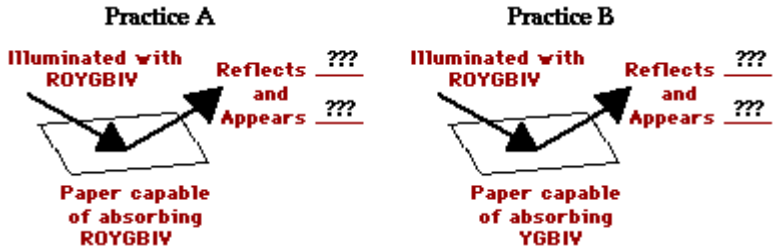
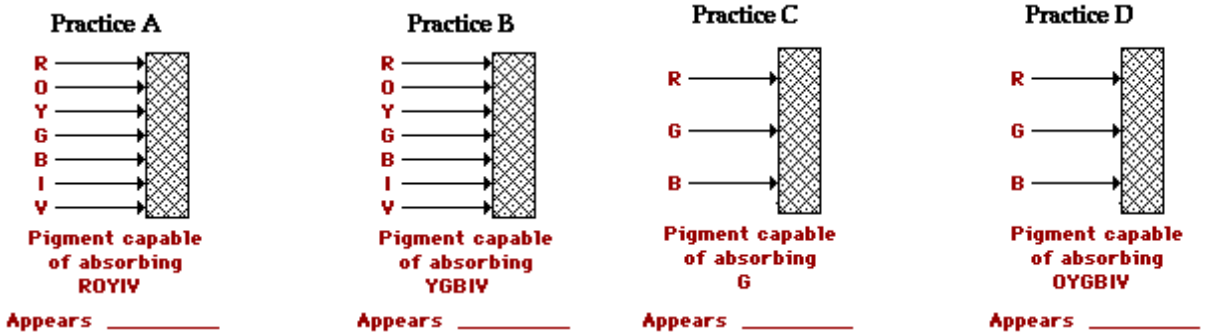
Perception
Week 2 Workshop Questions

1. The diagrams below depict a sheet of paper being illuminated with white light (ROYGBIV). The papers are impregnated with a chemical capable of absorbing one or more of the colors of white light. In each case, determine which color(s) of light are reflected by the paper and what color the paper will appear to an observer.



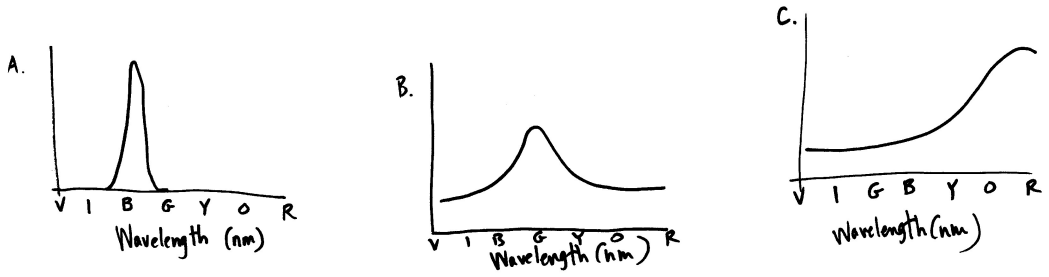
A. absorbs all so reflects nothing. Therefore the paper will appear black
B. reflects Red and Orange so paper appears reddish-orange.

2. The appearance of a transparent object is dependent upon what color(s) of light is/are incident upon the object and what color(s) of light is/are transmitted through the object. Express your understanding of this principle by determining which color(s) of light will be transmitted.

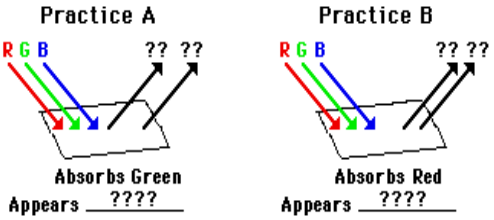


A. Green and blue will be transmitted so the light will appear cyan.
B. Red and orange will be transmitted so the light will appear reddish-orange.
C. Red and blue will be transmitted so the light will appear magenta
D. Green and blue will be transmitted so the light will appear cyan.

3. Draw/sketch intensity-distribution curves that represent each of the following lights:
   A. saturated blue light
   B. an unsaturated green light
   C. Pink light



4. Express your understanding of complementary colors and the rule of color subtraction by completing the following diagrams. White light (red-green-blue) is shown incident on a sheet of paper which is painted with a pigment which absorbs one of the primary colors of light. For each diagram, determine the color of the two reflected rays and determine the color which the paper appears.



A. Red and blue will be reflected so the paper will appear magenta.
B. Green and blue will be reflected so the paper will appear cyan.

5. Different colored light sources shine on different colored sheets of paper. The indicated paper color represents the appearance of the paper when viewed in white light. Fill in the table below to show the color of light which reflects from the paper (i.e., the color when viewed in this colored light).

	Color of Light	**Color of Paper**	**Color Observed**
a.	Red	Yellow	red
b.	Red	Magenta	red
c.	Blue	Blue	blue
d.	Blue	Cyan	blue
e.	Blue	Red	black
f.	Yellow	Red	red
g.	Yellow	Blue	black

6. What is the complementary color to green (why?) Is it a spectral or non-spectral color? Why?

The complement to green is magenta. It is a non-spectral color as it is comprised of red and blue light.

7. From your reading packet, experiment with the Try It for section 9.9B. Use the tempera paints and your creativity. Before each experiment, have your lab partner predict what the result will be and explain why using color theory? Have fun. Be able to explain the results in terms of your knowledge and understanding of color. There are several color wheels floating around - see if you can identify your mixed color on the wheel.

No specific answers…