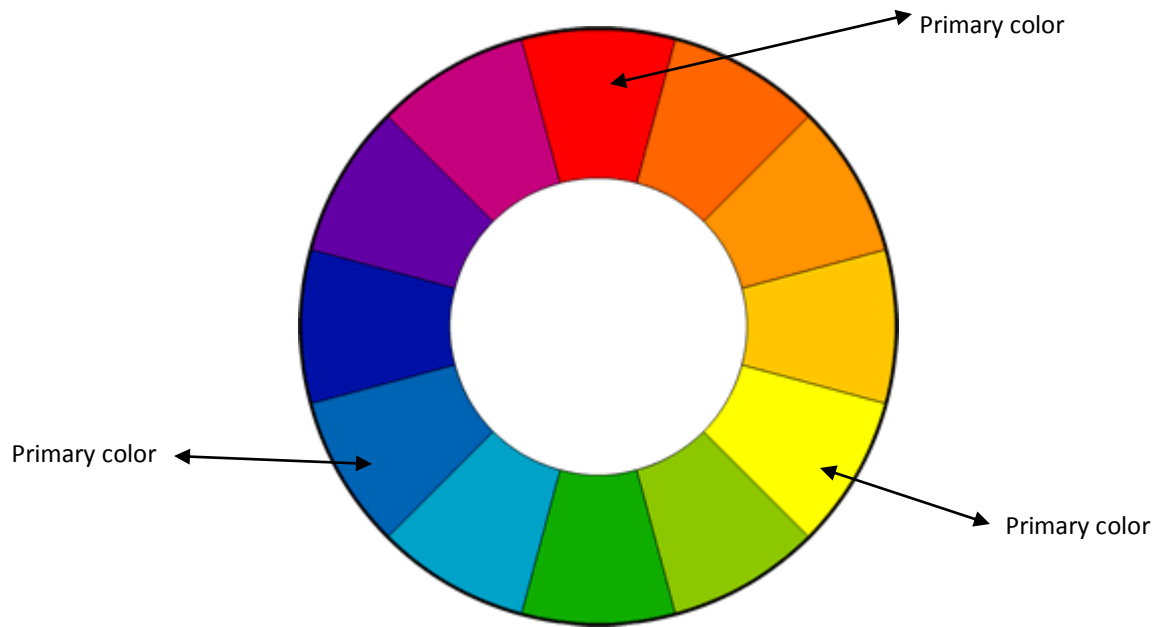


Introduction to Color/Hue Theory

With Marlene Oaks

Color affects us psychologically in nature, clothing, quilts, art and in decorating. The color choices we make create varying responses. Being able to use colors consciously and harmoniously can help us create spectacular results.

Know the Color Wheel



The **color wheel** is the basic tool for combining colors. The first circular color diagram was designed by **Sir Isaac Newton in 1666**.

Primary, Secondary and Tertiary Colors

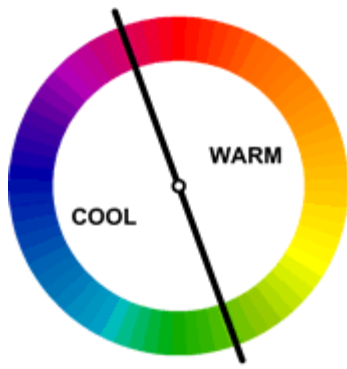
Color theory in regards to light says that all colors are within white light—think prism, and black is devoid of color. In pigment theory, white is the absence of color & black contains all colors. We will be discussing pigment theory here.

The **primary colors** are red, yellow and blue and most other colors can be made by various combinations of them along with the neutrals.

The three **secondary colors** (green, orange and purple) are created by mixing two primary colors.

Another six **tertiary colors** are created by mixing primary and secondary colors adjacent to each other.

The above illustration shows the color circle with the primary, secondary and tertiary colors.



Warm and cool colors

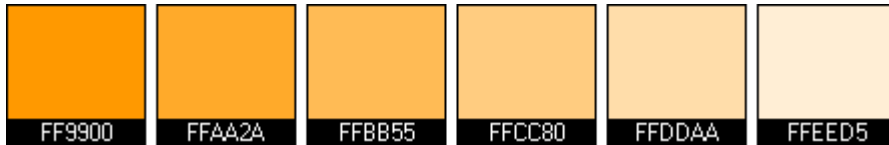
The color circle can be divided into warm and cool colors.

Warm colors are energizing and appear to come forward.

Cool colors give an impression of calm, and appear to recede.

White, black and gray are considered to be neutral.

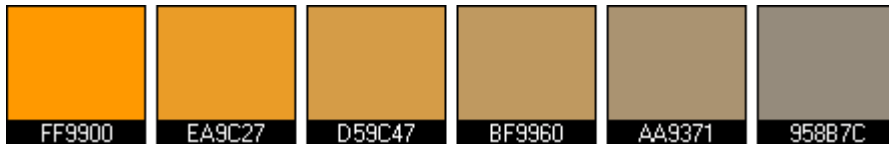
Tints - adding white to a pure hue:



Shades - adding black to a pure hue:



Tones - adding gray to a pure hue:

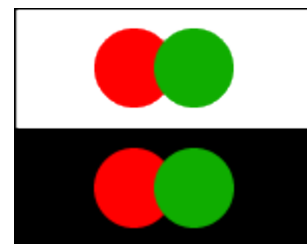


Terms about hue

also known as color



Test for color blindness



NOTE:

Color theory is vast. UCLA, for example has 5 full classes on various aspects of color theory. This little paper is in no way definitive. It is a simple introduction. It is my hopes it will launch a deeper study into color.

Value

The value is a measurement of the brightness of a color. The brighter a color is, the higher is its value and the more light it emits. For instance, a vivid yellow is brighter than dark blue, therefore its value is higher than that of the blue. A good way to see the difference in the values of colors is to look at the corresponding grayscale version. Value measures darkness or lightness in relation to the grayscale.



Saturation

Saturation can also be called a color's intensity. It is a measurement of how different from pure gray the color is. Saturation is not really a matter of light and dark, but rather how pale or strong the color is. The saturation of a color is not constant, but it varies depending on the surroundings and what light the color is seen in.



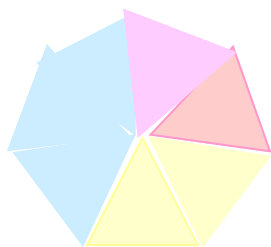
Value and saturation choices for quilters help make blocks either blend or stand out. The biggest problem for quilters is the tendency to select too many middle range value and saturation fabrics so that there is not sufficient contrast to make a quilt “pop.”

In order to develop an understanding of what value something is there are a couple of useful techniques.

1. Use a piece of red clear plastic or cellophane placed over your choices. The red tends to show same value pieces with little contrast.
2. Place small swatches of fabric choices on a scanner or copier and print out in black & white and not color. The various grays show up clearly which are too similar in value to be adjacent to each other.
3. Put samples of fabrics together and squint as you look at them. This helps some to see the values. Squint as you look at the examples below.



Make a grayscale with paint chips



Here is a sample of all light values, low saturation. Very little distinction.



Here is a sample with variation of value and saturation.

Analogous color scheme—usually 3 hues

Analogous color schemes use colors that are next to each other on the color wheel. They usually match well. The warm hues create energy and cool hues create serene feelings.

They are often used because they are harmonious. Contrasting values are helpful in this color set. Also, it is usual to make one of the three the focal point with the other two in support.

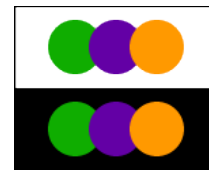


Triad color scheme

A triad color scheme uses colors that are evenly spaced around the color wheel.

Triad color schemes tend to be quite vibrant, even if you use pale or unsaturated versions of your hues.

To use a triad harmony successfully, the colors should be carefully balanced - perhaps let one color dominate and use the two others for accent or use varying intensities, tints and shades.

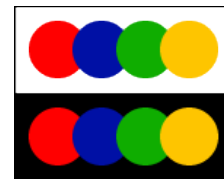


Square color scheme

The square color scheme has all four colors spaced evenly around the color circle.

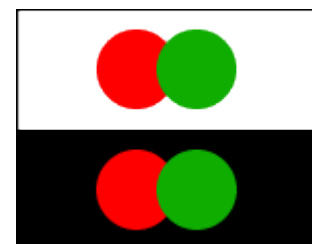
Square color schemes work best if you let one color be dominant, otherwise the colors may seem disharmonious.

You will likely need to also pay attention to the balance between warm and cool colors and value contrasts in your design. This is a challenging set to use successfully.



Complementary color schemes

Colors that are opposite each other on the color wheel are considered to be complementary colors such as red and green. We of course think of Christmas with this set. Most complementary color sets are used sparingly as they tend to be loud. Blue and orange for example are not often used in full intensity, but are more pleasing in tints such as powder blue and peach. Complementary colors when used for letters tend to be difficult to read.



Read this little sentence for example