Color Concepts and Projects to Teach Them

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Our world is full of color. Hands-on experiments in mixing color help in understanding it!

Primary Colors

The Primary Colors are Red, Yellow, and Blue. These three basic colors are the colors from which all other colors are made. They are often called the only true, or pure, colors. Mixing other colors cannot make primary colors. By mixing the primary colors together in various combinations, you can produce all the other colors on the color wheel.

Secondary Colors

Green, Orange, and Violet are the secondary colors. They are made by mixing equal amounts of two primary colors *(i.e.; Red mixed with Yellow produces Orange, Blue and Yellow produce Green, and Red mixed with Blue produces Violet)*. One should take note that when a true red and blue are mixed these make Violet, not Purple. Violet tends to be darker and is not as eye catching. However, it is the truer form of purple and should be used when painting a color wheel.

Tertiary or Intermediate Colors

Tertiary colors can be found in-between primary and secondary colors on the color wheel. Mixing a 2-1 ratio of primary and secondary colors makes Tertiary Colors. Example; Two drops of Yellow with one drop of Orange will make a good Yellow-Orange. The tertiary colors are as follows: Yellow-Orange, Red-Orange, Red-Violet, Blue-Violet, Blue-Green, and Yellow-Green. You will note that in the names of the Tertiary (Intermediate) Colors, *the primary color is always listed first* and the secondary color last.

Projects

The color wheel is the basis for every painting project. It is also a great exercise for children to use and become familiar with how color works. Tempera paint is the recommended paint for color wheel projects. Tempera colors are truer than watercolors, which tend to be too pale, and mixed watercolors tend to turn neutral more easily when blending.

***PRIMARY/SECONDARY COLOR WHEEL**—(1st, 2nd grades) Divide a circle in half, then divide each half into thirds, to create six triangle wedges. Paint every other triangle a primary color. Blend equal amounts of the two primaries on either side of each empty triangle, to create the secondary colors between.*

***TERTIARY (INTERMEDIATE) COLOR WHEEL**—(3rd-5th) Make a circle with 12 points, just like a clock. Draw lines across these points to create twelve triangle wedges. Paint Primary colors at 12, 4, and 8 o'clock; Secondary colors at 2, 6, 10 o'clock; Tertiary colors at 1, 3, 5, 7, 9, and 11 o'clock. Paint the primary colors first, Secondary colors next and tertiary colors last, this saves paint.*

Warm and Cool Colors

Warm colors are Red and Yellow predominate. They are harmonious with other warm colors, but more exciting if accented with cool colors.

Cool colors are colors that are Blue and Green predominate. As in the case of warm colors, cool colors are most harmonious when paired with each other, but more exciting when put with warm colors.

Project

The sunrise and sunset are filled with warm and cool colors. Using all warm or cool colors, to create the effect of dawn or dusk, is a great way to explore the warm and cool concept. Have the children cut out shapes from black construction paper to make a landscape. Glue to the dry watercolor wash.

Neutral Colors

White, Black, Brown, and Grey are neutral colors. They are not found on the color wheel and they are not found in the rainbow. Neutral Colors are harmonious with almost any color. White is the absence of color. Mixing different proportions of Primary Colors creates some of the other neutral colors:

- Black is made by mixing equal amounts of red, yellow and blue.
- Adding more red than yellow or blue produces brown.
- Adding more blue than red or yellow makes a bluish-gray.
- Mixing equal amounts of two color complements also produces grays.

Activity

If you want hands-on experience learning about neutral colors, here is a quick, easy, less messy activity. This one takes a little extra preparation but it sure saves clean up time. You need at least one zip type plastic sandwich bag for each student. In some of the bags, place equal amounts (a spoonful) of red, yellow and blue. Separate the colors so that they are easily identified, then close and seal the bag. In other bags, place yellow, blue and two or three times more red. In additional bags, place an equal amount of two color complements (e.g. red, green). Be sure each of the colors are far enough apart that it is easy to tell which colors you will begin with.

Pass out a bag to each student. Everyone squeezes and mixes the paint inside the bag to discover the color produced. Be sure to have an assortment of neutral mixtures to create. The bags can be thrown away after a discussion on the recipes for creating neutral color (see above).

Analogous Colors

Those colors in a series, next to each other, on the color wheel, such as Violet, Blue Violet, Blue or Yellow, Yellow-Orange, Orange. When these colors are used together in a composition, it creates harmonization.

Projects

Have kids design a room using an analogous color scheme. Materials that could be used: magazine pictures, drawings, fabric scraps, tiles, house paint samples. If you are ambitious, have them draw a diagram of the room and attach samples of their chosen materials (in analogous color combinations) to the side, similar to an interior designer's project board.

Create a Landscape or a jungle scene using the Analogous Colors of blue, blue-green, green, and yellow-green.

Create an Abstract design using lines that cross over each other to create four separate spaces. Paint each space a different color in a series of Analogous Colors.

Complimentary Colors

Complimentary colors are found opposite from each other on the color wheel. (Red-Green, Blue-Orange, Yellow-Violet) Just as the name implies, when these color are put together they compliment each other. They bring out the best in each other. The contrast provides for a vivid display that is eye pleasing.

Project

Paint a picture using only complimentary colors; i.e. Red, Green, and I always add black and white so the children can create different tints and shades. I like to pair this lesson with pointillism. Use q-tips in the place of brushes!

Monochromatic

This term describes the use of "one" color in different values and intensities, or tints and shades of the same color. Adding black or white to the color of your choice does this.

- **Value** is defined as the lightness or darkness of a color.
- **Tint** is a color that has been lightened with white.
- **Shade** has been darkened with black.

Project

Using a monochromatic color scheme, draw and paint a portrait. This is a fun and different way to do portraits! They can paint themselves, a friend, or draw from a magazine picture to paint.

Light and Shadow

Colors are affected by how much light is reflected on them or how shadow. Sources of light might come from a window or a door, the sun or the moon. Light and shadow create movement through a picture or painting. Our eye often focuses on the lightest point in a painting, following light to dark. Beyond color, brush strokes can be used to create a sense of movement, Van Gogh was a great example of this technique.

There are many resources to draw from when teaching art. The Art Discovery program provides much additional resource information; ask your Art Discovery Coordinator where you can find it! Another great tool is the Internet. There are several web-sites I have found to be excellent; http://www.sanford-artedventures.com, http://www.eduweb.com/insideart, http://www.crayola.com/art_education, http://www.kn.pacbell.com/wired/art2, and http://www.artsednet.getty.edu. These sites have great project ideas, lesson plans, and art adventures you can use on the classroom computer and project onto the large screen for the class. Let the teacher know if you plan to do this and she/he can get everything ready before you arrive. Practice on the Internet ahead of time so that things run smoothly and you can use the classroom time in the most efficient way.