Name _____ Date _____ Class _____

CHAPTER 14 STUDY GUIDE FOR CONTENT MASTERY

Gases

Section 14.1 The Gas Laws

In your textbook, read about the basic concepts of the three gas laws.

Use each of the terms below to complete the passage. Each term may be used more than once.

pressure	temperature	volume

Boyle's law relates **(1)**_____ and **(2)**_____ if **(3)**_____ and amount of gas are held constant. Charles's law relates **(4)**_____ and **(5)**_____ if **(6)**_____ and amount of gas are held constant. Gay-Lussac's law relates **(7)**_____ and **(8)**_____ if **(9)**_____ and amount of gas are held constant.

In your textbook, read about the effects of changing conditions on a sample of gas.

For each question below, write *increases*, *decreases*, or *stays the same*.

_____ **10.** The room temperature increases from 20°C to 24°C. What happens to the pressure inside a cylinder of oxygen contained in the room?

_____ **11.** What happens to the pressure of the gas in an inflated expandable balloon if the temperature is increased?

_____ **12.** An aerosol can of air freshener is sprayed into a room. What happens to the pressure of the gas if its temperature stays constant?

_____ **13.** The volume of air in human lungs increases before it is exhaled. What happens to the temperature of the air in the lungs to cause this change, assuming pressure stays constant?

_____ **14.** A leftover hamburger patty is sealed in a plastic bag and placed in the refrigerator. What happens to the volume of the air in the bag?

_____ **15.** What happens to the pressure of a gas in a lightbulb a few minutes after the light is turned on?