



Color Basics

When mixing your own colors, it's important to have a basic knowledge of color relationships. The **primary colors** (red, yellow, and blue) are the three basic colors that all other colors derive from, and they can't be created by mixing any other colors. Each combination of two primary colors results in a **secondary color** (purple, green, and orange), and a combination of a primary and a secondary color results in a **tertiary color** (such as red-orange or yellow-green). Another term you'll want to become familiar with is **hue**, which refers to the color group or family (such as red) rather than the specific color (such as alizarin crimson and cadmium red light, which are both of a red hue).



Using a Color Wheel

The **color wheel** demonstrates color relationships and will help you choose, mix, and use colors effectively. Any two colors directly across from each other on the color wheel—like yellow and purple or orange and blue—are **complementary colors**, and any groups of colors that are adjacent on the wheel—such as red, red-orange, and orange—are **analogous colors**.

UNDERSTANDING THE COLOR WHEEL

A color wheel is a convenient visual aid that helps you immediately identify primary, secondary, and tertiary colors, as well as complementary and analogous colors.



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Color Psychology

Colors are also often identified in terms of “temperature”—that is, colors can be classified as being either “warm” or “cool,” and each temperature can express moods as well as seasons. Warm colors—reds, oranges, and yellows—are associated with passion, energy, and the heat of summer or the changing colors of fall; whereas cool colors—blues, greens, and purples—create a sense of serenity and peacefulness and are associated with the cool temperatures of winter or the freshness of spring. There are variations in temperature within every hue, as well. A red that contains more yellow, such as cadmium red, is warmer than a red that contains more blue, such as alizarin crimson.



**MIXING VIVID
SECONDARY COLORS**
*To produce vibrant
secondary colors,
mix two primaries that
have the same
temperature (e.g., a cool
red with a cool blue or a
warm yellow with a warm
blue).*



**MIXING MUTED
SECONDARY COLORS**
*To create more subdued
secondaries, mix two
primaries of opposite
temperatures (e.g., a cool
red with a warm blue).*



PAIRING COMPLEMENTS

When complementary colors appear together in nature, they create striking scenes—for example, red berries among green leaves, the orange sun against a blue sky, or the yellow center of a purple iris.

Seeing Complements

When placed next to each other, complementary colors create lively, dramatic contrasts that can add interest and excitement to a painting. In contrast, you can also mix in a little of a color's complement to dull the color. For example, mute a bright red by adding a little of its complementary color green.

Creating Values

Value is the relative lightness or darkness of a color (or of black). Variations of color values help create the illusion of depth and form in a painting. To expand your range of values, you need to lighten and darken your colors. With opaque media, like acrylic and oil paints, you lighten your colors by adding white and darken them by adding black. With watercolor, you can still darken colors by adding black; but to lighten them, you must add water. The more water you add, the lighter the value will be.

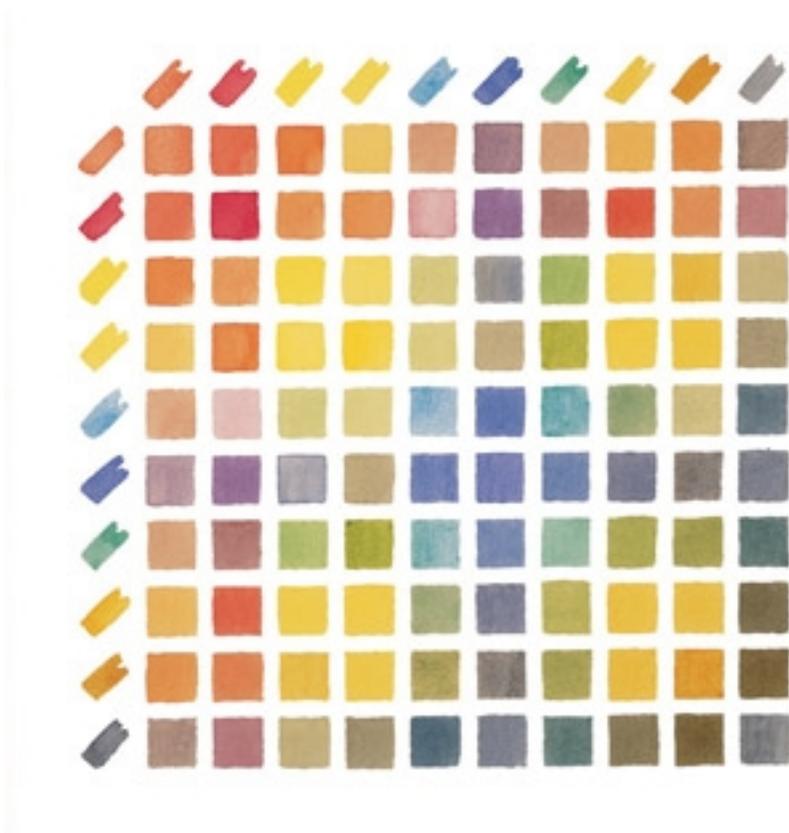


MAKING VALUE SCALES

Although these scales don't show all the light values possible, you get a good idea of the different values you can produce. Pure pigment is shown at left, and more water is added for successively lighter values.

Experimenting with Color Mixes

By mixing colors, you can create a full range of exciting color possibilities from just a small collection of paints (called a "limited palette"). The chart below shows the variety of colors that can be created from a limited palette of 10 colors. Each of the squares on the chart is a two-color mix. You can create an even greater variety by mixing together three colors, but most watercolorists agree that any number beyond that usually produces a dark, muddy mix. Charts like this are a useful reference, especially when created using your own palette and paint combinations.



VARYING MIXES

All the colors here are equal 50/50 mixes, but changing the proportion of one color can dramatically alter your results.