

Physical Principles in Living Systems

Name: _____

Color

Period: _____

Use Chapter 3, Section 2 of your textbook to answer the questions below.

Colors of Objects (p.86)

1. The wavelengths of light that reach your eyes determine an object's _____.
2. Your _____ is what interprets signals as color.

Colors of Opaque Objects (p.87)

- _____ 3. What happens when white light strikes a colored opaque object?
 - a. Colors of light are absorbed and reflected.
 - b. Colors of light are scattered and transmitted.
 - c. Colors of light are absorbed and transmitted.
 - d. Colors of light are absorbed and scattered.
4. The color of an opaque object is based on the colors of light that are _____.
5. _____ colors of light are reflected by a white object.
6. _____ colors of light are absorbed by a black object.



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Colors of Transparent and Translucent Objects (p.87)

7. Ordinary window glass is colorless in white light because it _____ all colors of light.
- _____ 8. Which of the following is seen through colored transparent or translucent objects?
 - a. the color of light absorbed through the material
 - b. the color of light dissolved through the material
 - c. the color of light reflected by or transmitted through the material
 - d. the color of light illuminated through the material

- _____ 9. What happens to colors that are NOT transmitted through or reflected by transparent or translucent objects?
 - a. The colors are absorbed.
 - b. The colors are dissolved.
 - c. The colors are reflected.
 - d. The colors are detected.

Pigments and Color (p.88)

10. _____ is a material that gives a substance its color.
11. In plants, _____ is the pigment that makes them green.



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Color Subtraction (p.88)

- _____ 12. How many colors of light does each pigment absorb?
 - a. at least one
 - b. only two
 - c. only three
 - d. none
- _____ 13. Which of the following does mixing pigments involve?
 - a. color correction
 - b. color coding
 - c. color subtraction
 - d. color deficiency
- _____ 14. Which of the following are the primary pigments?
 - a. yellow, cyan, and magenta
 - b. white and black
 - c. red, green, and blue
 - d. blue, yellow, and red