

# Color Mixing

Dr. Gordon Gainer,  
High School Physics Teacher,  
Prince George's County Public Schools



# Color Mixing

1. We will see how to make combinations of red, green, and blue light by using Christmas LED lights and a magnifying glass with a magnification of between 2 and 3.
2. We will also see how to mix light colors by spinning a paper plate with different color sections of plates or papers. You may hold the sections together with staples, and a center bolt, washer, and nut. Then spin the plate with a hand-turned drill. An electric drill would be unsafe, noisy, and break apart the paper.
3. Shine a light on the spinning plate. Otherwise, when the plate should look white, it will appear gray, and when it should look yellow, it will appear brown.

# Color Mixing

1. The biophysics explanation of color light mixing is in the attached article “Gainer's color mixing.pdf”.
2. A STEM fair project for using red, green, and blue LED lights to determine the distance between cones (color light sensors) on the human retina is described in “Color Resolution Distance Lab.pdf”.