical properties to separate substances.