Name _____ Class _____ Date _____

Section 18.4 Color

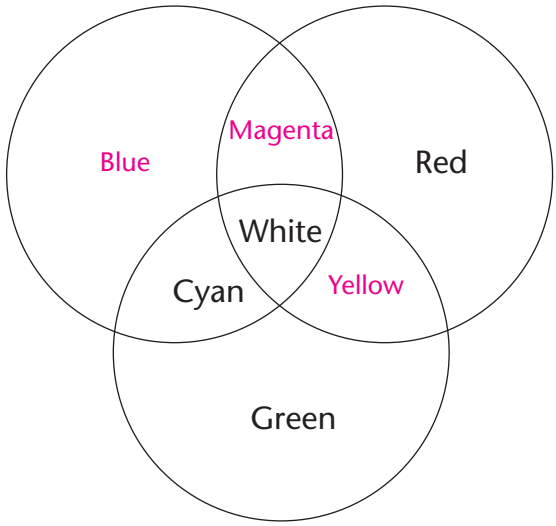
(pages 550–553)

This section explains how a prism separates white light. It also discusses factors that influence the various properties of color.

Reading Strategy (page 550)

Venn Diagram As you read, label the Venn diagram for mixing primary colors of light. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

Mixing Colors of Light



Separating White Light Into Colors (page 551)

1. Use the words in the box to fill in the blanks.

reflect	separate
refract	intensify

When white light passes through a prism, shorter wavelengths refract more than longer wavelengths, and the colors separate.

2. Circle the letter of the process in which white light is separated into the colors of the rainbow.

a. reflection
b. dispersion
c. absorption

3. When a rainbow forms, what acts as the prism and what is the light source? Water droplets act like prisms, and sunlight is the light source.

The Colors of Objects (pages 551–552)

4. Circle the letter of the factors that determine the color of an object seen by reflected light.

(a.) what the object is made of
(b.) the color of light that strikes the object
(c.) the way the eye works

5. Is the following sentence true or false? I see a red car in sunlight because the color of light reaching my eyes is mostly red light.

true

Mixing Colors of Light (page 552)

Match the colors of light with the correct type of color.

	Type of Color	Colors of Light
c	**6.** primary colors	a. Cyan, yellow, and magenta
a	**7.** secondary colors	b. Blue and yellow
b	**8.** complementary colors	c. Red, green and blue

Match each color of light to its definition.

	Type of Color	Definition
b	**9.** primary colors	a. Formed when two primary colors combine
a	**10.** secondary colors	b. Combine in varying amounts to form all possible colors
c	**11.** complementary colors	c. Combine to form white light

Mixing Pigments (page 553)

12. What is a pigment? A pigment is a material that absorbs some colors of light and reflects other colors.

Match the primary colors of pigment to the color they produce when combined.

	Primary Colors	Color Produced
c	**13.** Cyan and magenta	a. green
a	**14.** Cyan and yellow	b. red
b	**15.** Yellow and magenta	c. blue