

STUDY GUIDE**Chapter 15****Describing Matter**

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

The balloon undergoes a(n) _____. 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) _____ 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 _____ at room temperature. The words *clear* and *colorless* describe two _____ of water. The melting of the ice in iced tea is a(n) _____.

In comparison, a(n) _____ produces new substances. When a candle burns, physical and _____ changes take place. The _____ of the wax is a physical change. The melted wax is now in the liquid state. However, when burning occurs, a(n) _____ 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 _____ the mass of all substances after a chemical change.

REINFORCEMENT**Chapter 15****Describing Matter***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

1. steam:water: :water: _____
heat, molecules, ice, matter
2. solid:melting::liquid: _____
condensing, heating, mixing, vaporizing
3. physical:chemical::size: _____
burning, taste, solubility, acid
4. liquid:vaporizing::solid: _____
melting, freezing, decomposing, evaporating
5. iron:rust::silver: _____
reaction, oxygen, tarnish, water
6. chemical:rust::physical: _____
compound, condensation, solid, change
7. element:compound::oxygen: _____
water, hydrogen, matter, mixture
8. compound:mixture::chemical: _____
physical, separation, property, gas
9. hydrogen:water::carbon: _____
carbon dioxide, graphite, coal, gas
10. solid:steel::gaseous: _____
coal, air, water, gasoline
11. burning:candle:corrosion: _____
vaporization, physical property, copper, mixture