Physical Principles in Living Systems Name:

Color Period:

Use Chapter 3, Section 2 of your textbook to answer the questions below. The word banks can be used to fill out the sentences below them. Some terms may be used more than once.

all brain chlorophyll color pigment reflected transmits

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.

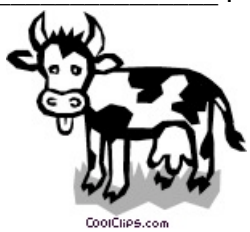
Colors of Opaque Objects (p.87)

_____ 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.



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 substances its color.

11. In plants, _____ is the pigment that makes them green.

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