

Name _____

Laboratory for Color Perception

1. Color Contrast; Hue, Saturation, and Lightness

These concepts are important for color perception, so first ensure that you understand them.

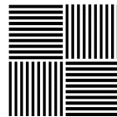
Concept	Notes
Color Contrast	
Hue	
Saturation	
Lightness	



2. Subtractive and Additive Color Mixing

What color do you get when you mix yellow and blue lights? _____

While you have a color mixed in the circle, change the background color several times. Does your perception of the circle's color change as a result? If so, note the important role of context in color perception (simultaneous color contrast).



3. Negative Color Afterimages

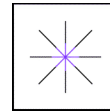
Opponent-process theory can explain your experience of the negative color afterimages. The simple explanation of such afterimages is that they are due to fatigued photoreceptors. The McCullough Effect makes such a simplistic explanation unlikely. Why?

Color



4. Perceiving Colors “Inaccurately”

Can you explain why you don't perceive the colors accurately? Would you describe your inaccuracy as a defect in the visual system? Or do your errors make sense to you? (Think of earlier demonstrations of lightness perception “errors.”)



5. Perceiving Colors that Aren't There: Color Spread

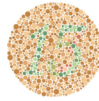
First, tell me about your experience of color spread in the first figure. Describe your experience carefully. Which example doesn't give rise to color spread? Why not?

After thinking about all the different figures, some with greater and some with far less color spreading, try to explain the factors that seem to be most influential in producing color spreading. What seems to minimize color spreading? What seems to enhance color spreading?



6. Perceiving Colors that Aren't There: Benham's Top

Can you think of any explanation of Benham's top that involves only the retina (i.e., cones)? How might you explain the faint colors you perceive?



7. Color Vision Deficiencies

How would the color vision experience of dichromats support Trichromatic Theory?

How would the color vision experience of dichromats support Opponent-Process Theory?

Were you able to detect all the numbers in the Ishihara plates?

8. The Stroop Effect **GREEN**

Time for First Set		Time for Second Set	
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Based solely on introspection, how difficult was it for you to say the color names? Why?
