

Chapter 9

REINFORCEMENT

Composition of Matter

BP15

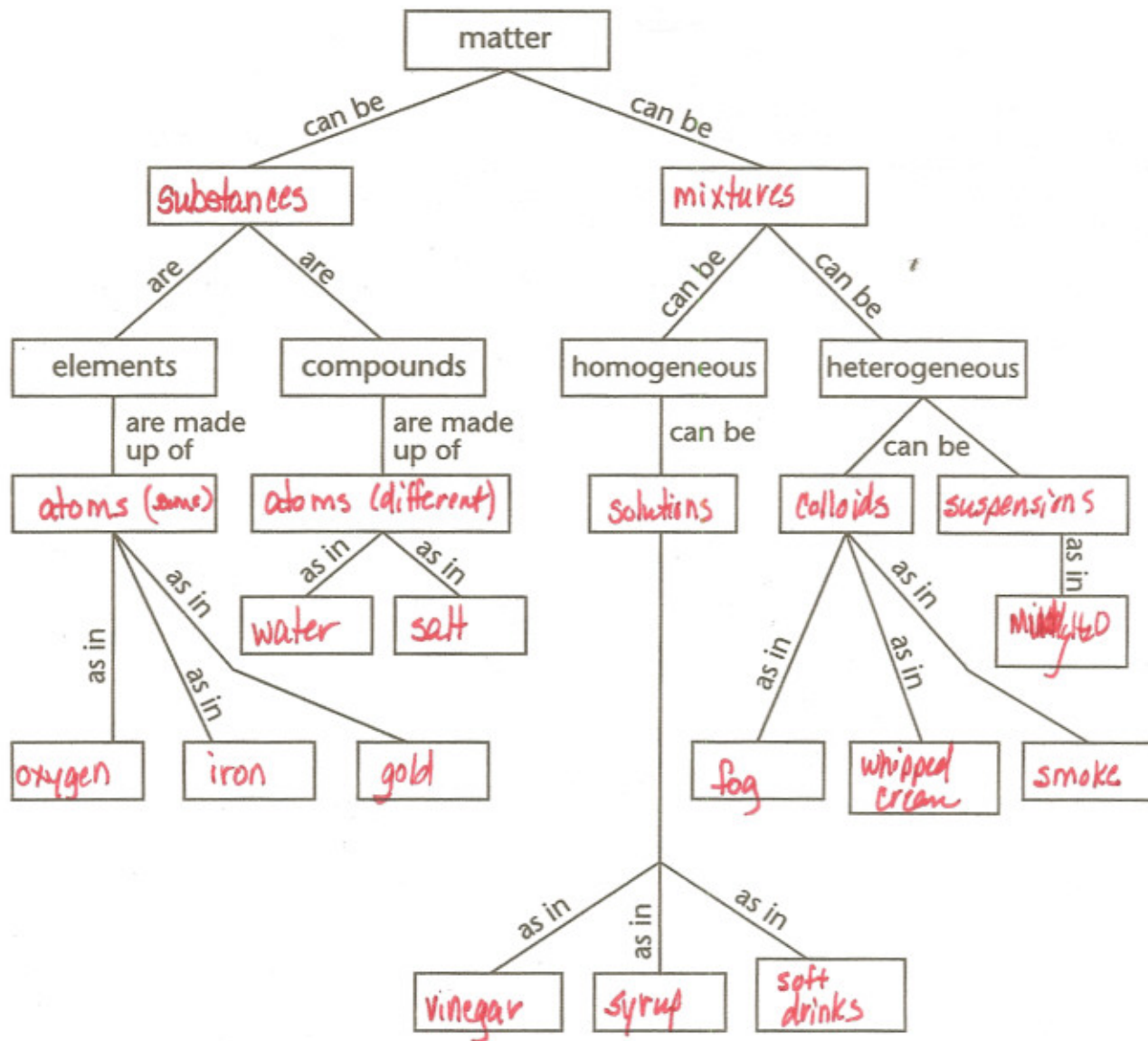
Use the words listed below to correctly complete the concept map.

atoms (different)
gold
oxygen
solutions
vinegar

atoms (same)
iron
salt
substances
water

colloids
mixtures
smoke
suspensions
whipped cream

fog
muddy water
soft drinks
syrup



Chapter 9

Use with Text Pages 246-251

STUDY GUIDE

● Composition of Matter

One key term has been scrambled in each of the following statements. Unscramble the term. On the lines provided, rewrite the entire statement with the unscrambled term. Then find each unscrambled key term in the hidden word puzzle.

1. A(n) *ethgnesuoereo* mixture has different materials that are spread out unevenly.
heterogeneous
2. A(n) *oildclo* is a heterogeneous mixture whose particles never settle and are large enough to scatter light. colloid
3. A homogeneous mixture in which particles are so small that they cannot be seen without a microscope is a(n) *tuolsion*. solution
4. A(n) *ssinnopue* is a liquid heterogeneous mixture in which visible particles settle.
suspension
5. A(n) *ooudnmpc* is a material made from atoms of two or more combined elements.
compound
6. If all the atoms in a sample of matter are alike, that kind of matter is a(n) *neemetl*.
element
7. A(n) *oogosuenehm* mixture has substances that are uniformly spread out.
homogeneous



Chapter 9

CHAPTER REVIEW

● Classification of Matter

BP15

Part A. Vocabulary Review

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

Column I

Column II

- | | | |
|----------|--|--------------------------------|
| <u>B</u> | 1. a type of mixture in which all substances are uniformly spread out | a. element |
| <u>N</u> | 2. a change in size, shape, or state of matter | b. homogeneous mixture |
| <u>H</u> | 3. mixture of air and water droplets | c. heterogeneous mixture |
| <u>C</u> | 4. a type of mixture in which different materials are spread out unevenly | d. physical property |
| <u>A</u> | 5. matter in which all atoms are alike | e. chemical change |
| <u>M</u> | 6. explains that matter is neither created nor destroyed during a chemical change | f. colloid |
| <u>O</u> | 7. heterogeneous mixture containing a liquid in which visible particles settle | g. compound |
| <u>G</u> | 8. a material made from atoms of two or more elements that are combined | h. fog |
| <u>L</u> | 9. clumps of small particles | i. solution |
| <u>D</u> | 10. a characteristic of a material that can be easily observed without changing the substances that make up the material | j. Tyndall effect |
| <u>F</u> | 11. a heterogeneous mixture that does not separate | k. chemical property |
| <u>K</u> | 12. a characteristic that helps to identify a substance by describing how the substance will undergo a chemical change | l. coagulation |
| <u>I</u> | 13. a homogeneous mixture that remains uniformly and constantly mixed | m. law of conservation of mass |
| <u>E</u> | 14. a change of one substance in a material to a different substance | n. physical change |
| <u>J</u> | 15. scattering of light by particles in a mixture | o. suspension |

Chapter 9

Use with Text Pages 254-261

STUDY GUIDE

● Describing Matter

#15 Binder

Complete the following by filling in each blank with the correct term.

Scientists try to explain how changes in substances take place. By applying energy, you can tear a sheet of paper into pieces and cause a(n) physical change

_____ in the paper. If you place a balloon filled with air into the refrigerator, the balloon will get smaller. The balloon undergoes a(n) physical

change _____. On a hot summer day, water vapor will condense into water droplets on the outside of a glass of iced tea. The glass of iced tea is a(n)

mixture (solution) of sugar, tea, lemon, and water. Ice is water in the solid state. The density of ice is less than that of liquid water. Therefore, ice floats on the tea. The melting point of ice is 0°C. This temperature is also the freezing point of liquid water. Water is a clear, colorless

liquid _____ at room temperature. The words clear and colorless describe two physical

properties _____ of water. The melting of the ice in iced tea is a(n) physical _____ change _____.

In comparison, a(n) chemical _____ change _____ produces new substances. When a candle burns, physical and chemical _____ changes take place. The melting _____ of the wax is a physical change. The melted wax is

now in the liquid state. However, when burning occurs, a(n) chemical _____ change _____ takes place. The melted wax, as it burns, combines with gaseous

oxygen in air. After the chemical change, water vapor and carbon dioxide gas are formed. The mass of all substances before a chemical change equals _____ the mass of all substances after a chemical change.

Chapter 9

Use with Text Pages 254–261

REINFORCEMENT

● Describing Matter

B-18

Analogies

Below are two sets of words. Complete the second set by choosing a word from those listed below the blank. The two words must be related in the same way as the first set of words.

EXAMPLE

letter:envelope::pillow:[case]
case, sheet, soft, bed

- steam:water::water: ice
heat, molecules, ice, matter
- solid:melting::liquid: vaporizing
condensing, heating, mixing, vaporizing
- physical:chemical::size: burning
burning, taste, solubility, acid
- liquid:vaporizing::solid: melting
melting, freezing, decomposing, evaporating
- iron:rust::silver: tarnish
reaction, oxygen, tarnish, water
- chemical:rust::physical: condensation
compound, condensation, solid, change
- element:compound::oxygen: water
water, hydrogen, matter, mixture
- compound:mixture::chemical: physical
physical, separation, property, gas
- hydrogen:water::carbon: CO₂
carbon dioxide, graphite, coal, gas
- solid:steel::gaseous: air
coal, air, water, gasoline
- burning:candle::corrosion: copper
vaporization, physical property, copper, mixture.