

Name: _____

14.2

Color



Question: What happens when you mix different colors of light?

1 **Mixing primary colors of light**

a. How many colors do you see in the light pattern on the screen?

b. Use colored pencils to draw the light pattern in the space below. Pay attention to the colors of light you see when two light beams overlap.

c. What color of light do you see when two LED light beams overlap? Write your answers in table 1.

Table 1: Mixing primary colors of light

LED color combination	Color you see
Red + Green	
Green + Blue	
Blue + Red	
Red + Green + Blue	

2

How does a color filter work?

Record your observations in Table 2.

Table 2: Examining LEDs

Red LED	Green LED	Blue LED
White LED		

3

Drawing conclusions

- a. Compare the colors in the red LED to those in the green LED. What are the similarities and differences in the range of colors?

- b. Compare the colors in the green LED to those in the blue LED. What are the similarities and differences in the range of colors?

- c. How do the colors in the white LED compare to the red, green, and blue LEDs combined?

- d. The red LED consists of a white LED covered with a red filter. What does the red filter do?

- e. What do color filters do?

- f. If you wanted to get yellow light, what part of the spectrum would the color filter have to absorb?
