

# LAB - COLOR: ADDITION AND SUBTRACTION

<http://pdukes.phys.utb.edu/PhysApplets/Colors/TabbedcolorBox.html>

**PROBLEM:** What are the results and applications of adding and subtracting colors?

**What to Do:**

1. Copy chart below, and make predictions.
2. Observe demonstration to get actual colors.
3. Answer questions at end.
4. Write conclusion.

**Data:**

**Mixing Color**

	Prediction	Actual
Red + Blue		
Red + Green		
Green + Blue		
Red + Blue + Green		

**Mixing Light (Addition)**

	Prediction	Actual	Explanation
Red + Blue			
Red + Green			
Green + Blue			
Red + Blue + Green			

**Mixing Pigments (Subtraction)**

	Prediction	Actual	Explanation
Yellow +Cyan			
Yellow + Magenta			
Cyan + Magenta			
Yellow + Cyan + Magenta			

## QUESTIONS

1. What color results from adding red, blue, and green light? Why?
2. How can this information be used in producing the color of each dot on a color TV screen?
3. Why is the mixing of paint pigments like the subtraction of colors by adding filters?
4. How can we use information about the color of light from a star to determine information about the star?
5. Knowing what you now know about white light, if you shine a white light on a red shirt, why does it look "red"? Where do the other colors go?