Light and Color

This section explains what happens to light that strikes an object, and what determines the color of an object. It also explains how mixing colored pigments is different from mixing colored light.

Use Target Reading Skills

As you read, carefully note the definition of each key term. Also note other details in the paragraph that contains the definition. Use all this information to write a sentence using the key terms.

a. transparent material

_____

_____

b. translucent material

_____

_____

c. opaque material

_____

_____

d. primary colors

_____

_____

e. secondary colors

_____

_____

f. complementary colors

_____

_____

g. pigment

_____

_____

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Light and Color *(continued)*

When Light Strikes an Object

1. What three things can happen when light strikes an object?

_____

_____

2. In which three categories can most materials be classified, based on what happens to light that strikes the material?

_____

_____

3. What happens to light that strikes a translucent material?

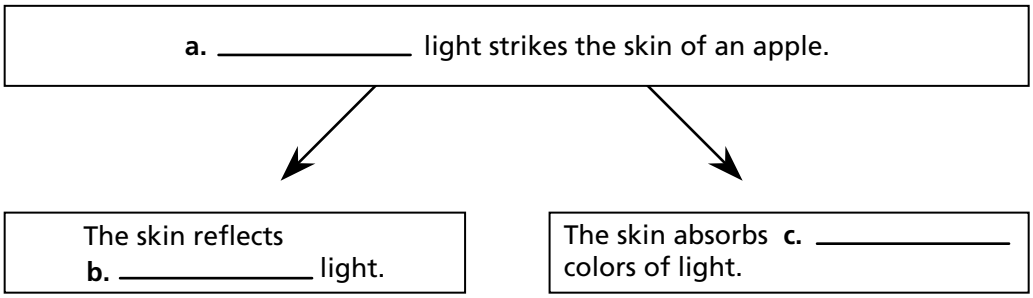
_____

_____

The Color of Objects

4. The color of an opaque object is the color of the light it _____.

5. Complete the flowchart about why you see the skin of an apple as red.



6. Is the following sentence true or false? Objects can look different in color depending on the color of light in which they are seen.

_____

7. What color does a green leaf appear to be in red light? Why?

_____

_____

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8. Circle the letter of the color of light that a red filter allows to pass through it.
   a. blue
   b. magenta
   c. cyan
   d. red

Combining Colors

9. The three colors that can be used to make any other color are called _____.

10. Any two primary colors combined in equal amounts produce a(n) _____.

11. What are the three primary colors of light?

_____

12. When combined in equal amounts, what do all three of the primary colors of light produce?

_____

13. Complete the following "equations" by writing the secondary color the two primary colors of light produce when they are combined in equal amounts.

    a. Green + Blue _____

    b. Red + Green _____

    c. Red + Blue _____

14. Any two colors of light that combine to form white light are called _____.

15. What are pigments?

_____

_____

16. Complete the following "equations" by writing the secondary color the two primary colors of pigments produce.

    a. Magenta + Cyan _____

    b. Magenta + Yellow _____

    c. Cyan + Yellow _____

17. Why is the printing process called four-color printing?

_____

_____

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