RGBColor Addition

Purpose:
 The purpose of this activity is to explore the addition of the three primary colors of light in equal and unequal intensities.
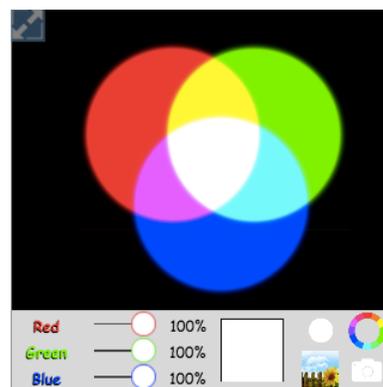
Getting Ready:
 Navigate to the RGB Color Addition simulation in the Physics Interactives section at TPC:

   http://www.physicsclassroom.com/Physics-Interactives/Light-and-Color/RGB-Color-Addition

 Path:

   www.physicsclassroom.com => Physics Interactives => Light and Color => RGB Color Addition

Once there, tap on the Launch Interactive link. Then resize the Interactive using the *hot spot* in the bottom right corner or use the Expansion arrow in the top left corner to view in full screen. Three circles appear on the screen. Drag the circles to partially overlap them. The colors of the circles can be modified using the sliders at the bottom of the screen. Experiment with the interface until you are comfortable with how to investigate the purpose of this lab. Then complete the table in the **Data** section.

Data:

 What relative color intensities (0% to 100%) are needed in order to produce the color typical of the following objects?

   a. yellow school bus   Red _____   Green _____   Blue _____

   b. cyan sky   Red _____   Green _____   Blue _____

   c. magenta ink   Red _____   Green _____   Blue _____

   d. orange.....orange   Red _____   Green _____   Blue _____

   e. milk chocolate brown   Red _____   Green _____   Blue _____

   f. lavender flower   Red _____   Green _____   Blue _____

   g. light pink rose   Red _____   Green _____   Blue _____

   h. purple grape   Red _____   Green _____   Blue _____

   i. navy blue Bear's jersey   Red _____   Green _____   Blue _____

   j. forest green car   Red _____   Green _____   Blue _____

Come up with four of your own:

   k. _____   Red _____   Green _____   Blue _____

   l. _____   Red _____   Green _____   Blue _____

   m. _____   Red _____   Green _____   Blue _____

Conclusion:
Summarize your findings by describing the result of adding various combinations of red, green, and blue primary light colors in equal intensities. And explain the result of adding these primary colors in unequal intensities.