# COLOR FOR WATERCOLORISTS - Paint Characteristics

There are several characteristics of watercolors that the painter needs to be familiar with in order to make an informed decision about which palette or group of colors to use for a particular painting. These properties are: transparency/opacity, tinting strength, staining quality, granulation/sedimentary quality, and color temperature (warm/cool bias).

You can use inexpensive, lightweight (90 lb) watercolor paper or "scrap" watercolor paper for all color tests/exercises, but it is suggested you do these test on the paper that you intend to paint on most of the time, as paper influences the results due to differences in sizing, surface and other factors.

Exercise 1:

Make a 1/2" wide line on cold press or rough watercolor paper with a permanent, waterproof (Sanford "Sharpie" or El Marko) felt-tip pen (or with waterproof India Ink). Make sure the line is completely dry.

Paint a saturated color swatch of paint over your black line and let it dry. Label each swatch with the color name and manufacturer as you paint them. Let each swatch dry. Then look at where the color goes over the black line. If you see no "color" where it goes over the black, label that swatch "Transparent". If there is just a little color showing on the black, label it "Semi-Transparent". If the color nearly covers the black line, label the swatch "Opaque". You may add a "semi-opaque" category if you wish. I use the abbreviations T, ST, SO and O to label my paints.
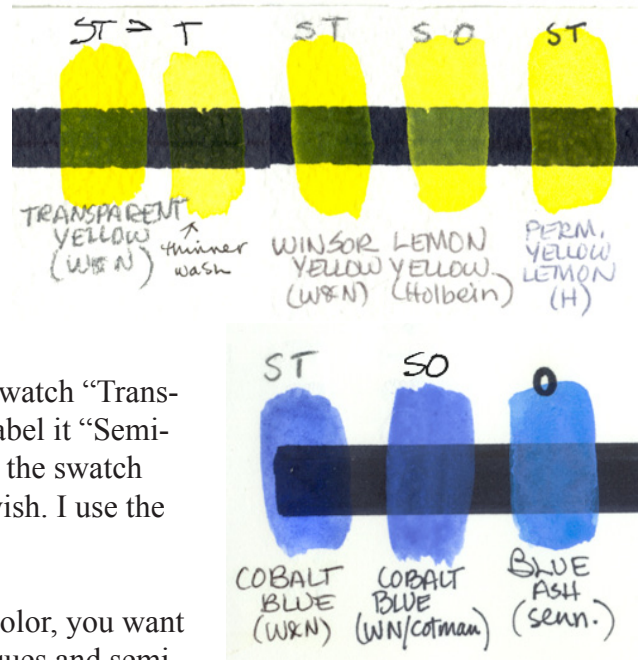
Why is this important? If you want to glaze or layer watercolor, you want to use only transparent or semi-transparent colors. The opaques and semi-opaques do not glaze successfully, nor do pigments that contain a large amount of granulating particles.

Exercise 2:

This test gives you information on how staining a particular color is. ***Why is this important?*** If you want to lift out white or light areas from parts of your painting after the paint is dry, then you want to use the least staining pigments you can. Staining pigments do not lift easily or completely. They will also stain all other hues below them when used as a glaze, particularly if the glazed layer is at all saturated with pigment.

Again paint a saturated swatch of each of your colors on watercolor paper. Label each swatch as you go with the color name and manufacturer and let the swatches dry completely. Then using a synthetic bristle brush or toothbrush moistened with clean water, scrub back and forth over each swatch. Blot each swatch with paper towel or kleenex and rinse your brush between color swatches. Use the same number of scrubbed back and forth strokes for every swatch, so the test will be consistent (I count out twenty strokes). Note that if you soak and stretch your watercolor paper prior to painting, any surface sizing will be diluted or removed, and your paints will not lift as easily when dry.

Compare the amount of color left in the scrubbed/blotted area. Some colors will reveal nearly white paper and can be labeled "Non Staining". Others will barely come up at all, and can be labeled "Very Staining". I use a third middle category I call "Somewhat Staining", where some color comes up, but not to nearly white paper. I use the abbreviations NS, SS, and VS to indicate the three levels of staining.

Exercise 3:

Paint a swatch of clean water about 1/2" wide and 1-1/2" long on your paper. While it's shiny wet, touch a brush loaded with very saturated paint to the top of the wet patch. Then tip your paper back and forth to distribute the pigment evenly throughout the wet swatch. Finally tip the paper one direction and with a dry brush, pick up the excess "bead" of paint, if there is any, and let the swatch dry. Label with color name and manufacturer.

When the swatches are dry, examine them. Some will have an even smooth tonality throughout. They can be labeled with a minus sign or with the abbreviation NG (Non-Granulating). Some will show some granulation and can be labeled with a plus sign or G (Granulating). A few will be heavily granulated and can be labeled with a double plus (++) or VG (Very Granulating).
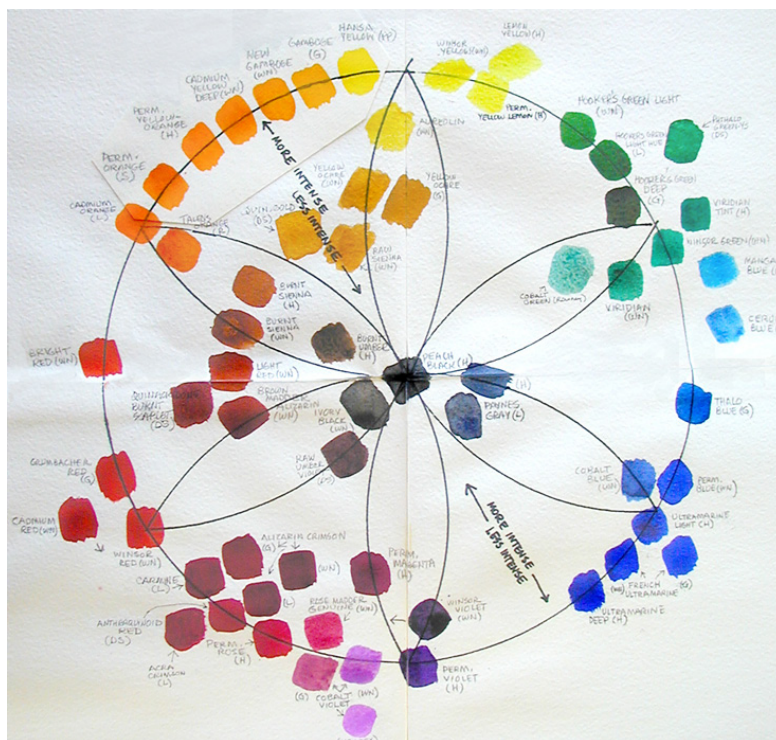
Why is this important? Granulation affects the variation you can get in the appearance of washes. Combining a very granulating pigment (like Manganese Blue) with a non-granulating pigment (like transparent yellow) creates an exciting "two-toned" wash, where the heavier pigment particles of the Manganese drop out and separate from the lighter, non-granulating pigment. These two-toned washes can lend optical interest, and suggest texture.

Exercise 4:

Make a color wheel for yourself using all the tube colors you currently have. Arrange the colors with the yellows at the top, the reds to the bottom left and the blues to the bottom right, with the secondary colors (oranges, greens and violets) inbetween the primaries. Less intense hues should be placed toward the center of the circle (black would be at the absolute center), and your brightest, most intense hues will be at the edge of the circle. Make your wheel large enough so that you can add any new tube colors you may buy in the future. The easiest way to do this is to paint small swatches of each color (saturated), let them dry, then cut them out and place, then glue them to, your color wheel.

Why is this important? It helps you judge a color's temperature and intensity, and compare the same common color by different manufacturers. It helps you determine the visual complement for any color quickly.

COLOR PROPERTIES

The **properties of color** include HUE, VALUE and INTENSITY.
HUE is the name of a color, like red or blue
VALUE is the relative lightness or darkness of a color (tints are light values; shades are dark values)
INTENSITY—sometimes called chroma—is the relative brightness or dullness of a color.

The **uses of color** in painting include:
• Creation of deep or shallow spacial illusions
• Creation of a particular "mood" or "feeling"
• Creation of symbolism or cultural associations
• Possibilities for personal expression and visual impact
• Identification of objects through use of local, descriptive color
• Pictorial organization through manipulations of color value, intensity, hue, dominance, etc.

How we use color in painting:
We work with color in the following ways, all of which have to do with CONTRASTS:
• We use a change in *hue* to contrast one color with another
• We use a change in *value* to contrast a light color with a dark one
• We use a change in *color temperature* to contrast a warm color with a cool one
• We contrast *intensity* (bright/saturated vs. dull/unsaturated)
• We contrast a color with its *complementary (opposite) color*
• We contrast the *relative appearance* between colors
• We contrast the *quantity* of one color with another

The first 5 of these contrasts are fairly straightforward, easily discernable and fairly easily manipulated.
The last 2 are mainly of concern to painters whose primary interest in their work is the relationship between colors, although they can also be used to fine tune a painting that doesn't quite achieve harmony or unity.

Color Harmony
Color harmony or unity is achieved when the colors in your painting work well together, when the greatest contrasts help highlight your focal point, and when your color choices relate to the subject matter.

There are limitless possibilities for choosing and mixing colors, so it is up to you to limit your choices to the colors that will work best for the idea that you have in mind, and that reflect your own preferences in terms of how the painting looks, and the feeling the color generates. Some people prefer strong, saturated colors with strongly contrasting color schemes. Others lean toward "color neutral" schemes, using lots of earth colors in almost a monochromatic way. And some watercolorists prefer "close value" paintings, with all their values in a similar range whether light, medium or dark.

Color Keying and Pigment Compatibility
Beginners should probably limit themselves to 3-5 colors per painting. Doing so will guarantee a more harmonious color result, and force the artist to use a more complete range of values and intensities for each of the three or four colors chosen.

Exercise 5:
Intense Primary#1:   Scarlet Lake, **Thalo (Winsor) Blue**, **Transparent Yellow**
This is an intense, semi-transparent, staining group of colors. You can layer with these colors as long as they are not oversaturated. Rich darks are possible. *You will not be able to mix purple with these colors*.
Do this exercise again using a different set of primary hues (red, yellow, blue) Label the colors you use.

NEUTRALIZING COLORS

To orchestrate your paintings, you will usually have one area that contains the purest, most intense colors, surrounded by other colors that have been subdued in intensity, or neutralized. You neutralize a color by adding some of its complementary color (the one opposite it on the color wheel). The more of the complement you add, the more neutral the color becomes until it is either a grayish or brownish hue.

Generally, these are the basic color complements:

Red & Green	Blue & Orange	Yellow & Violet
Red Orange & Blue Green	Blue Violet & Yellow Orange	Yellow Green & Red Violet

Why is this important?

Most beginners don't have any difficulty making muddy colors, so you are probably wondering why it's important to learn to make these low intensity, neutralized hues. And the answer is: Neutral doesn't mean muddy, chalky or necessarily opaque. Neutrals can be wonderful, subtle colors, and can serve as a foil to the brighter, clear, intense ones in your paintings. Learning to make "good" neutrals will help you orchestrate your colors, and as a result, create stronger paintings.