

THE ELEMENT OF COLOR

Color — the dynamic language of design — the element of design that speaks messages of joy, comfort, warmth, love, seasons, and holidays! Knowledge of the element of color is a powerful tool in the hands of a designer. Understanding the dimensions of color includes discovering its qualities and the emotional impact it creates through various combinations.

Exploring the scientific basis of color is necessary to creatively use color through design to express human emotion. Color* is the reflection of light from a pigmented surface transmitted to the brain by the eyes. To experience color, light must be present to provide the visual sensation.

Color does not provide physical properties such as touch or taste. Instead, it is psychological. Color stimulates various emotional responses. These emotional responses vary, depending on each person's exposure to specific colors.

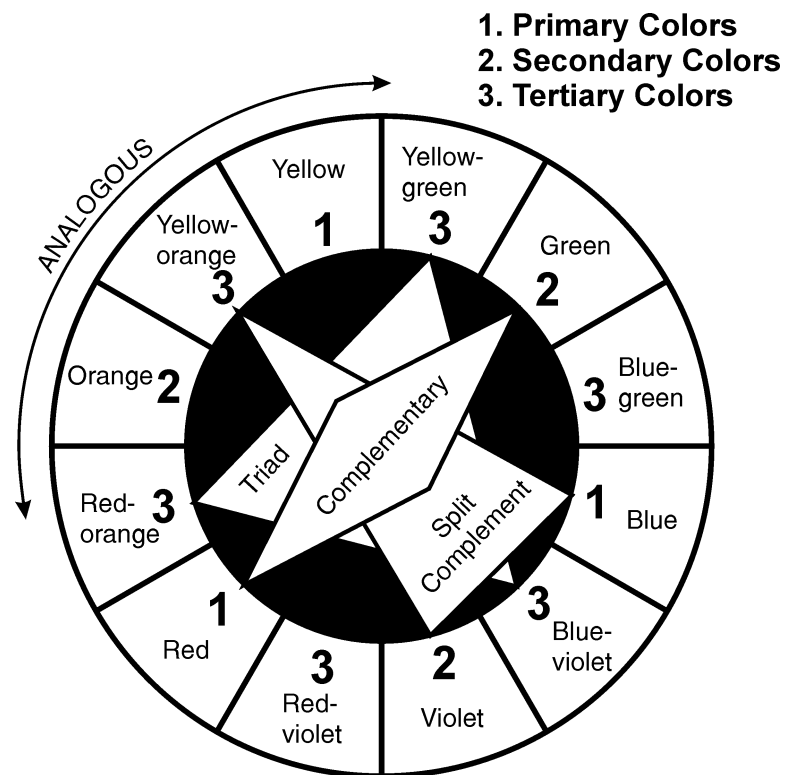
THE SCIENCE OF COLOR

When passed through a prism, “white” light separates into a color spectrum. Careful observation of the color spectrum reveals twelve major colors.

The three primary colors of the spectrum are red, yellow, and blue. Mixing equal parts of the primary colors creates the three secondary colors of orange, green, and violet. Mixing equal parts of a primary color with a secondary color results in six tertiary or intermediate colors.

The names of the six tertiary colors consist of two words. The first word is the name of the primary color. The second word is the name of the secondary color. Tertiary colors include red-orange, yellow-orange, yellow-green, blue-green, blue-violet, and red-violet.

The color wheel is a tool used by designers to study the relationships of colors and their harmonies with each other. It represents the entire color spectrum formed into a circle.



*Underlined words are defined in the Glossary of Terms.

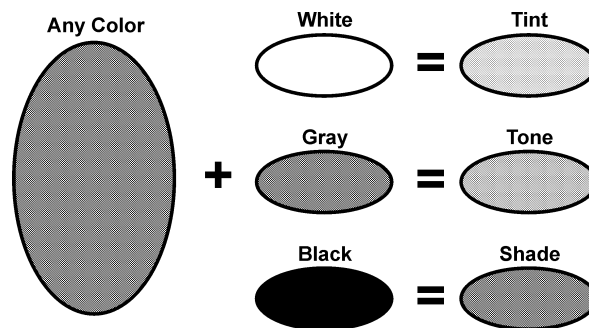
Primary colors occur equal distance from each other on the color wheel. Secondary and tertiary colors occur between the primary colors from which they form.

White, black, and gray are neutral colors. White is the presence of all colors. Black is the absence of all colors. White, gray, and black make up the gray scale.

THREE DIMENSIONS OF COLOR – HUE, VALUE, AND CHROMA

A hue is the descriptive name of a color. Red, orange, and violet are examples of hues. Each hue represents a family of color, or a pie shaped wedge on the color wheel. Red is a pure hue. It has many variations. Pink is a tint of red. Maroon is a shade of red. Pink and maroon are members of the red hue.

Colors have other qualities or dimensions including value and chroma. Value is the lightness or darkness of a hue achieved by the addition of white, gray, or black. The gray scale is a guide for modifying the value of any color. White added to a hue creates a tint. Adding gray creates a tone.



Black added to a hue produces a shade. Variations of the color blue might include baby blue (tint), colonial blue (tone), and navy blue (shade). The addition of white lightens and brightens and increases the value of a color as it increases the reflection of light. Black darkens and decreases the value, creating more visual weight.

Chroma is the third quality or dimension of color. It refers to the degree of intensity, strength, saturation, or purity of a color. The purity of a color refers to its freedom from white, black, or gray.

SCIENTIFIC COMBINATIONS OF COLORS THAT INFLUENCE OUR EMOTIONS

With the foundation of the science of color as a palette, a knowledgeable designer is effective in using color combinations to evoke responses and emotions.

Color harmonies result through the combining of tints, tones, shades, and hues from the color wheel. Color harmonies are combinations of color that are pleasing to the eye. Numerous harmonies of colors exist. The six classic color harmonies described in the following paragraphs provide a good foundation for future creative colorful designs.

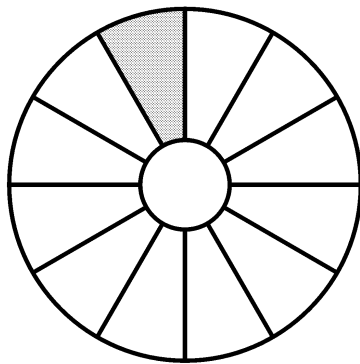
Color harmonies may be related or contrasting, depending on their location on the color wheel. Related color harmonies are monochromatic and analogous. These harmonies are safe and usually pleasing to most people.

To provide interest and to avoid monotony in floral designs having related color harmonies, designers often select flowers having different color values. In addition, the designers use a variety of flower textures and forms.

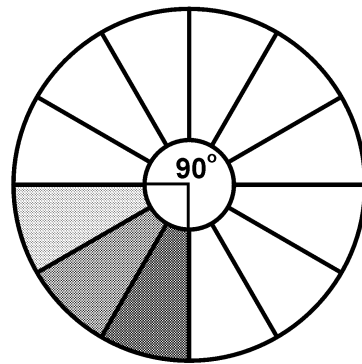
A monochromatic color harmony includes tints, tones, and shades of the same hue. Although it is a basic color harmony, it is sometimes challenging to maintain interest. Therefore, textures, forms, and values are necessary to provide interest. An example of a floral arrangement of a monochromatic color harmony is a traditional bridal bouquet of white flowers.

An analogous color harmony consists of related colors that are adjacent on the color wheel. An analogous color harmony is often used to express a mood or seasonal theme. Autumn arrangements often consist of analogous color harmonies. Adjacent hues in an analogous color harmony consist of tints, tones, and shades. They usually include only one primary color. An analogous color harmony allows one color to dominate and others to enhance it.

Related Color Harmonies



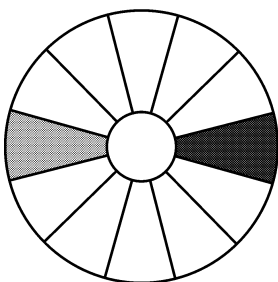
Monochromatic Color Harmony



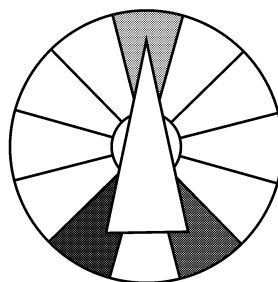
Analogous Color Harmony

Contrasting color harmonies include complementary, split complementary, triadic, and polychromatic color schemes. Developing these color schemes is more challenging because of the variety of colors from diverse parts of the color wheel. Contrasting color harmonies are dramatic, exciting, and make visual statements.

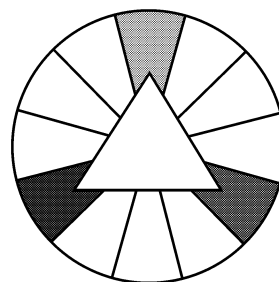
Contrasting Color Harmonies



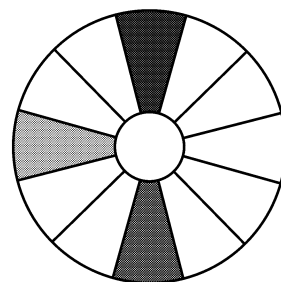
Complementary Color Harmony



Split-complementary Color Harmony



Triadic Color Harmony



Polychromatic Color Harmony

A complementary color harmony features colors directly opposite on the color wheel. Using a warm and a cool color, these direct opposites create visual depth and make bold color combinations. This type of color harmony emphasizes color differences rather than similarities. For example, Christmas arrangements often include the complementary color harmony of red and green.

Combining one color with two colors on either side of its direct complement results in a split complementary color harmony. An example of a split complementary color harmony is yellow combined with blue-violet and red-violet. This color combination provides a softer contrast than a direct color complement.

A triadic color harmony involves three colors equally spaced on the color wheel. Although challenging, this color harmony allows a skilled designer to create a pleasing combination by allowing one color to dominate. Tints, tones, and shades are also effective in harmonizing this color scheme. The combination of red, yellow, and blue is an example of a triadic color harmony.

A polychromatic color harmony includes a wide range of colors from warm to cool. A polychromatic color harmony allows a floral designer to blend a variety of spring flowers together with one color that provides dominance.

THE EMOTIONS OF COLOR

Many designers agree that color is the most important element in floral design. Color creates moods and evokes emotions. It is often the first consideration that influences a customer's selection. Color changes may occur due to influences of light quantity and quality.

A designer must know that color responses are not universal. Colors have different meanings and various emotional associations among the various members of the global community. People within the same culture react differently to color because of educational background, culture, and personality. Additionally, the exposure and experiences individuals have with colors vary.

A knowledge of color is a powerful and creative tool for a floral designer. When creating an arrangement, the designer uses this knowledge as a tool to express his/her emotions and ideas.

Cool and Warm Colors

On the color wheel, the colors exist as warm colors or cool colors. The warmth or coolness expressed by each color affects its emotional impact.

Warm, or advancing colors, are those that resemble fire and heat. Red, red-violet, red-orange, and yellow-orange are examples of warm colors. These colors are active and make flowers appear larger and more dominant in an arrangement.

Warm colors appear closer and seem to reach out and grab the attention of the viewer. The viewer is more likely to see warm colors of flowers from greater distances. In addition, warm flower colors are more easily seen in dimly lit areas.

The colors the human mind considers cool represent water and ice. Cool colors also associate with peace and calm. Examples of cool colors include blue, blue-green, and blue-violet.

Receding colors include the cool colors of blues, blue-greens, and blue-violets. These colors in a design appear to recede and look smaller. They are not easily seen from a distance. However, cool colored flowers do provide depth to a floral arrangement.

Some colors, such as violet, express characteristics of being both warm and cool. These colors often become influenced by their surrounding colors.

Lighting also has an effect on color expressions. Highly visible colors of warm hues, light values, and bright intensities are effective in floral arrangements viewed from a distance. Cool colors vanish in dim light.

Lighting is an important consideration when planning and preparing floral arrangements for evening weddings and banquets. Tints reflect more light and are more easily seen in dim lighting than the pure hues, tones, or shades. This knowledge of color is also helpful in expressing moods and emotions with color.

Throughout time, people have used colors to express emotions and convey messages. These associations vary from one culture to another. As mentioned earlier, individuals within a society react differently to a specific color depending on their exposure or experiences with that color. Color often sets the mood and expresses its own emotion and personality.

PERSONALITIES OF INDIVIDUAL COLORS

In-depth study of the colors on the color wheel reveals the personalities and associations characteristic of each color. As an example, orange is an exciting color associated with the autumn season and Halloween.

Orange gives warmth and energy to an arrangement and conveys a festive emotion. Used as a pure hue, the color of orange dominates and sometimes becomes overwhelming. As a result, florists use pure hues of orange in small quantities.

Light values of orange (salmon and peach) or dark values (rust and brown) are not as overwhelming as the pure hue. As a result, florists use these colors in greater amounts.

Brown is an earth tone color, often used as a color for a container and autumnal effects. The complement of orange on the color wheel is blue. The dramatic color harmony occurs naturally in the flowers of *Strelitzia reginae* (Bird of Paradise).

COLOR RELATED TO DESIGN PRINCIPLES

A knowledge of the relationship of color to the principles of design is an important creative tool of a skillful floral designer. The following paragraphs describe some of the relationships color has to the principles of floral design.

Dominance

A floral designer uses color in several ways to develop the focal area of a floral arrangement. The designer creates dominance with color by allowing one color to dominate. In addition, the use of contrast in flower color is effective for developing the focal area. The use of warm colors and heavy colors is also a method the designer uses to develop the focal area in an arrangement.

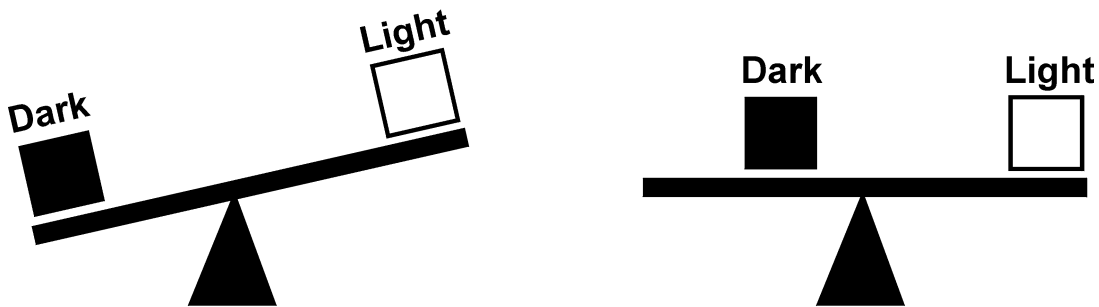
Unity

Repetition of color results in unity throughout a floral arrangement. If a floral designer uses a white container for an arrangement, the arrangement must contain white flowers or variegated foliage to establish unity. Otherwise, the container will appear separate from the arrangement.

Balance

Color balance establishes visual balance in an arrangement. Dark colors appear to have more visual weight. When placed lower in an arrangement, the darker colored flowers provide visual stability.

Color Balance



To achieve visual balance, place darker, heavier colors closer to the center of the arrangement.

Dark flowers and cool colors placed deep into an arrangement contribute to depth. The dark flowers and cool colors are the first to draw the attention of the viewer.

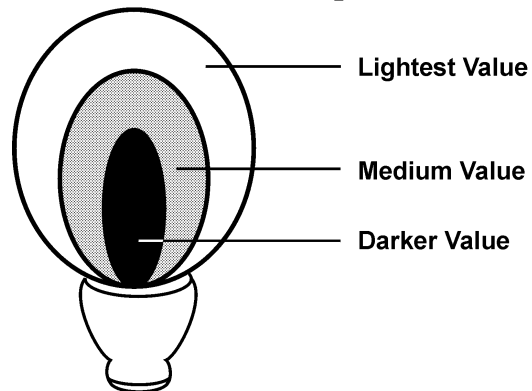
Proportion

To establish proportion in a floral arrangement, a floral designer places smaller, lighter-colored flowers in greater quantities at the perimeter of the arrangement. Larger flowers of darker shades or pure hues placed in the focal area are fewer in number than the lighter-colored flowers.

Rhythm

Repeating a color throughout an arrangement develops rhythm. A floral designer accomplishes this by using one color at the focal point and repeating it throughout the arrangement with a tint, tone, or shade of the color. This encourages the viewer's eyes to travel throughout the arrangement.

Color Proportion



Place lighter value materials higher and in the outermost areas of an arrangement. Place darker value materials lower and closer to the center of the arrangement.

COLOR AND ITS INTERRELATIONSHIP WITH DESIGN

Color is a powerful element in floral design. It speaks and plays on the viewer's senses and evokes emotions. A floral designer uses knowledge of the science of color and its qualities and dimensions to establish pleasing and effective color harmonies in floral arrangements. A designer uses the power of the language of color and blends it with knowledge of the principles and elements of design to create arrangements that are beautiful and unique.

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The references listed below were used in the development of this topic and can be researched for additional information. References indicated with (1) were consulted and permission for use was given.

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GLOSSARY OF TERMS

Definitions for terms in this glossary are taken from *Book of Floral Terminology*, developed by the Education Committee of the American Institute of Floral Designers.

Advancing colors – Warm colors consisting of red, yellow, red-violet, red, red-orange, orange, yellow-orange, yellow, and yellow-green.

Chroma – The degree of intensity, strength, saturation, or purity of a color.

Color – Visual response of the eyes to reflected rays of light (consists of hue, value, and chroma).

Color harmony – A compatible and/or useful combination of colors.

Color wheel – A diagrammatic guide to the color system in which all hues appear in the proper spectral order.

Gray scale – A visual aid that represents the transitional gradations of white through black, demonstrating the varying degrees of gray.

Hue – The descriptive name of a color (a specific spot on the color wheel).

Neutral colors – The achromatic colors of white, gray, or black that consist of no color or hue.

Primary colors – The colors of red, yellow, and blue from which all other colors are made. Primary colors cannot be made from any other colors.

Receding colors – Cool colors that predominantly consist of blue, blue-green, and blue-violet.

Secondary colors – The colors of orange, green, and violet that occur by mixing two primary hues together.

Tertiary colors – Third generation or intermediate colors created by mixing primary colors with adjacent secondary colors.

Value – The lightness or darkness of a hue achieved by adding white, gray, or black.

BRAIN PROBES

SHORT ANSWER/LISTING: Answer the following questions or statements in the space provided or on additional paper.

1. Define color.

2. Name twelve colors revealed in the color spectrum when white light passes through a prism.

a.	_____	g.	_____
b.	_____	h.	_____
c.	_____	i.	_____
d.	_____	j.	_____
e.	_____	k.	_____
f.	_____	l.	_____

3. Name the tool used by florists and designers to study the relationships of colors and their harmonies with each other.

4. List and define the three dimensions of color.

a. _____

b. _____

c. _____

5. Illustrate the six color harmonies used by florists and designers to create attractive designs.

6. Differentiate between advancing colors and receding colors.

7. Describe how a floral designer uses color to develop the focal area in an arrangement.

8. Describe how a floral designer uses color to achieve visual balance in an arrangement.

CONCEPTS TO CREATIVITY

- Research a color on the color wheel. Discover its interaction with other colors to create color harmonies, how it is affected by different types of light, the emotion it evokes, and seasons for which it is used. Share your research with classmates in a presentation and use visual aids to help others learn more about the personalities of the color you researched.
- Draw a color wheel. Label each color. Identify the primary colors, secondary colors, and tertiary colors.
- Create a color wheel with paint or construction paper. Identify six color harmonies. Label the cool and warm colors.
- Select photos of floral arrangements from the Internet, floral magazines, or brochures. Identify the color harmonies used in the arrangements shown.
- Plan a mock wedding. Select color swatches of fabric. Set a date and time for the wedding. Develop a color harmony that fits the theme, season, and time of the proposed wedding.
- You have been asked to design winter holiday centerpieces for a banquet that will be held in a hotel ballroom. It is an evening function with candlelight. Describe the colors and accessories you would use to create attractive arrangements for the festive occasion.
- Collect a flower or foliage to represent each of the twelve colors on the color wheel and one white flower. Light votive candles and then turn out the room lights. Observe which flowers are the most visible. Turn on the lights. If the lighting is fluorescent, take the flowers outside and observe the difference in natural light. Describe how the different types of light affected the colors of the flowers.
- Select several bolts of different values of green ribbon. Cut sections of ribbon and lay the sections side by side. Determine the tints, tones, and shades. Repeat this with exposure to light, natural daylight, fluorescent light, and candle light.
- Select several types of all green foliages. Lay them side by side. Note different textures and the effects of the colors. Identify tints, tones, and shades of green.
- In the classroom, gather several colorful items such as ribbons, candles, flowers, etc. Group into teams and create a color harmony with the materials.

- Select advertisements from magazines. Identify color harmonies used in advertising. Which ads attract your attention? What colors create depth in the ads? What moods are created by the color harmonies?
- Using white china at a table setting, change the accessories to match the season. Create a formal and informal table setting. Add flowers to complete the composition.
- Visit a retail floral business. Observe various display areas. What color harmonies are used? Look at the exterior display window. What color harmonies are used to attract a customer's attention and invite him/her inside? Observe lighting fixtures in display areas and in floral coolers.
- Visit a retail floral business. Look at the various arrangements on display in the floral cooler. Select arrangements that express each of the following emotions: love, sympathy, celebration, joy, and happiness. What colors are used to express each emotion?
- Visit a wholesale floral business. Take a color wheel and list the types of flowers that represent each color on the wheel.

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