

## Complementary Saturation Scale

**Chroma** is the purity of a color. **Saturation** refers to the brightness or dullness of colors. Pure colors have a high intensity and tend to be bright; grayer colors a lower intensity or dullness. Adding white, black, gray or its complementary color will lower the intensity of a hue and **saturates** the color. Bright to dull is another way to clarify intensity and saturation. If you mix two complementary colors you can achieve a range from bright to dull with a neutral value of brown, gray or green, depending on the colors selected and from which color wheel - RYB or CMY.

Different wavelengths of light appear to be different colors. White light is made up of all the wavelengths of visible light. When white light hits a surface, a certain amount of it is reflected back. If the surface is white, most of the light is reflected unchanged in color and the surface appears white. If the surface is black, most of the light is absorbed and little is reflected. When the light hits a colored surface, some of the wavelengths of light are absorbed and some are reflected.

If the surface is green, the green wavelengths are reflected and the others absorbed. If most of the green light is reflected, the surface will look bright green (highly saturated). If only a little of the green light is reflected, the surface will look dull green (low saturation). Therefore, for a surface (paint) to appear green it must absorb (subtract) most of the wavelengths of light that are NOT green and reflect those that are. A light green occurs when some white light is also reflected with the green light. Dark green occurs when very little white light is also reflected with some green light.

In this assignment you will demonstrate the effects of mixing complementary colors together and achieving a bright to dull scale, why some colors are bright and some are dull; learn how to decrease the saturation of a color by mixing it with its complement; make one or more complementary saturation scale(s).

### Assignment: Complementary Saturation Scale(s)

1. Choose two complementary colors from either color wheel (RYB or CMY). These two complementary colors will be used to make the saturation scale, which goes from one color to its complement color.
2. Create each complement and be generous. Your colors need to be equal in value to achieve a neutral value, so you may need to add white to one of the colors. Mix a small portion of the two complements to find your neutral value. A neutral value should appear as an achromatic gray (CMY) or brownish (RYB), yet shouldn't favor either of the complementary colors. Be patient, you may need to mix a bit to get the neutral value. You must achieve a neutral value before you paint the values.
3. Paint a swatch 2"w x 8"l to ensure an even coat over the required paint chip area or a selected shape of your scale.
4. The paint chip should be close to opaque, even in value and may require a second coat to reach its true value.
5. **Aim for 5-7 steps in the scales.** Depending on which pair of complements, neutral may not be in the center.
6. This exercise increases your sensitivity to the subtle differences in saturation from bright to dull.
7. Trim scale (s) to 1.5"w x 7"l. Mount saturation scale on black paper.

### Due Wednesday, 9/13 at the beginning of class - Complementary Saturation Scale

Turn in all preparatory sketches and unused paint swatches.

**Tools for this assignment:** Bristol board, two complementary colors based on RYB or CMY color wheel in watercolor paint, black or gray paper, brush, palette, water cup, glue stick.