# Color Schemes and the Color Wheel
By Hummie

Learning the basics of color schemes and the color wheel will enable you to make better layouts. For instance, observing the main color in a photo and choosing a complementary color for the papers is one technique that can improve a layout.

PURCHASE A COLOR WHEEL

First, I suggest running out to your local hobby store or isle at your favorite department store and purchasing a very inexpensive color wheel for just a few bucks. The investment is extremely worthwhile. You can also find some on the web, but I found the small one I purchased to do everything I need for layouts.
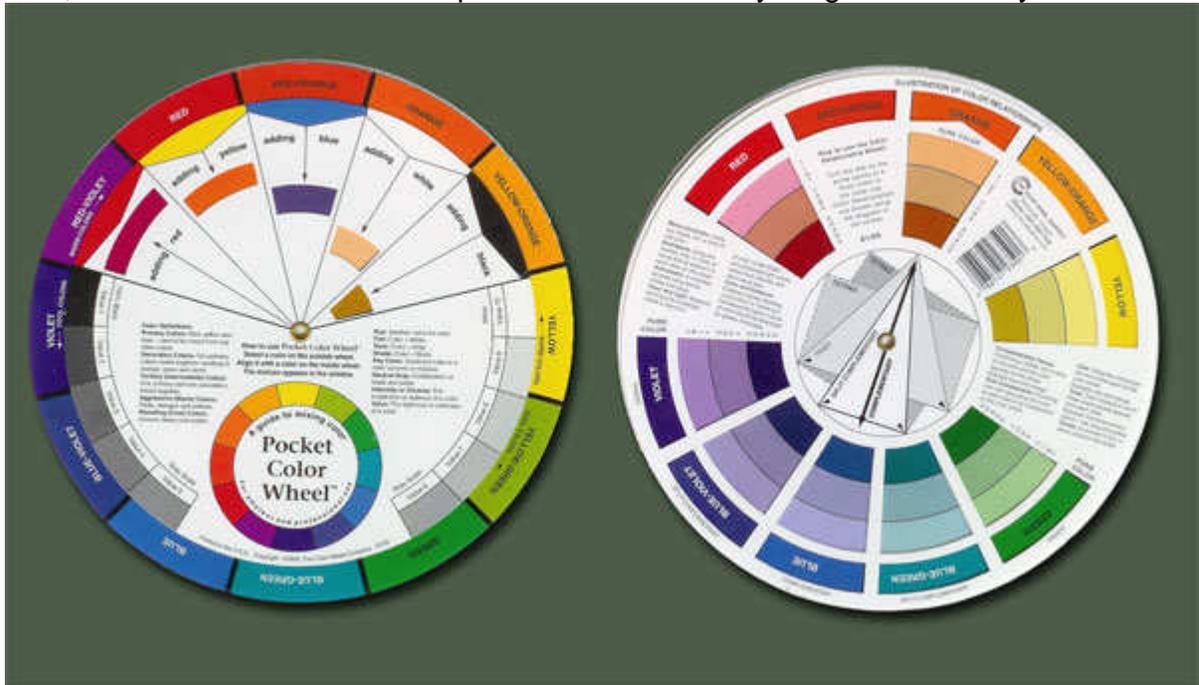
COLOR BASICS

A. Reflect back into your elementary school art teacher's lessons and recall that there are three **primary colors**: red, yellow, and blue. On the color wheel, they create a triangle.

B. Recall that the **secondary colors** are in between each primary color on the color wheel: green, orange, and purple. These three colors are created by mixing the primary colors they lie between on the wheel.

C. Recall that the **tertiary colors** lie between the secondary colors and are also created by mixing secondary colors: Yellow-orange, red-orange, red-purple, blue-purple, blue-green and yellow-green.

COORDINATING COLORS

Colors coordinate well by either creating contrast or harmony.

Contrasting colors also are great for coordinating and making photos pop.

How awful is it when you hear two or more singers together and their voices just do not sound well together? Their voices are disharmonious (big word, huh?!). How many wonderful popular singing duos can you think of? The harmony of the voice is pleasing. That is the same with color schemes. Some colors together are disharmonious and others are perfect harmony. Learning which colors go together is important in making a layout that is pleasing to the eye.

COLOR SCHEMES

Color Schemes are methods of finding harmonious or contrasting colors that will work well in your layouts. Learn how to utilize the back side of the color wheel to find color schemes. There is a diagram on the back of the color wheel. Turn the wheel so that the main color of your layout (or your key color choice) is at a corner of one of the schemes in the diagram. Follow the shapes to the other corners to find the coordinating colors that make up the color scheme.

1.   **Complementary Color Scheme**: any **two** colors which are directly opposite each other on the color wheel. This is the most basic of the color schemes. Ever wonder why Christmas colors go together so well? Observe your color wheel. Contrast, rather than harmony, is the principle that makes these colors work well together.

2. **Analogous Color Scheme**: any **three** colors which are side by side on the color wheel. This color scheme is harmonious, but does not provide contrast. Want to play? Try adding a complementary color to an analogous set of colors.

3. **Split Complementary Color Scheme**: **three** colors with two of them being on either side of the complementary color.   If you need three colors to your scheme, rather than two, this is a great way to achieve coordinating contrast.

4. **Triad Color Scheme**: **three** colors an equal distance apart on the color wheel in the form of a triangle. This creates less contrast, but more balance.

5. **Tetrad Color Scheme**: **four** colors in either a rectangle or a square across from each other on the color wheel. There are two tetrad graphs on the color wheel, one that is square and one that is rectangle. As with the triad, these create less contrast, but more balance.

6. Monochromatic Color Scheme: using various shades and tints of one color. On the color wheel, these are demonstrated by the line of color going toward the center. Of course, there are many more shades and tints than what is shown on the color wheel.

7. Achromatic Color Scheme: A colorless color scheme using blacks, whites, and grays. These colors are not on the color wheel.

OTHER COLORS SCHEMES

There are other color schemes available. For instance, color schemes are taken from nature. There are "fall colors" and "spring colors."   Also, there are color schemes for holidays.

NEUTRAL COLORS

Achromatic colors are considered neutral colors and can also be coordinated with other color schemes. Browns, beiges, and tans are also considered neutral colors. These colors will create harmony.

COOL AND WARM COLORS

You will note that the color wheel is separated with warm colors on one side and cool colors on the other side.

Warm colors are those that have a yellow suggestion to them that bring the feeling of warmth or energy. Reds, oranges, yellows, and green-yellows of various tints and shades are considered warm colors.

Cool colors are those that have a blue suggestion to them that bring the feeling of coolness or calmness. Purples, blues, aquas, and greens of various tints and shades are considered cool colors.

PRECISE COLOR SCHEMES

Most often, I refer to my simple color wheel to consider coordinating colors for my layout without going after the precise colors and numbers for colors that match. For designing especially, you may want to obtain a precise color scheme.

First, there are software programs that will generate a color scheme for you. Some of them are for free on the internet and some are for purchase at several levels of cost. There is a free one on my website.

Second, you may also manually calculate the color scheme.

As indicated in the Hue, Saturation, and Value Tutorial, the Hue numbers range is from 1 to 360. This is similar to a circle (the color wheel) being 360 degrees. Utilize this knowledge to calculate precise color schemes.
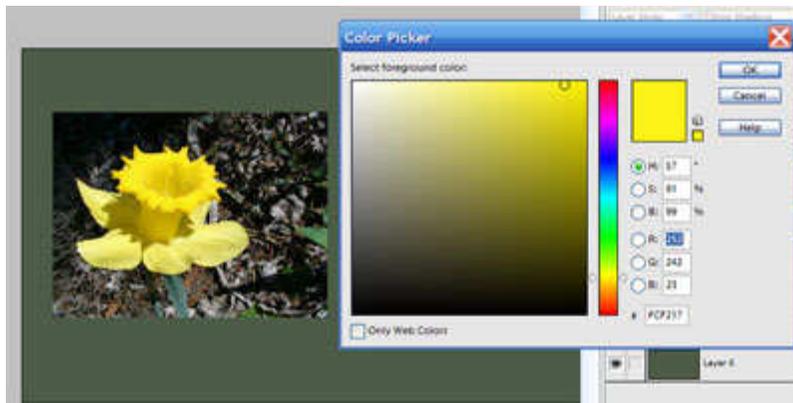
1. **Complementary Color Scheme**: One-half of 360 is 180. Therefore, to find the color directly opposite on the color wheel, add or subtract 180 to the value in the hue box.

In my sample, I used the eyedropper to obtain a yellow color from the flower. The Hue value in the Color Picker is 57. 180 + 57 is 237; a bright blue.

For my personal tastes, this blue is too bright, so I also lowered the brightness to 50.

As always, there is more than one way to accomplish a task. With the background layer as the active layout, hold down the control key and hit the "I" key to invert the colors.

2. **Analogous Color Scheme**: To obtain two colors on either side of the key color, add the same number as you subtract from the key color. Using values between 20 and 30 to add and subtract work well. 57+30 is 87 and 57-30 is 27.

3. **Split Complementary Color Scheme**: To obtain two colors on either side of the complementary color, first consider that the complementary color is calculated using 180 and that the colors on either side of it are between 20 and 30 from the complementary color. Therefore, add and subtract the same number between 150 and 160 (180-30 or 180-20) from the key number. 57+150 is 207. 57-150 is negative 93.

A negative number is not on the color wheel! To convert this to a positive number, visualize this as being at 57 on a 360 degree circle like a clock (which is on the top right of the circle) and subtracting or going left along the color wheel. Once you reach the top which is 360 (zero), continue left 93 more spots (360 – 93) which is 267.
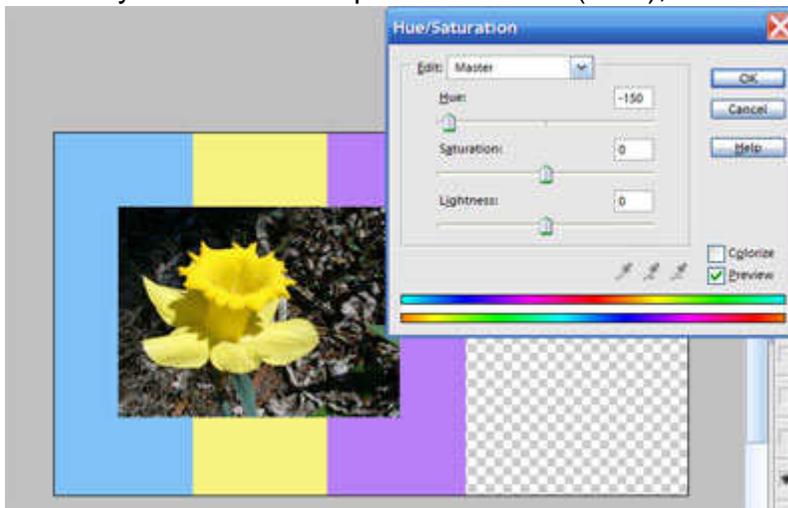
Sigh, but who wants to do that much thinking? There is a much easier way! Aren't you glad? That thinking really hurt my brain!

Call up the Hue/Saturation tool (the shortcut is Control U) with the layer of the key color as the active layer and put 150 in the box for the Hue slider to obtain one color and -150 in the box for the Hue slider to obtain the other color. Much easier, huh? However, at least you understand the process of calculating which may be helpful at times.
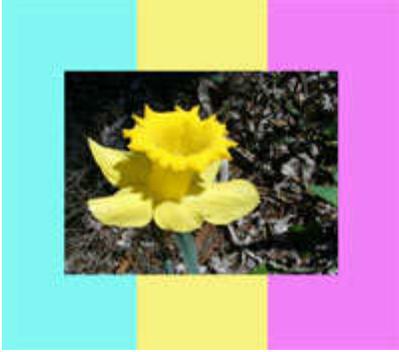
4. **Triad Color Scheme**: One-third of 360 is 120. Therefore, to find three colors an equal distance apart on the color wheel in the form of a triangle, add 120 from the key color and subtract 120 from the key color to obtain the other two colors.
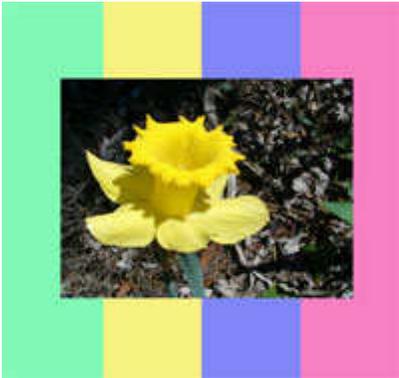
5. **Tetrad Color Scheme**: One-fourth of 360 is 90. Therefore, to find four colors in a square across from each other, subtract and add 90 to the key color number and find the complimentary color for the fourth color (180).

To find four colors for a rectangle Tetrad Color Scheme, subtract and add 72 to the key color number and find the complimentary color for the fourth color (180).

6. **Monochromatic Color Scheme**: To vary the shades and tints of a color, change the brightness (or lightness) values. Editing this field will add white or subtract black from a color.

7. Achromatic Color Scheme: Hit the D key on the keyboard to make the foreground color black and white. Hit the X key to exchange the two. Change the brightness (lightness) of the black and white to obtain variations of grey.