Name Period Date

SECTION 3.4 | LIGHT WAVES INTERACT WITH MATERIALS.

Reinforcing Key Concepts

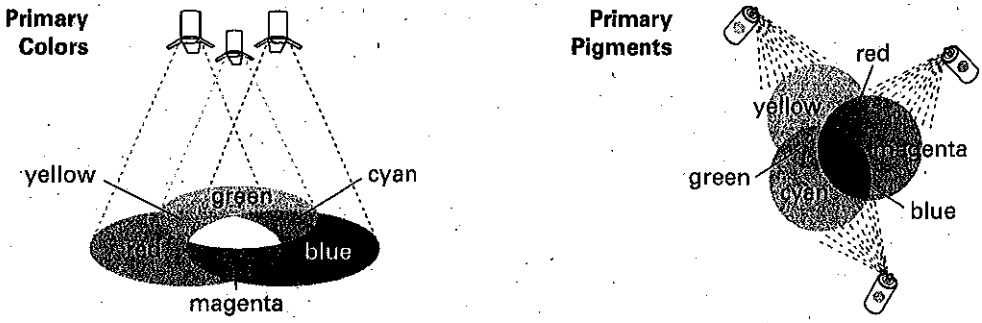
BIG IDEA Electromagnetic waves transfer energy through radiation.

KEY CONCEPT Light waves interact with materials.

1. **Light can be reflected, transmitted, or absorbed.** Light can interact in different ways with a medium it encounters. In the chart below, describe what happens to light waves during reflection, transmission, absorption, scattering, and polarization.

Reflection	Transmission	Absorption	Scattering	Polarization

2. **Wavelength determines color.** The picture below shows the three primary colors—red, green, and blue—and the three primary pigments—cyan, magenta, and yellow. When all three primary colors of light are mixed together equally, they produce white, or colorless, light. When all three primary pigments are mixed together in equal amounts, the result is nearly black, the absence of color. Why do these two processes produce opposite results?



CHAPTER 3 Electromagnetic Waves