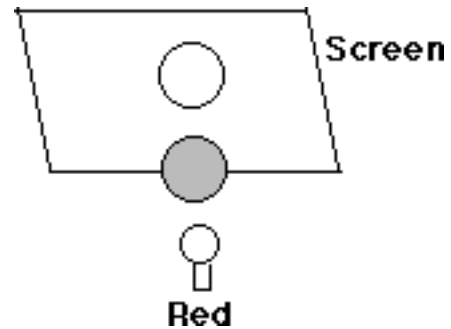
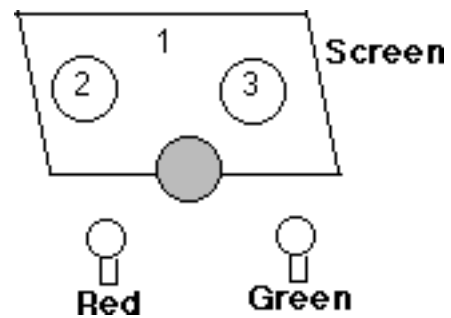


AP Wave Model: Color Demo (WS 6)

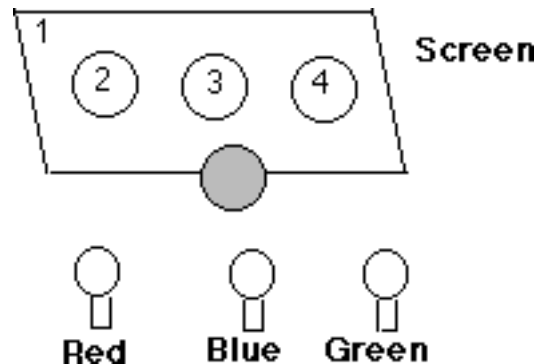
1) The sketch to the right shows a ball that is placed in front of a **WHITE** screen in a **DARK** room. The light bulb emits red light, casting a shadow on the screen, as shown. Label the color of the shadow and of the background.



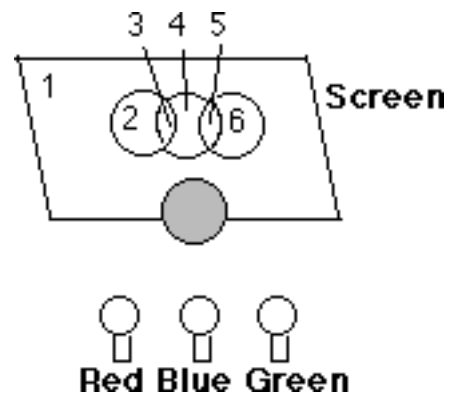
2) A green light source is added and makes a second shadow. List below the appropriate color for each numbered region in the shadows and background.



3) A blue lamp is added and three shadows appear. List below the appropriate color for each numbered region in the shadows and background.



4) The lamps are placed closer together so that the shadows overlap. List below the appropriate color for each numbered region in the shadows and background.



5. What color(s) of light does a blue glass bottle transmit? What color(s) does it absorb?

6. How do you think the health of a plant would be affected if it only received green light? Why?

7. What are complementary colors?

8. What is the complement of green light?

9. What colors of ink do color ink-jet printers use to produce the colors you see? Are the inks single suckers or double suckers? Why?

COLORS OF OBJECTS: The "color" of an object depends on what colors of light it reflects out of the colors of light striking it. For example, if an object reflects red and orange light, then it would look reddish-orange under white light. But under blue light it would look black.

10. What color would a "white" shirt appear to be for each of the following colors of light shining on it?
 red : _____ green: _____ blue : _____ white : _____

11. What color would a "red" shirt appear to be for each of the following colors of light shining on it?
 red : _____ green: _____ blue : _____ white : _____

12. What color would a "green" shirt appear to be for each of the following colors of light shining on it?
 red : _____ green: _____ blue : _____ white : _____

13. What color would a "magenta" shirt appear to be for each of the following colors of light shining on it?
 red : _____ green: _____ blue : _____ white : _____

14. What color would a "yellow" shirt appear to be for each of the following colors of light shining on it?
 red : _____ green: _____ blue : _____ white : _____

15. What color would a "black" shirt appear to be for each of the following colors of light shining on it?
 red : _____ green: _____ blue : _____ white : _____