



A garden is about color – the scene, the light, the volumes of space are all in color. Classic color theory is important to understand, but a personal adventure with color is vital and an integral part to being in a deep relationship with nature.

Learning about color theory can help create the perfect look and mood for your garden.

Color theory relies on the relationships between the various colors on the color wheel.

Understanding the basic primary colors and how they blend in is one of the first things we learn in school.

By understanding the principles of color and the science behind how we perceive different hues, we can creatively mix, match and blend colors that are pleasing to look at and evoke emotions.

Basic Color Principles

There are three basic principles when talking about color and color theory:

1. The color wheel,
2. Color harmony, and
3. Context or application of its use.





When most of us were in grade school, color theory was based on RYB primary colors, which defined red, yellow, and blue as the colors capable of mixing all hues.

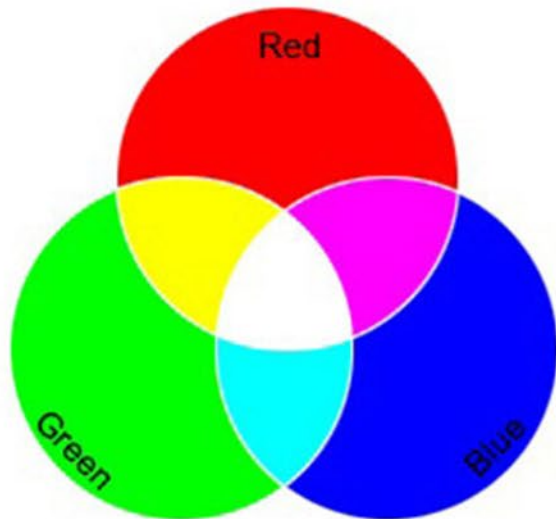
This is the scheme most commonly taught in grade school and is still used by artist and in mixing paints.

However, with advances in technology, scholars would switch to an RGB (red, green, blue) and CMY (cyan, magenta, yellow) models as advances in increased the range of synthetic pigments in photography and printing have evolved.

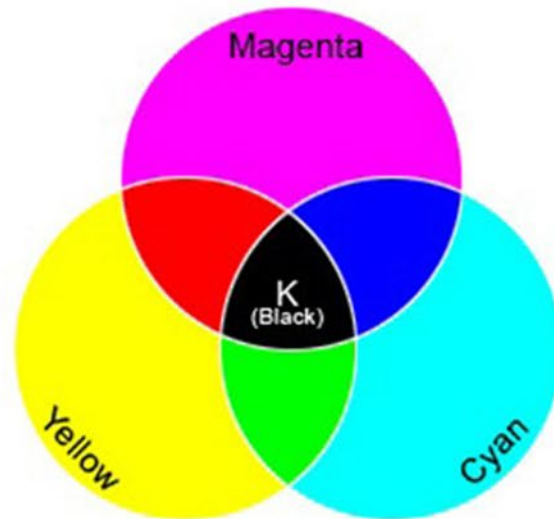
By 1901, when Emily Noyes Vanderpoel wrote her revolutionary [color manual *Color Problems*](#) she incorporated industrial items into her research. Vanderpoel looked at everything from teacups to plants and used grids to break down the colors found in each object.

Today, color theory is based on the physics of light with two common types of color; Additive and Subtractive. Additive colors refer to the mixing of light and subtractive color refers to the mixing of pigments.

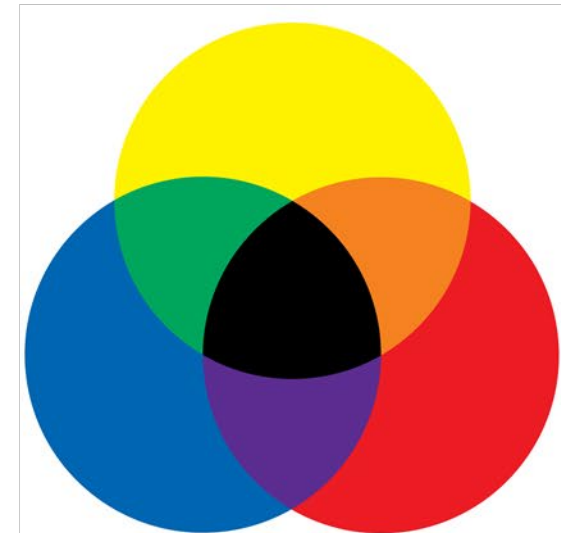
PRIMARY COLORS



Additive Colors



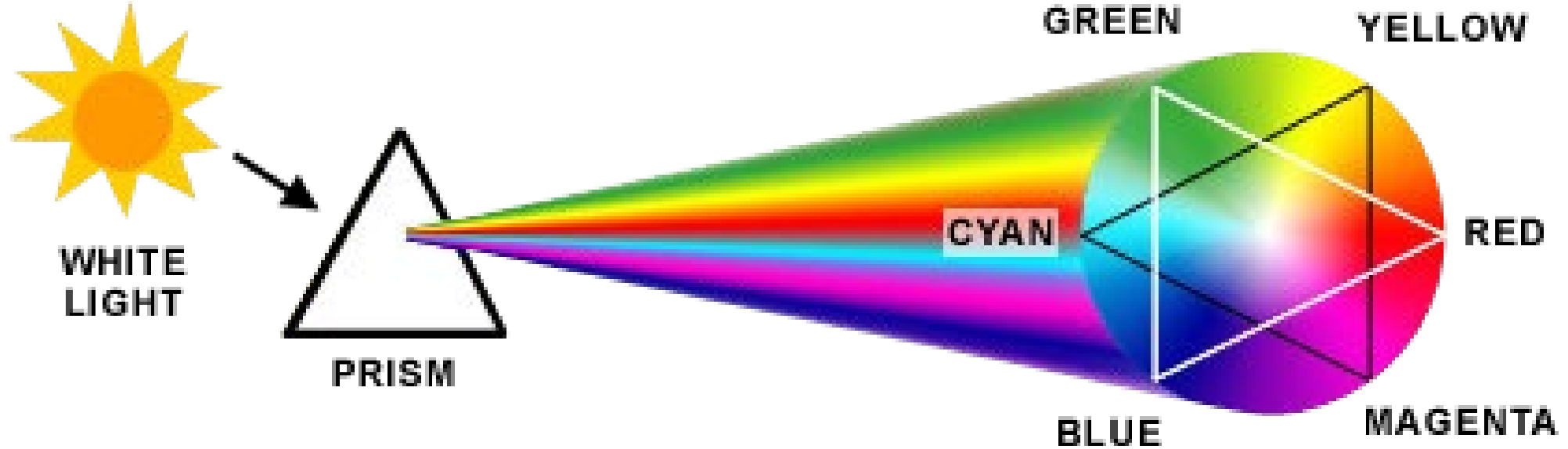
Subtractive Colors



Subtractive Colors



- All colors we see come from the sun's energy
- Almost all color we can see comes from the energy components that give us visible light which gives us our color spectrum and with different energy components expressed as a different colors.
- White light can be broken apart into these components of colors (rainbow or prism) and this process can also be reversed to create white by adding equal parts of primary colors (red, blue and green).
- These three primary colors of light when equally added together get lighter with each mix then combine to create magenta, yellow and cyan that mixed evenly give us white light. And when they keep getting lighter and lighter each time add more and this is referred to as Additive process.
- When colors of light are combined the resulting mixed color is always lighter and more vibrant.

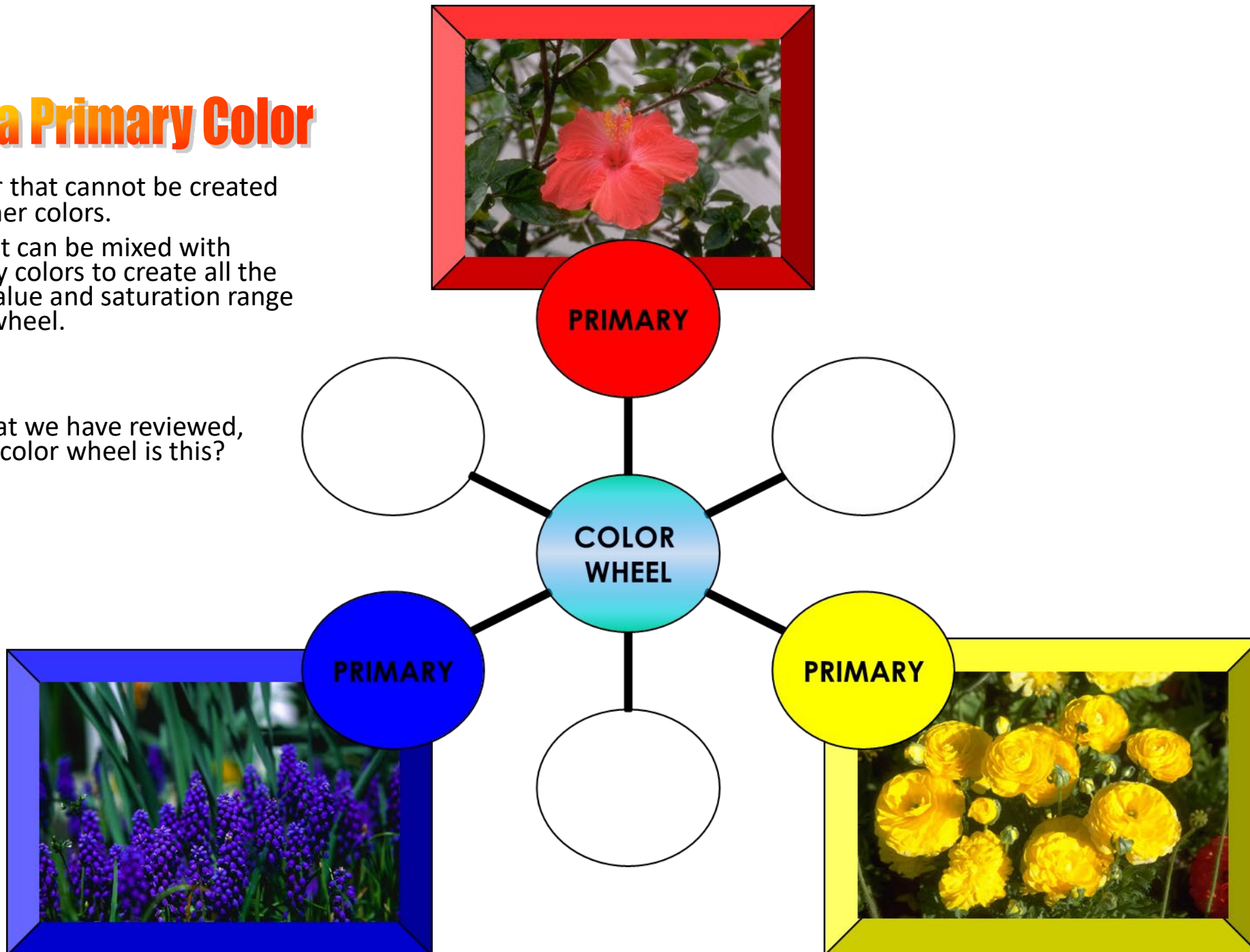


- Color pigments on the other hand, behave the same way and light color, only opposite. So, when primary pigments RYB or RGB combine, they get deeper in value. This is called the subtractive process because its almost as if you are subtracting light.
- Colored light is Energy.
- Pigments are physical Matter.
- Therefore, it is impossible to get lighter colors when mixing red, green and blue.
- This is important for understanding where the primary colors Magenta, Cyan and Yellow.

What is a Primary Color

1. It is a color that cannot be created by mixing other colors.
2. A color that can be mixed with other primary colors to create all the color hues, value and saturation range of the color wheel.

Based on what we have reviewed, what type of color wheel is this?





SECONDARY

PRIMARY

SECONDARY



PRIMARY

COLOR
WHEEL

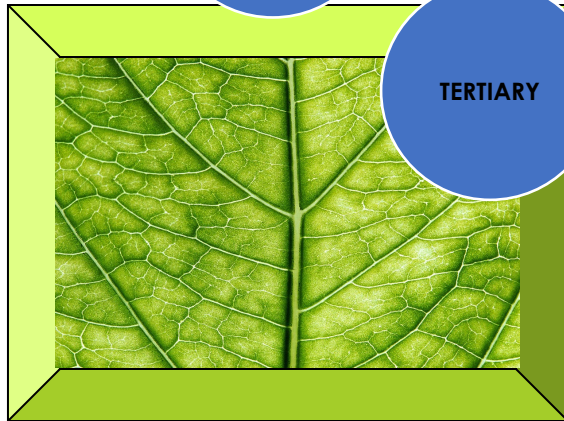
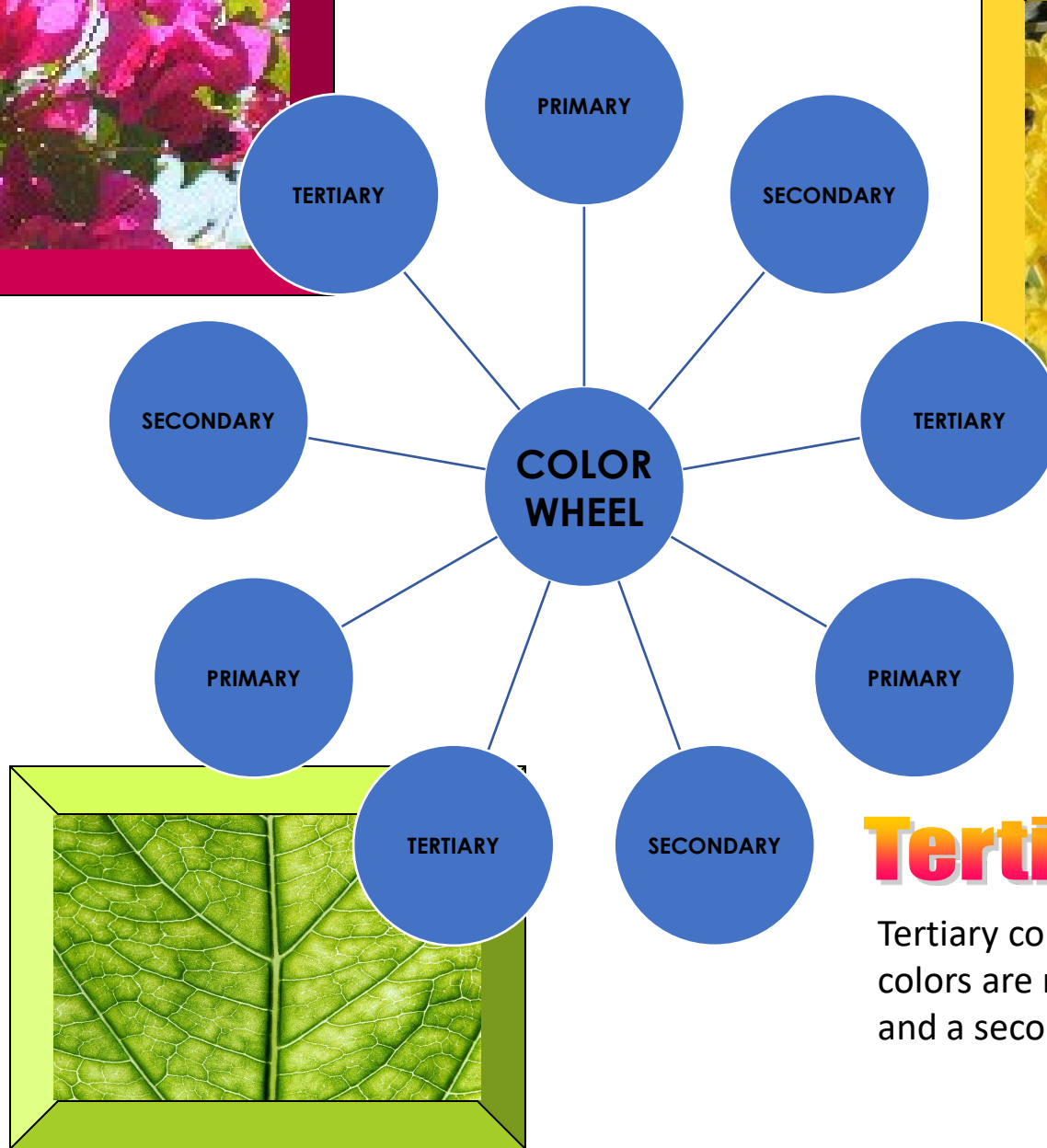
PRIMARY



SECONDARY

Secondary Colors

Secondary colors orange, green and violet (purple) are made by combining two primary colors on either side of the color wheel.



Tertiary Colors

Tertiary colors sometimes called intermediate colors are made by combining a primary color and a secondary color together.



What Is Color Harmony?

- Color harmony is when the colors are arranged in a pleasing way to the viewer and harmonious color combinations based on geometric relationships on the colors wheel. When these principles are applied to the landscaping it creates a sense of equilibrium.
- It creates balance
- It creates a sense of order
- It creates a sense of excitement i.e., is not visually boring to the viewer
- The main idea is to create a sense of balance. Too much visual stimulation is chaotic and will "turn off" the observer. Not enough stimulation will also turn off the viewer, but not because of it being too busy, but because it is visually boring and bland.
- Last but not least. Consider shade, tint, and tone when working on your color scheme, as they allow you to create rich, layered color combinations.

Complementary



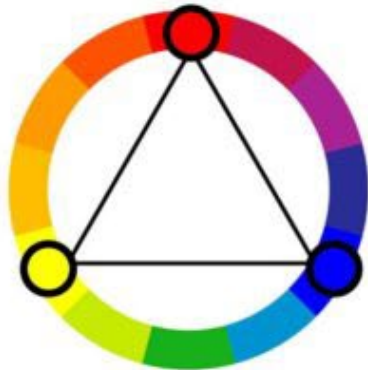
Split-Complementary



Analogous



Triadic



Tetradic



Square

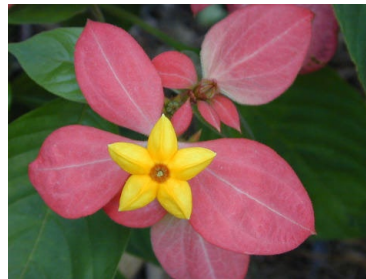


Monochromatic



Complementary Color Scheme

This color scheme creates vibrant high contrast color palettes in the garden by pairing color opposite one another on the color wheel.



Complimentary colors work together by bringing out the intensity of each other. Red and green on their own are less vibrant than when they are next to each other. The same happens when blue and orange are placed together, purple and yellow, and so on. These pairs can be primary, secondary, or tertiary colors.

Split Complementary Color Scheme

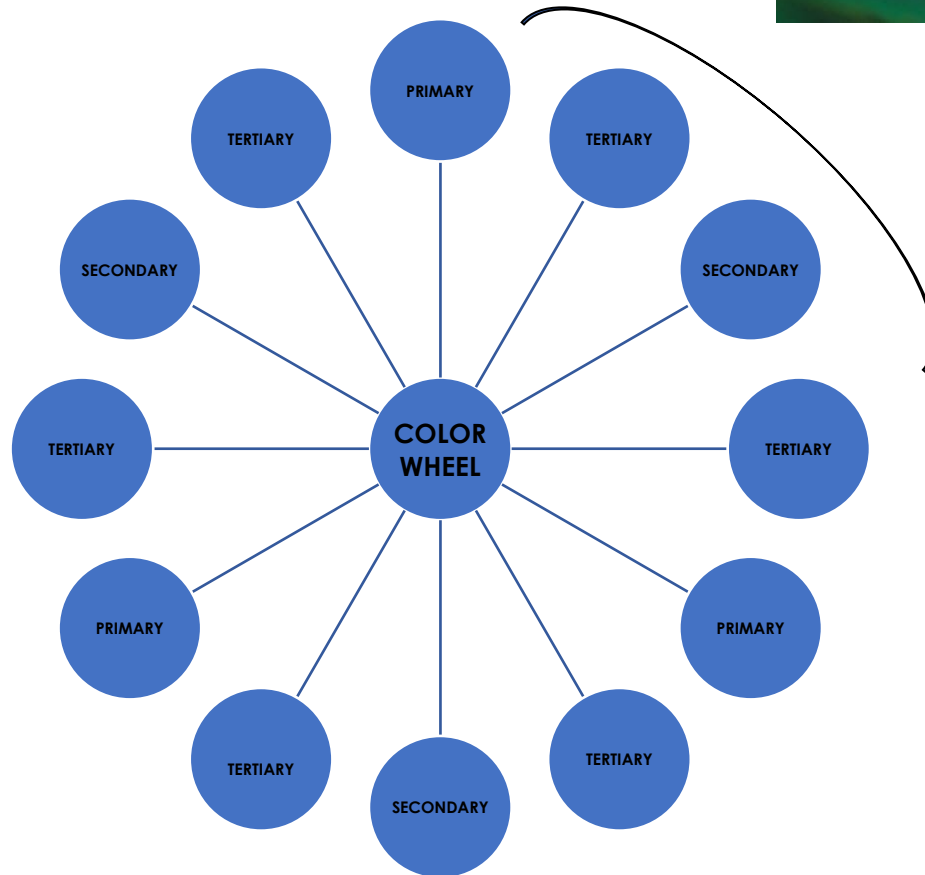
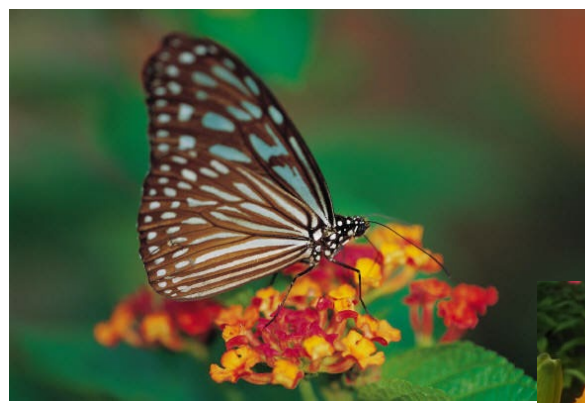
Split complementary colors are pretty much what the name implies. You take two colors opposite each other on the color wheel, like **red and green**, and split one of them into its two adjacent colors on the wheel. Take for example red-orange and blue-green.

Red + Blue-Green + Yellow-Green.
Orange + Blue-Purple + Blue-Green.
Red-Orange + Blue + Green.
Red-Purple + Yellow + Green.
Yellow-Orange + Purple + Blue.
Yellow-Green + Red + Purple.
Yellow + Blue-Purple + Red-Purple.



Analogous Color Scheme

Analogous colors scheme uses any three side-by-side colors on the color wheel. When used, it creates a gradation of the same color.



This color scheme is visually pleasing to the eye.

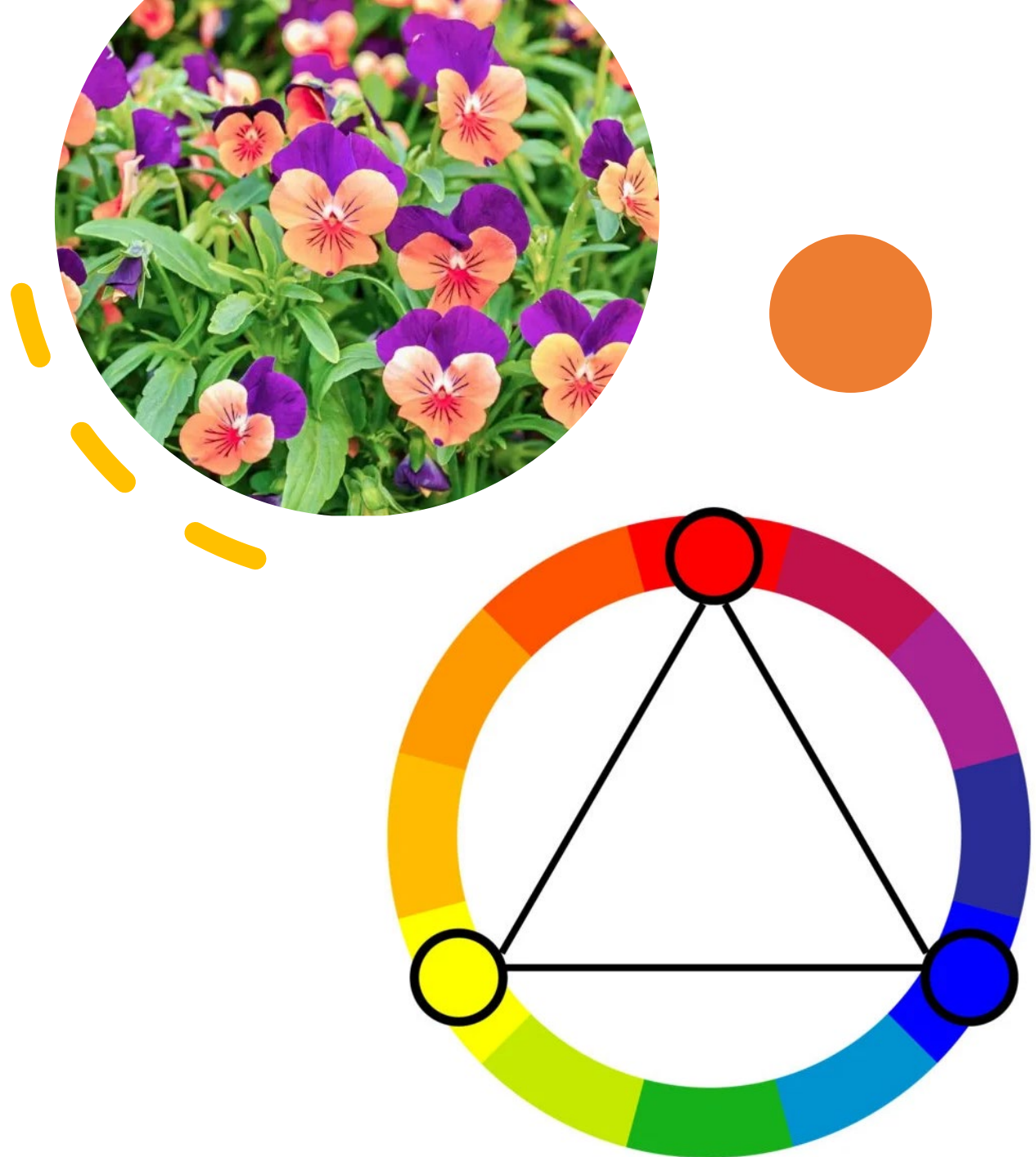
In this example we have shown how; *Lantana camara* 'Confetti', *Allamanda cathartica*, *Hemerocallis* – Daylily and *Koelreuteria elegans* (Golden Rain Tree).

Triadic Color Scheme

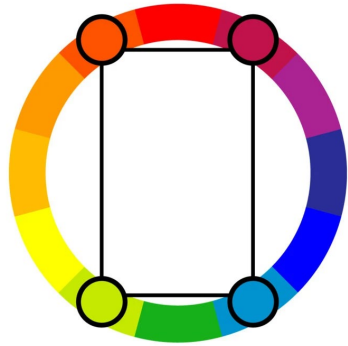
Like complimentary color schemes, triadic color combinations consist of three colors evenly spaced on the color wheel. They are very versatile, and generally create a vibrant, bold color palette.

They tend to be easier on the eye than a simple complementary pair, making them a safe bet if you want more than one hue to play with, but don't want to make quite as much of a splash as a complementary pair would.

When choosing your colors in harmony, let one hue dominate and use the others for accents only. This way, you avoid a child-like effect that can ruin your design.



Tetradic Color Scheme Or Double Complimentary



Consists of two complementary color pairs.

Like any complementary scheme with a wide range of colors, the result is a vibrant palette rich with contrast.

Use neutrals to prevent this look from becoming too garish.



Color Relationships

- In general, darker colors will recede into the landscape while lighter colors will be more prominent in the landscape.
- Warm colors (red, yellow, orange) will catch your attention. They are energizing and exciting.
- Bright vibrant colors at a distance will shorten the sense of space. Yellow and red are visible, even at high noon, from about 200 feet. Blues, purples pinks all read as soft and diffused – almost gray – at a distance. Soft colors are even more diluted in the harsh midday light. To create a sense of space it is best to put soft colors at a distance and the bolder colors close to the buildings. Take a good long look at the distant views and shapes, they will all relate back to your garden color.



Monochromatic colors create visual unity. A way to spice up a monochromatic landscape is to use contrasting textures (both leaves and flowers) to add more visual interest.

When choosing plants, remember that foliage can add just as much color as flowers.

Contrasting colors that are opposite each other on the color wheel, like purple and yellow, can result in bold combinations. Similar colors that are next to each other, like blue and purple, offer a subtle but sophisticated look.



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- Combining Both Warm and Cool Colors
 - Both warm and cool colors can be combined in a non-chaotic way in your landscape. The best advice I can give is less is more, meaning only pick a few colors and dot them throughout your landscape for flow and continuity. Combining both warm and cool colors creates a more natural landscape and is useful when planning a wildflower garden. In the example shown of orange tiger lilies are combined with pink mallow in this wildflower planting bed at Brookfield Zoo in Riverside, IL.



