

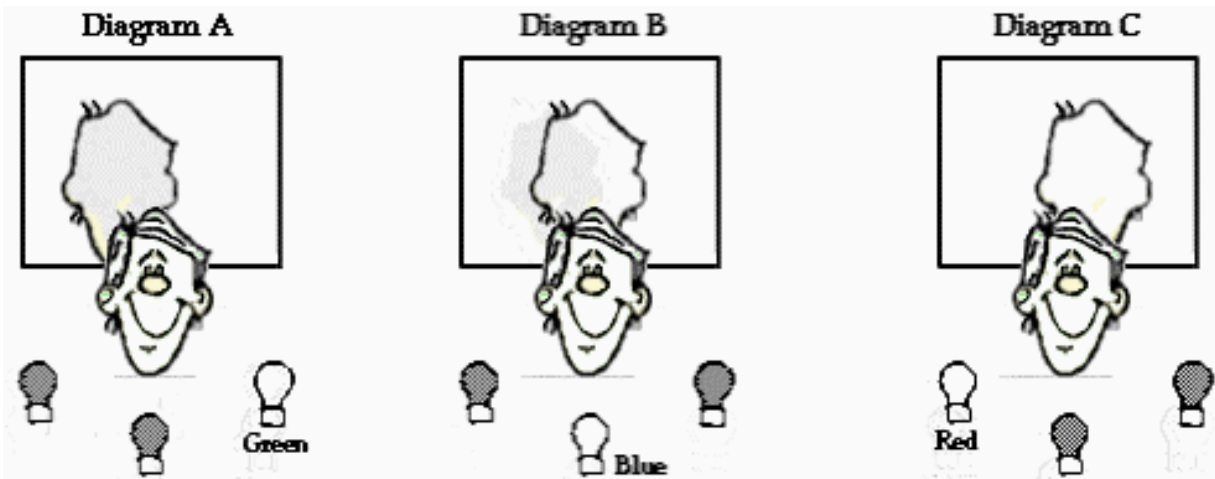
### Shadows

Read from Lesson 2 of the Light Waves and Color chapter at The Physics Classroom:

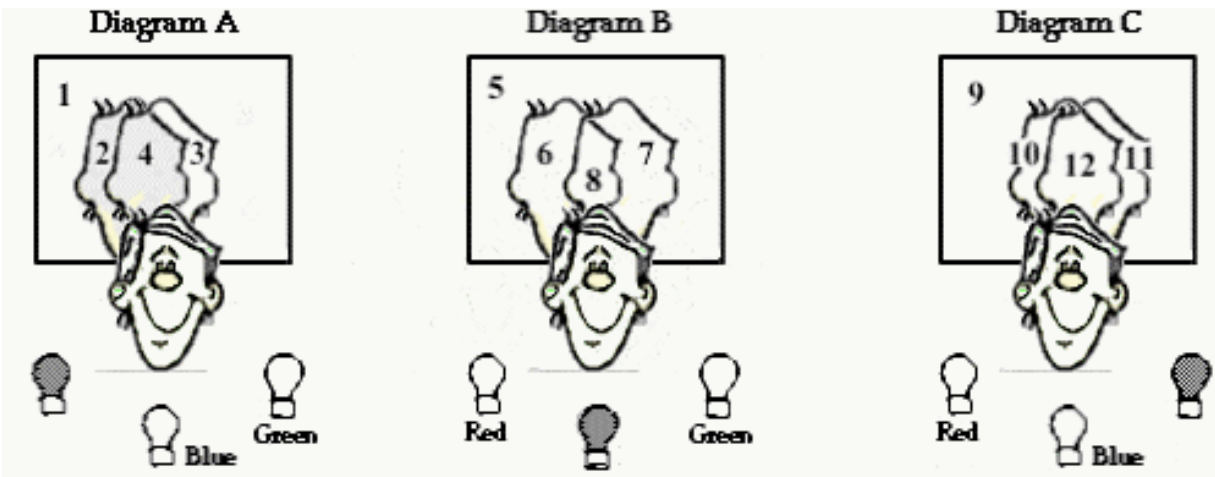
<http://www.physicsclassroom.com/Class/light/u12l2d.html>  
<http://www.physicsclassroom.com/Class/light/u12l2e.html>

MOP Connection: Light and Color: sublevel 9

1. A shadow is created when light from a source is blocked by an object, thus preventing that light from illuminating a screen. In the diagrams below, a teacher is blocking the light which is shining towards the whiteboard. Label the color of the shadow and the color of the whiteboard.



2. Now the same teacher stands in front of two lights, thus casting two shadows on the whiteboard. To complicated matters, the two shadows overlap in the middle wherever both lights are being blocked and prevented from hitting the whiteboard. Express your understanding by identifying the colors of the labeled regions.



Part #	Color
1	
2	
3	
4	

Part #	Color
5	
6	
7	
8	

Part #	Color
9	
10	
11	
12	

## Sound and Music

3. Now the teacher stands in front of three lights, thus casting three shadows on the whiteboard. And of course the three shadows overlap in various ways, creating an intricate pattern on the whiteboard. Express your understanding by identifying the colors of the labeled regions.

1 = \_\_\_\_\_

2 = \_\_\_\_\_

3 = \_\_\_\_\_

4 = \_\_\_\_\_

5 = \_\_\_\_\_

6 = \_\_\_\_\_

