## Color - design element Information



1. How do we see color?

Sunlight- white light- is made up of colors of light. White light is a combination of red, orange, yellow, green, blue, indigo and violet. (ROYGBIV)

A red apple appears red because it absorbs all the colors of the rainbow except red. The red light rays are redirected back to the eye. That is why we see a red apple.

An object appears white when it reflects all wavelengths of color. An object appears black when it absorbs all of the wavelengths of color.

Color - Is talked about and described using three specific terms.
Hue - the name of the color
Value - the blackness or whiteness of the color.
Intensity - the brightness or dullness of the color.

## Color Terminology

1. Color spectrum: The color spectrum is a band of colors produced when white light shines through a prism. (ROYGBIV)
2. Subtraction color theory - The subtraction theory of color uses pigments. It is called subtraction theory because the light that gets to the eye is cut down by the absorption and mixing of the pigments.
3. Pigments - pigments are powders that are obtained from crushed minerals.
4. Hue: Hue is the common name of color. The hue of red is red just like the color of red is red. The hue of blue is blue.
5. Tint: A tint is a color that has white added.
6. Shade: A shade is a color that has black added.
**Tone: A tone is a color that has grey added.
7. Primary colors are: Red, Blue and Yellow. These colors cannot be obtained by mixing, they must be purchased at a store. All other colors are derived f.rom these three hues.
8. Secondary colors are: Violet, Green and Orange. They are obtained by mixing two primary colors together.

Red + Yellow = Orange
Yellow + Blue = Green
Blue + Red = Violet (One should always use the word "Violet" instead of Purple.
9. Tertiary color: Create tertiary colors by mixing a primary color with a secondary color. These are two word colors that must be separated by a hyphen. The primary color must always come first.

Ex. Blue + Green $=$ Blue-Green. There are six Tertiary colors.
10. Intermediate colors - These are colors that are in between the twelve regular colors, but sometimes the term is used for the term "Tertiary colors"
11. Color Wheel: A color wheel is a circular shape with 12 colors around it. It is used to remember and understand color relationships when working with pigments. The color wheel is based on red, yellow and blue. This is traditional in the field of art.
12. Color Scheme: A color scheme is a plan or way to work with color. A plan for selecting or organizing colors for a work or composition.

## The types of Color Schemes:

1. Color temperature:
A. Cool color scheme - Blue, Green and Violet. (All cool colors have blue in them )
B. Warm color scheme - red, yellow and orange.
2. Monochromatic- A color scheme made of only one color or hue and all of its tints and shades.
3. Triadic- A color scheme using three colors that are evenly spaced on the color wheel. There are four triadic color schemes.
A. Primary triadic - red, blue and yellow
B. Secondary triadic - Green, Blue and Violet.
C. Tertiary triadic - There are two of these.
4. Blue-Green, Yellow-Orange and Red-Violet
5. Yellow-Green, Blue-Violet and Red-orange.
6. Complementary colors - colors directly opposite each other on the color wheel. This color scheme works with two colors. Ex. Red and Green. The primary compliment pairs are: red and green, blue and orange, Yellow and Violet.
**Note: When compliments are mixed a brown to grey hue is produced.
7. Split complement - Complementary colors are very intense. Therefore a split compliment can be used to soften the scheme. Ex. A client likes yellow and violet but the design is too intense. The client likes yellow more than the violet so the artist can pick the two colors surrounding violet to change the scheme from two colors to three: Yellow, Red-violet and Blue-violet. This will soften the impact of the colors.
8. Analogous colors - Analogous colors are considered related as they lie next to each other on the color wheel. Analogous colors are used in groups of three or four colors. Analogous colors have a color in common. Ex: Red, RedViolet, Violet and Blue-Violet
9. Plastic colors - A color scheme that takes advantage of the push and pull of color temperature. Cool colors recede and warm colors advance.
10. Local color- Color that is seen in nature or the still life. If one sees a green tree, one paints a green tree.
11. Subjective color - Colors the artist chooses to work with. Fantasy colors. Ex: Purple trees and orange grass.
12. Tetrad - A color scheme where four colors are used. These are spaced around the color wheel in a rectangle or square shape. This is a double compliment color scheme. Example of a square tetrad: Yellow, Red-Orange, Violet, BlueGreen. Blue -Green and Red-Orange are tertiary compliments while Yellow and Violet are a primary complement.

An example of a rectangle tetrad: Yellow, Orange, Violet, Blue. Two primary complements of yellow/Violet and Orange/Blue are used.
11. Neutral colors : Black, White, Grey- A neutral color can be added to any other color scheme and not change that color scheme. Ex. Cool color scheme of Blue, Green and Violet with Black, white and gray added will still be a cool color Scheme.
12. Color value. This works off of the tints and shades of colors.
A. High Key color scheme: Pastel colors. A color scheme where all the colors have white added to them.
B. Low Key color scheme: Dark colors. Shades. A color scheme where all the colors have black or a compliment added to them.

## More about color:

Color has emotion/ meaning: This is culturally influenced. Warm colors show passion and love. Cool colors show depression and sadness. Example of culture meaning: In the U.S. White is innocence and is worn by the bride at a wedding. In Japan, white is a color for funerals and red is worn by the bride at a wedding.

## Color intensity:

Color intensity is how much light from the pure color in a hue reaches your eye. (How much of the light color reaches your eye.) A color straight from the tube has the highest intensity that it will ever have. When another color is mixed with the tube color the intensity is cut down. One can cut down the intensity of a tube color by adding a neutral or complementary color.


