

LIGHTING FOR INTERIORS

- **COLORS**



- **LIGHTING**

Interior Design Department
Third grade/ Fall semester

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COLORS

- **THEORIES OF COLOR DESIGN**
- **COLOR SCHEMES**

Review

REVIEW

HUE ,VALUE, AND SATURATION

- **The Hue**

- Gradation of color within a visible spectrum.
- Hue is one of the primary properties of a color, its name, such as red, blue, or yellow, which is given to each color to distinguish it from the other colors.
- The color (hue) is the function of light wavelengths as discernible by the human eye.
- Hue is measured in degrees from 0 to 360



REVIEW

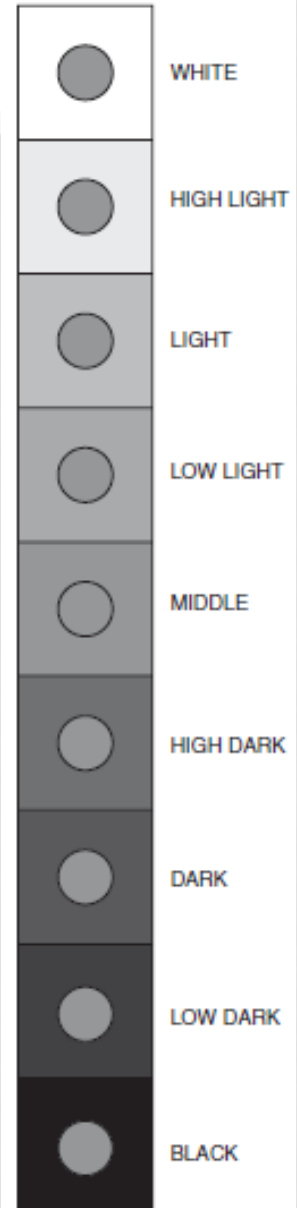
HUE ,VALUE, AND SATURATION

- **The Value**

- refers to the lightness or darkness of a color.
- It indicates the quantity of light reflected.
- When referring to pigments, dark values with black added are called “shades” of the given hue name. Light values with white pigment added are called “tints” of the hue name

Seven graduations of a gray value scale between white and black.

The dots (all of a middle value) appear darker against a light background and lighter against a dark one.



REVIEW

HUE, VALUE, AND SATURATION

- **The Saturation(Chroma)**

is the Intensity of a color



THEORIES OF COLOR DESIGN

THEORIES OF COLOR DESIGN

1. Newton's Hue Circle
2. Itten's Color Wheel
3. Munsell's Color Sphere
4. The Pantone Color System

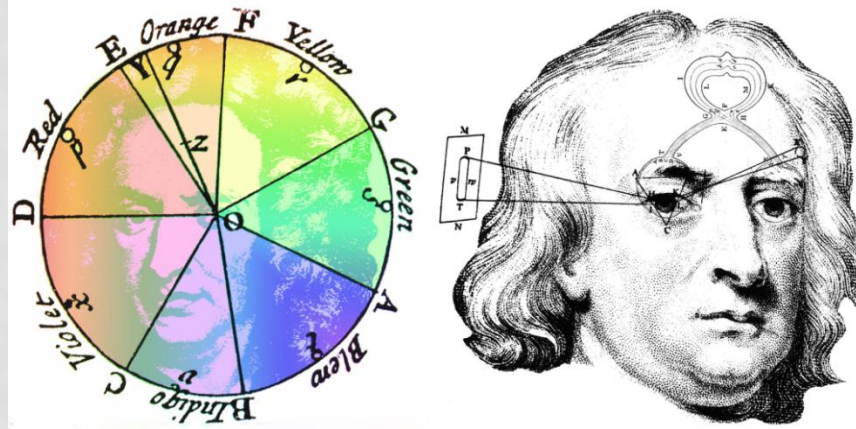
THEORIES OF COLOR DESIGN

- Many attempts have been made to establish methodologies to evaluate the advantages of certain color combinations.

THEORIES OF COLOR DESIGN

1. Newton's Hue Circle-1706

- In his attempt to develop a theory of color, Newton was the first to understand that colors did not lay on linear chart, but rather existed in a continuum.
- Isaac Newton split white light into seven colors-orange, yellow, green, blue, indigo, violet, and red-arranged on a disk in proportionate slices such that the spinning of the disk would result in the color white.



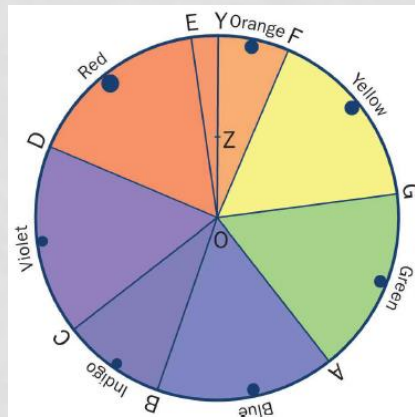
THEORIES OF COLOR DESIGN

1. Newton's Hue Circle-1706

In his attempt to develop a theory of color,

The hue circle is represented by white at the center (O) and the hues arranged in order around the disk.

Each hue is given a weight, or proportion, that balances it within the system. Newton closed his system through a mix between red and violet that did not appear in his natural primary spectrum.



THEORIES OF COLOR DESIGN



2. Itten's Color Wheel

- Johannes Itten developed his color wheel based on primary colors of red, yellow, and blue. The three primary colours placed in an **equal triangle**; yellow at the top, red at the lower right, and the blue in the lower left. About this triangle Itten inscribed a regular **hexagon**, resulted from mixing the primaries to obtain the three **secondary colours** as the following:
- yellow + red = orange, yellow + blue = green, and red + blue = violet. The six colours (primaries and secondaries) mixed carefully generate a 12 sequenced tone of colors such a rainbow or natural spectrum.

THEORIES OF COLOR DESIGN

2. Itten's Color Wheel

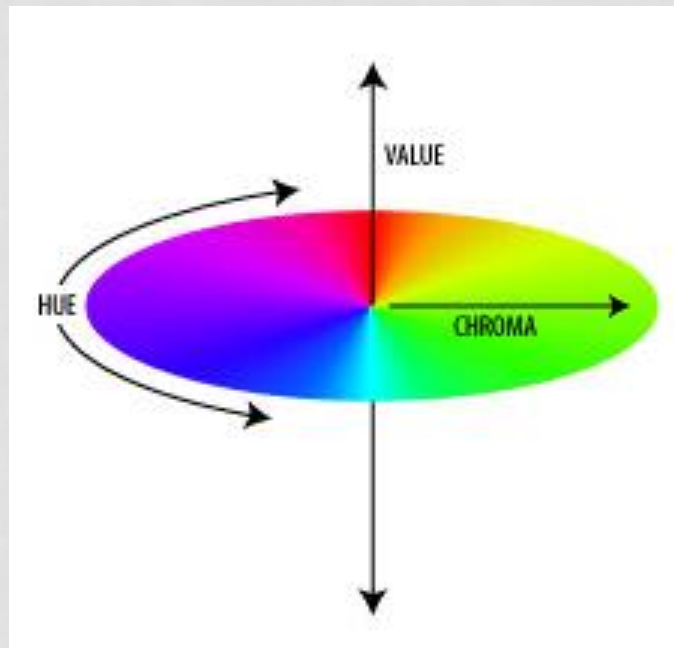
- Itten did not believe in further expanding the wheel to 24- or 100-hue wheels, as the dilution(decrease) of the naming system he established made it difficult to easily identify color distinctions.



THEORIES OF COLOR DESIGN

3. The Munsell Model

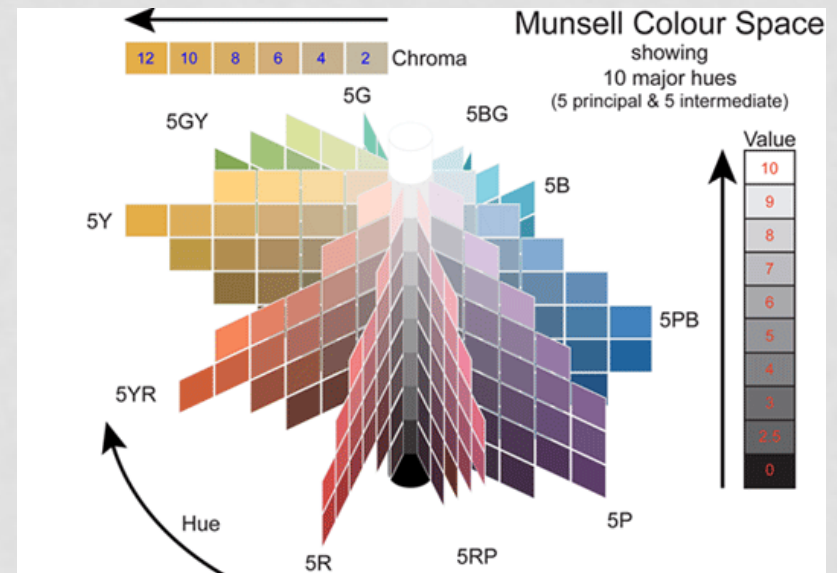
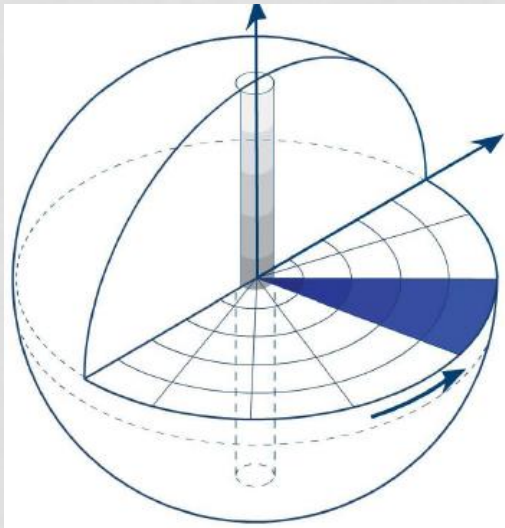
- In the early 1900s, the American Albert Munsell developed a system of color analysis based around hue, value, and Chroma.



THEORIES OF COLOR DESIGN

3. The Munsell Model

- In Munsell's system, hue is arranged around the perimeter of a sphere, value as it moves from the top pole (light) to the bottom (dark). And Chroma as it moves toward the center.

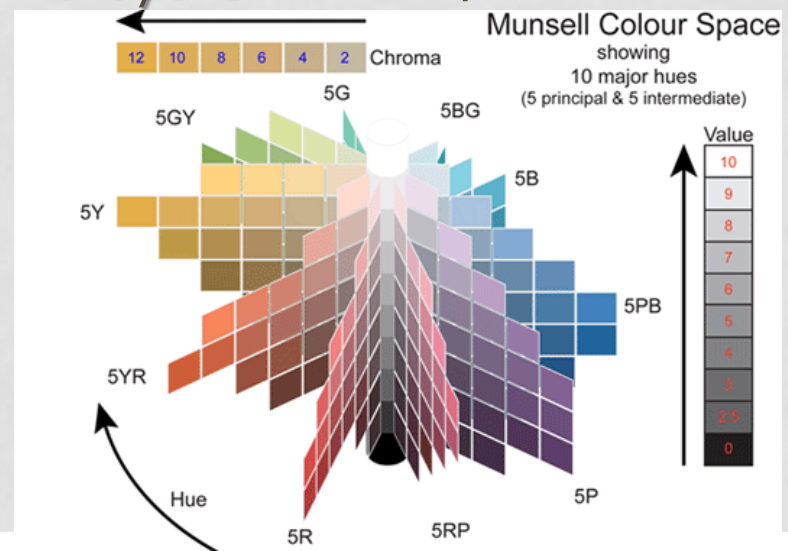


THEORIES OF COLOR DESIGN

3. Munsell's Color Sphere

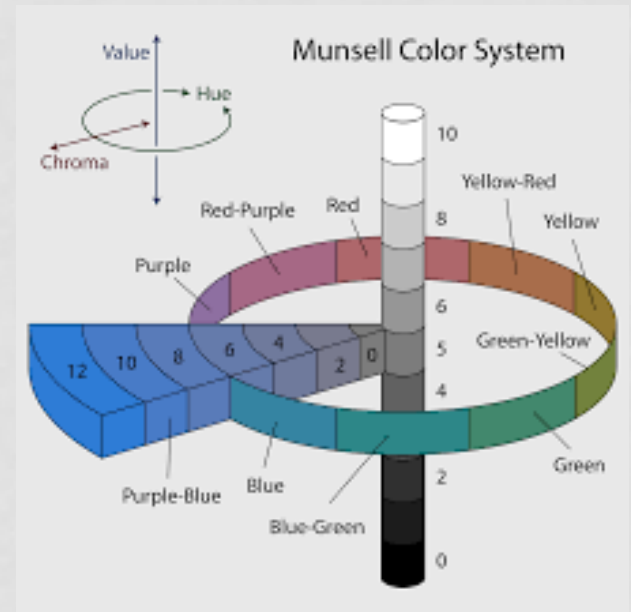
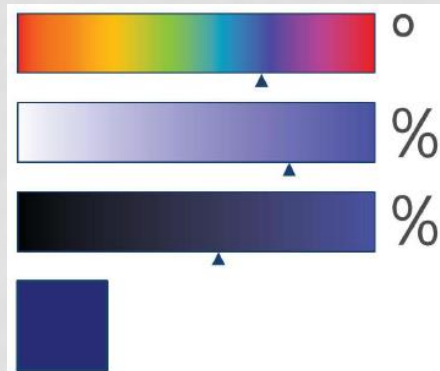
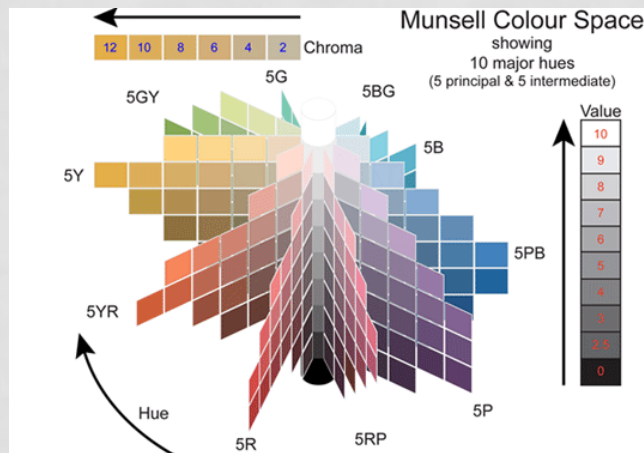
Starting with a circular relationship of hues, Munsell established a decimal notational system to describe the transitional relationship as one color is identified from another.

Munsell also developed the color names that made it easy to identify any color in his system. R 5/10 would be red, value 5, chroma 10.



THEORIES OF COLOR DESIGN

- Munsell developed what he called the **color tree**.



COLOR TEMPERATURE

4. The Pantone Color System (PMS)

- Pantone is a corporation that began as a commercial printing company in the 1950s.
- However, it is best known for its color-matching system (PMS), as seen in the Figure.
- Pantone's system consists of approximately 1,114 ink colors that are produced from 13 base pigments (15 including white and black) mixed in specific amounts.



COLOR TEMPERATURE

4. The Pantone Color System

- Each color is identified by a three- or four-digit number followed by a C, M, or U, such as PMS 123-C.
- The letters following the number refer to the type of paper they are printed on, such as C = coated, M = matte, and U = uncoated.
- The Pantone system can be used with the CMY mixing process as well as the screen-based RGB process.
- Pantone's color-matching system is primarily used for printing, it is sometimes used in the manufacturing of colored paint, fabric, and plastic.

COLOR SCHEMES

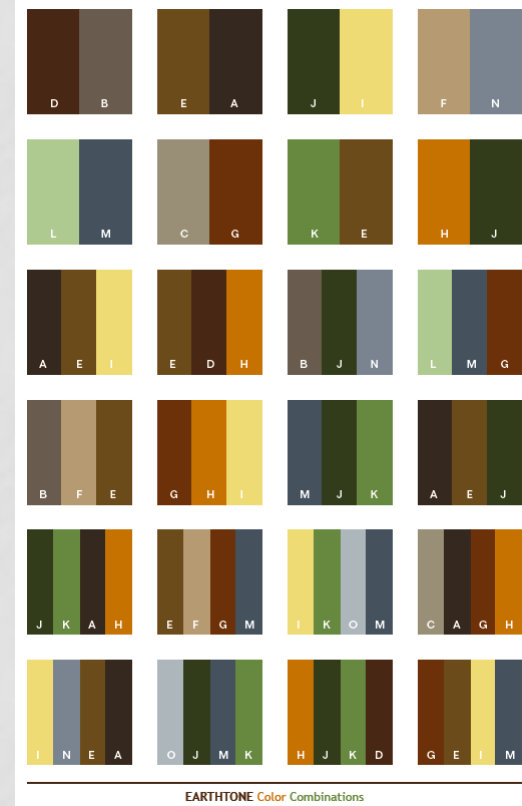
COLOR SCHEMES

- there are six "classic" combinations of color:
- 1. monochromatic,
 2. analogous,
 3. complementary,
 4. split complementary,
 5. triadic,
 6. tetradic.

COLOR SCHEMES

- Introduction:

- Color schemes are the result of turning color combinations into a set of rules for an interior palette.
- Grounded in color theory, the designer can creatively select and organize color in harmonious combinations.



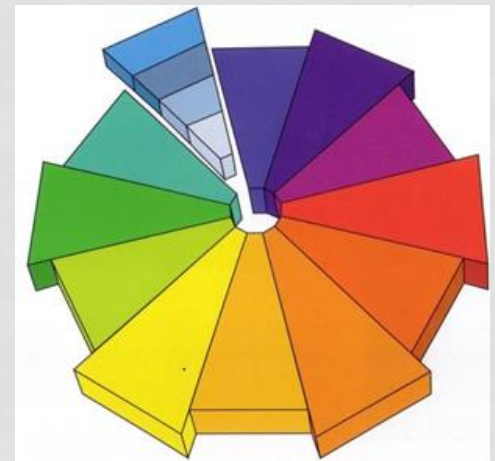
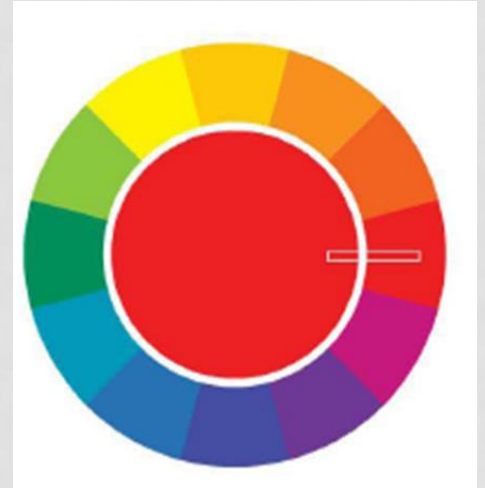
COLOR SCHEMES

1. Monochromatic

The monochromatic is perhaps the simplest and most basic of the color schemes.

A single hue is varied throughout in tints, tones, and shades.

The one-color combination seems to ensure some unity or harmony through color application.

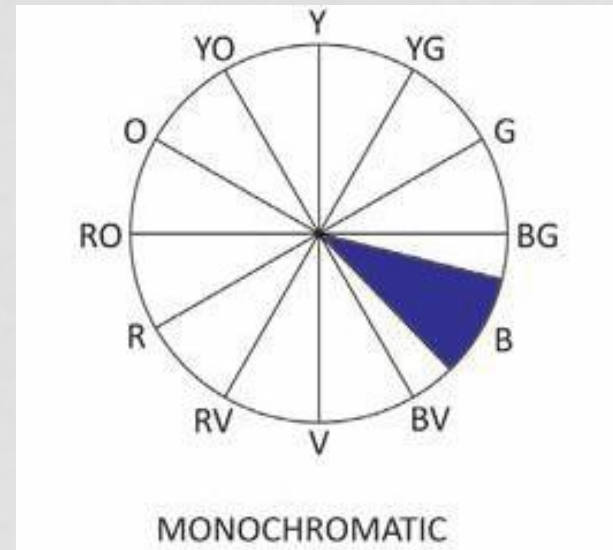


COLOR SCHEMES

1. Monochromatic

However, designers should consider that some colors lend themselves to monochromatic schemes better than others, and that certain monochromatic concepts can become rather boring.

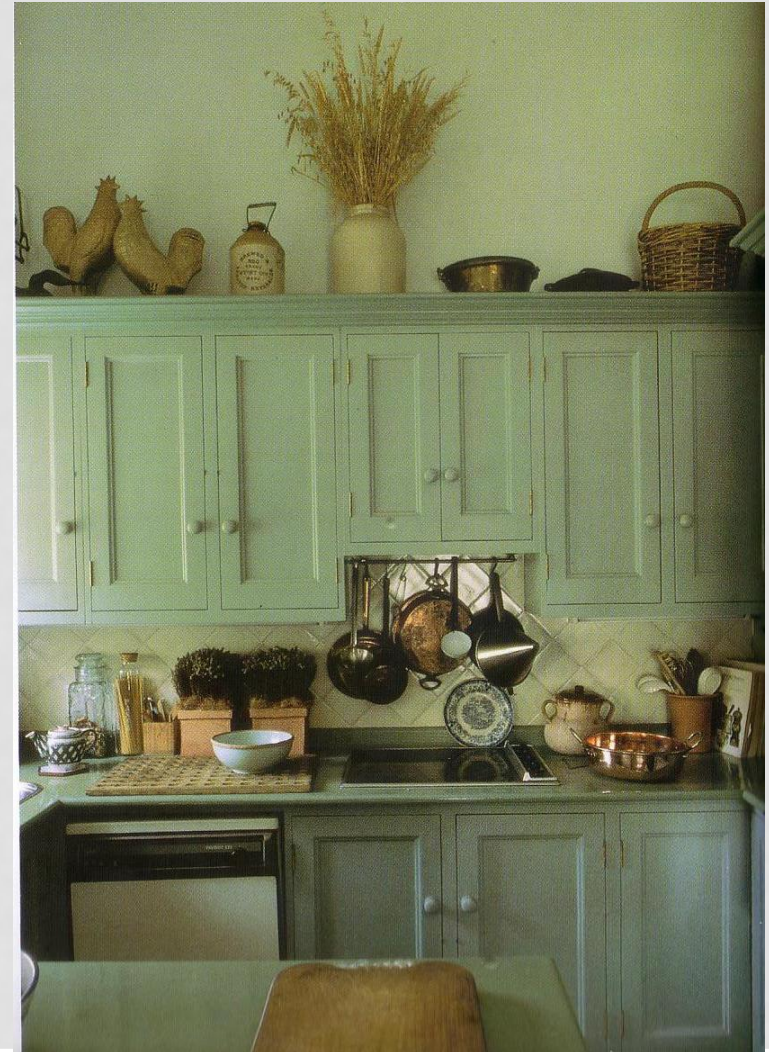
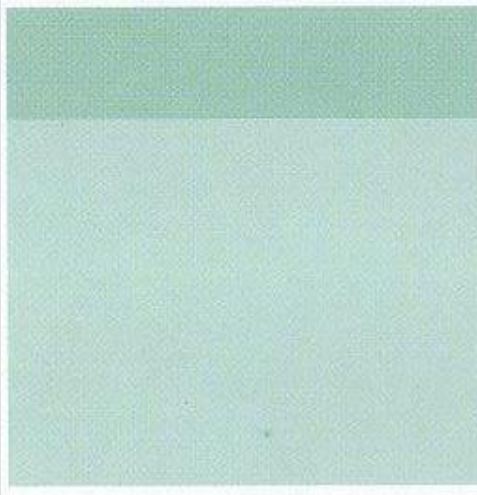
Some variety in intensities, textures, and forms should be used to give life to the interior.



COLOR SCHEMES

1. Monochromatic

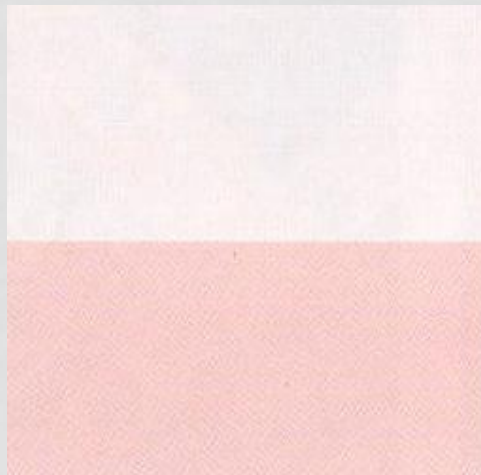
The dramatic quality of this monochromatic blue-green kitchen provides an excellent backdrop for displaying kitchenware.



COLOR SCHEMES

1. Monochromatic

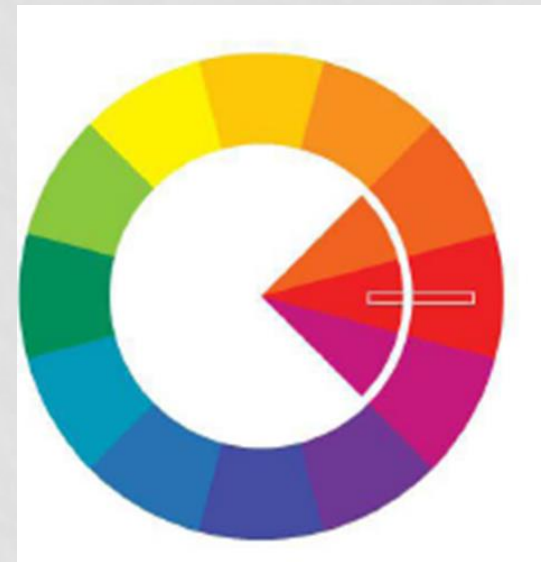
The pinks and reds of this bedroom lend a rosy brightness. The gradual shifts in color value make the space feel soft and feminine.



COLOR SCHEMES

2. Analogous

The next easiest scheme is the analogous color scheme, which uses colors (often three or more) that are adjacent on the color wheel.

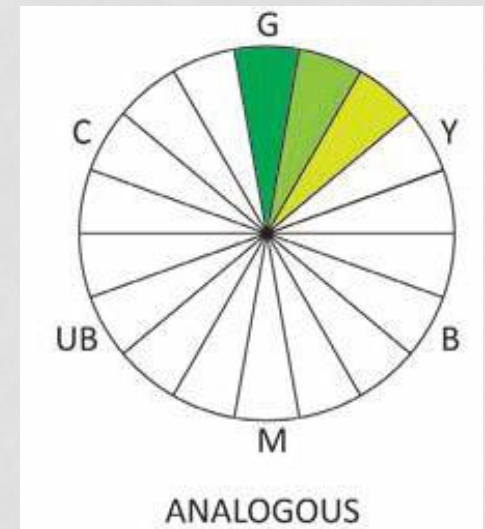


COLOR SCHEMES

2. Analogous

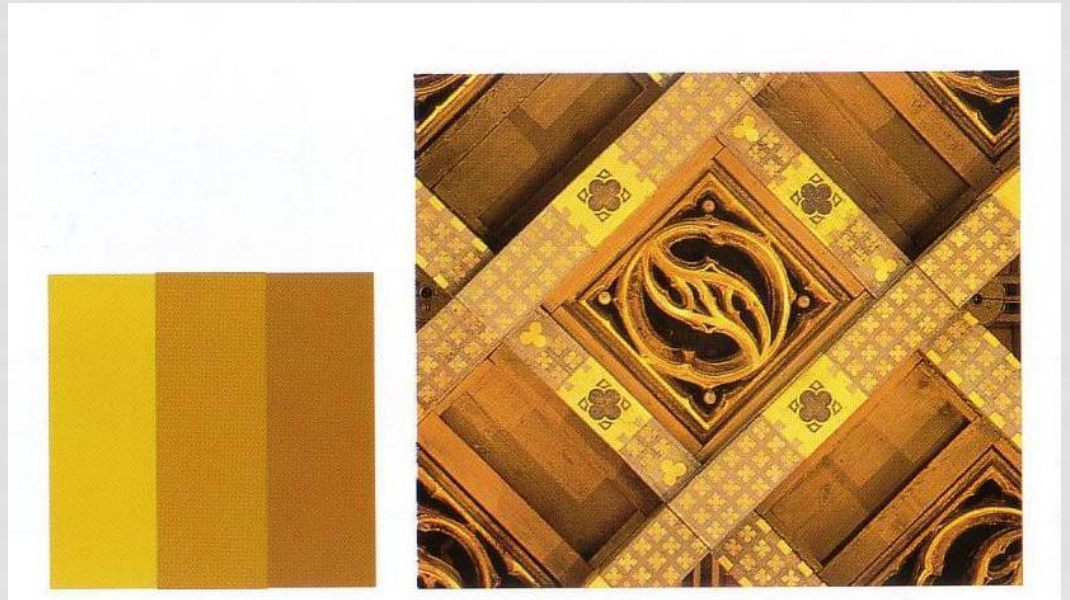
Analogous schemes offer more variety than the monochromatic schemes, yet are harmonious.

The hues are intermixed in varying proportions, values, and intensities to provide successful interiors.



COLOR SCHEMES

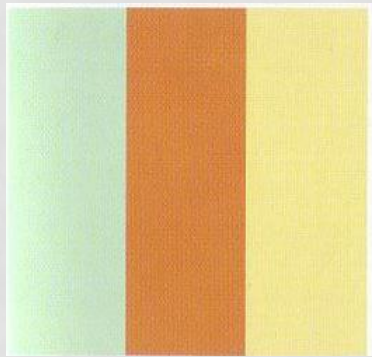
2. Analogous



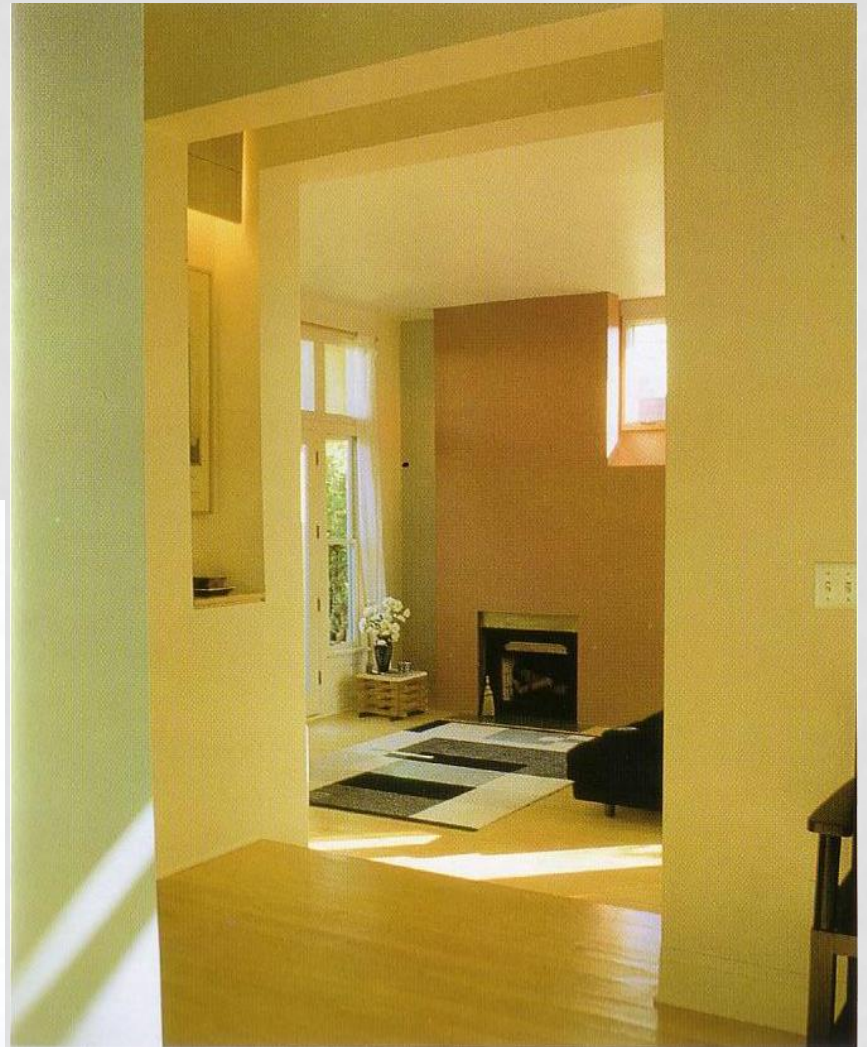
This wood panel detail designed by Bernard Maybeck uses decorative painting techniques mixed with natural wood tones to achieve a rich, complex tapestry of color.

COLOR SCHEMES

2. Analogous

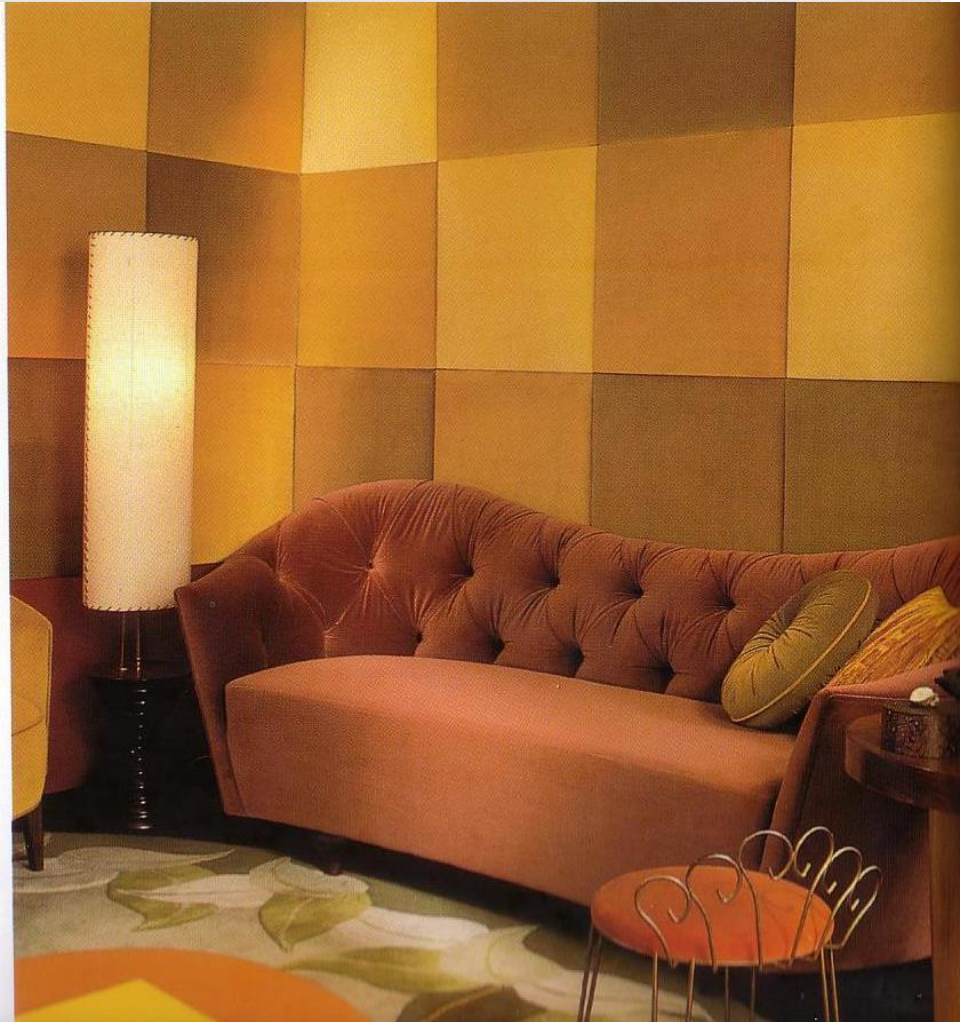


The bright, contrasting colors create a lively layered effect in this contemporary interior. The progression from yellow-green to yellow to red-orange heightens the sense layering.



COLOR SCHEMES

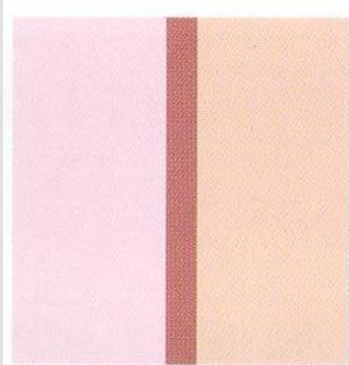
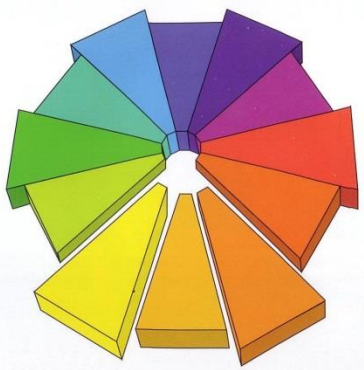
2. Analogous



The bold, rich colors of this sitting area create a total environment. The whole space becomes one large furniture piece.

COLOR SCHEMES

2. Analogous



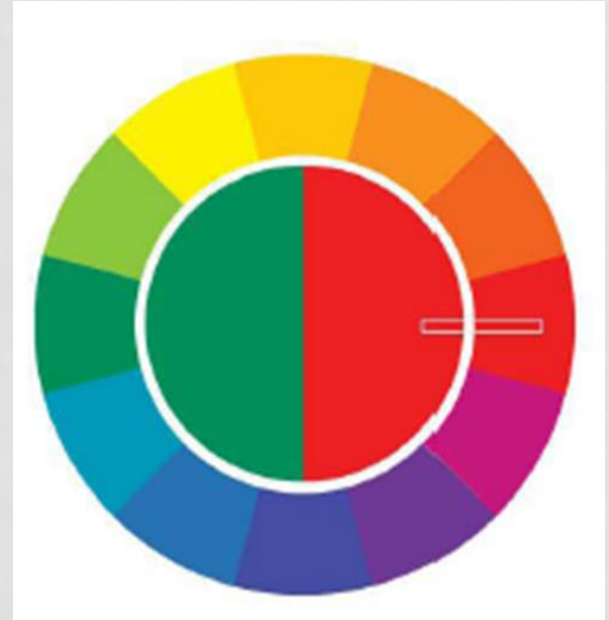
This elegantly abstract space blurs the distinction between inside and outside. The colors both define individual architectural elements in the space and weave the space together.



COLOR SCHEMES

3. Complementary

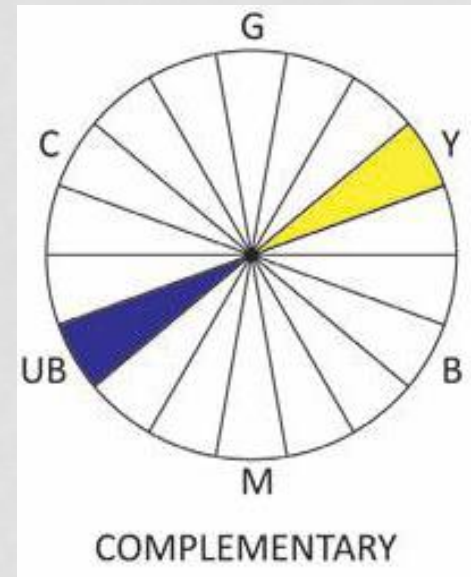
The complementary color schemes offer an even greater variety in contrast or accent by using colors that are directly opposite on the color wheel.



COLOR SCHEMES

3. Complementary

These brilliant contrasts are frequently used in graphic design when a forceful visual impact is needed.



COLOR SCHEMES

- 3. Complementary



COLOR SCHEMES

- 3. Complementary



COLOR SCHEMES

4. Split Complementary

Is one hue on one side of the color wheel and two hues on either side of its complement.



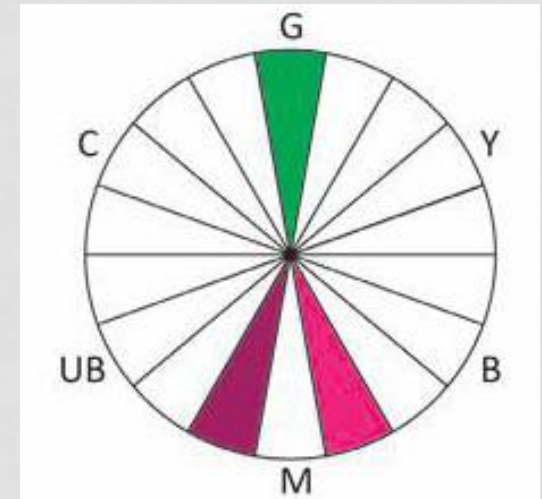
COLOR SCHEMES

- **4. Split Complementary**

Split complementary

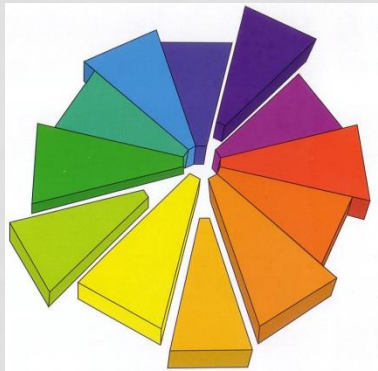
A split-complement scheme resembles a narrow-armed **Y** on the color wheel rather than being exact opposites or complementary colors.

Such a scheme thus provides three colors instead of the two of complementary combinations, thereby offering a wider range of color selection.



COLOR SCHEMES

4. Split Complementary

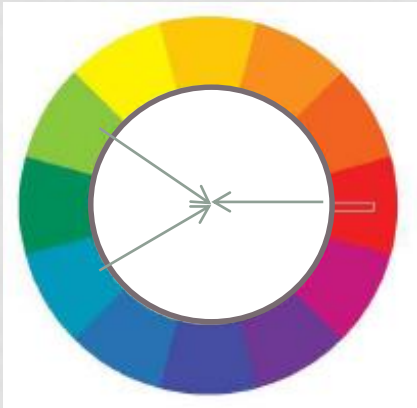


The yellow-green of the walls and the yellow-orange of ceiling and woodwork, in combination with the deep purple of the carpet, provide an excellent example of a successful split complement color scheme.



COLOR SCHEMES

4. Split Complementary



This powerful color scheme uses full intensity colors for startling drama.

COLOR SCHEMES

4. Split Complementary



The panels used in these collaborative areas within Haworth's Paris showroom are based on a split complementary color scheme of violet, yellow-green, and yellow-orange.

COLOR SCHEMES

5. Triads

Uses colors equally spaced around the color wheel. Produces high-contrast schemes.

These colors might be the basic primary or the basic secondary colors. These combinations can produce some of the most diverse color schemes of all the systems.



COLOR SCHEMES

5. Triads

- The primary colors red, yellow and blue form the most common triad.
- Primary colors can be very stimulating in a child's environment as children respond to strong colors in their early stages of development.
- For an adult to live with nothing but primary colors for a long time could become tedious(boring).



COLOR SCHEMES

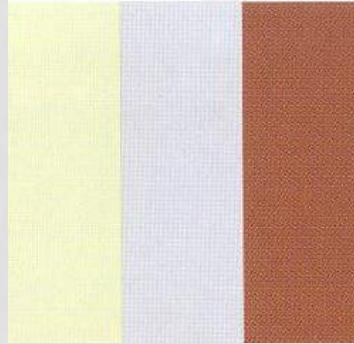
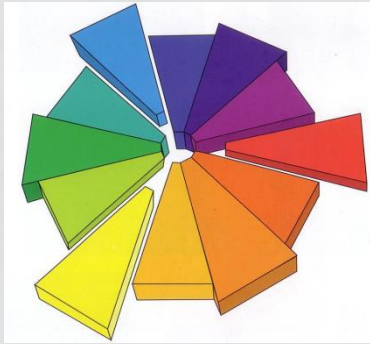
5. Triads

Blue and yellow wall paints in this interior are accented with red furniture, creating a strong triad color scheme.



COLOR SCHEMES

5. Triads



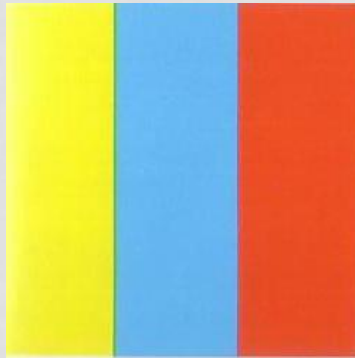
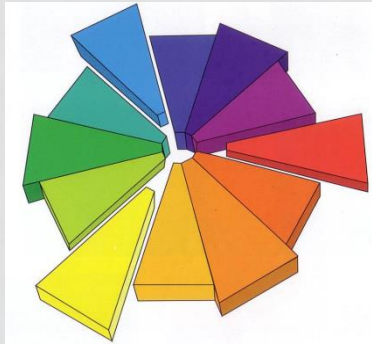
This kitchen is done in primary colors

Here, the colors are soft and grayed down to create a very subtle but richly balanced scheme.



COLOR SCHEMES

5. Triads



The full intensity of these primary colors brings to mind a tropical environment.

COLOR SCHEMES

6. Tetrads

Tetradic

Uses two complementary color pairs.
Proportions of colors must be chosen carefully to maintain balance.



COLOR SCHEMES

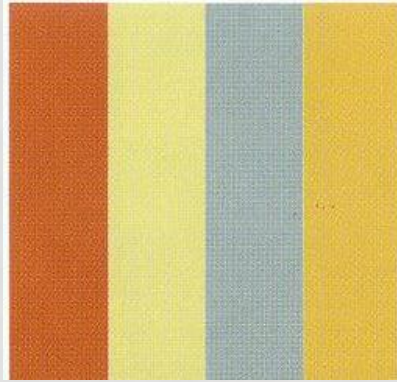
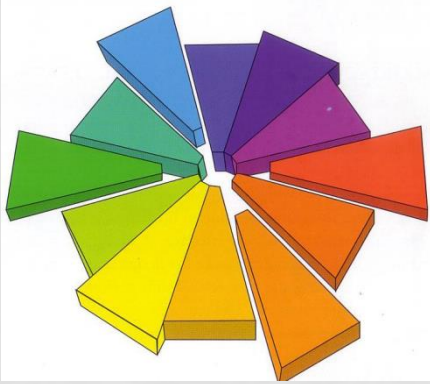
6. Tetrads

Tetrads are often used in fabric, wallpaper, or other decorative design where the colors can be interlaced together for balance and harmony

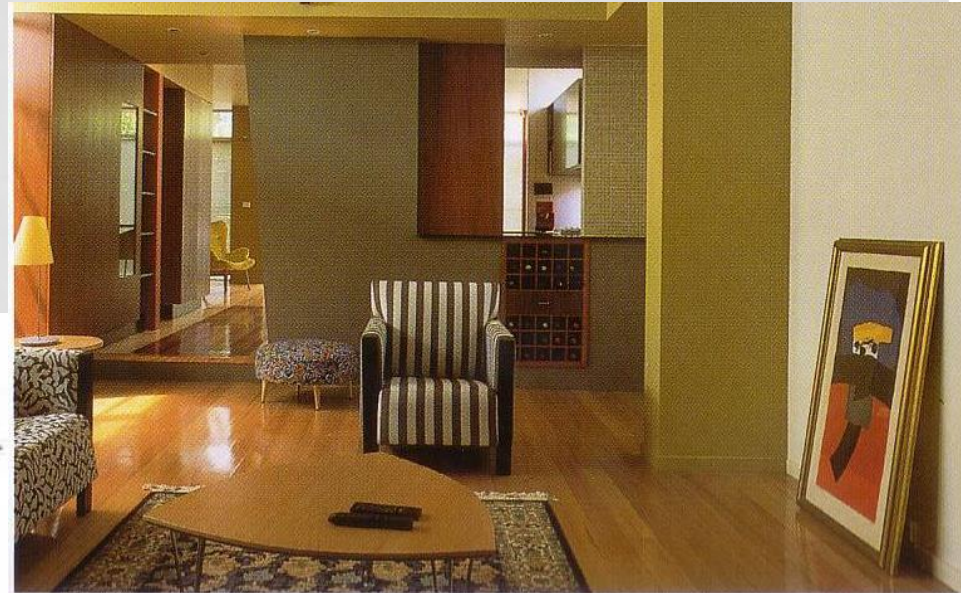


COLOR SCHEMES

6. Tetrads

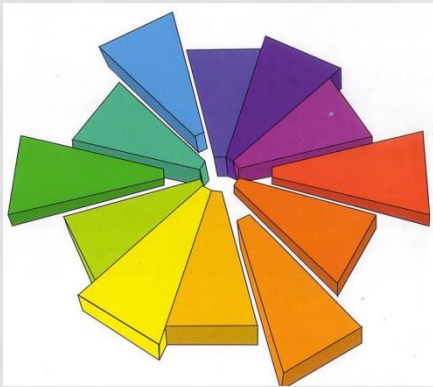


This unusual color scheme combines red and green complements with blue and wood tone orange complements. The color of the furnishings is simple so that it does not compete with the other colors.



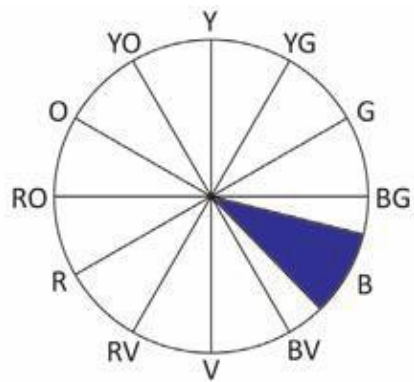
COLOR SCHEMES

6. Tetrads

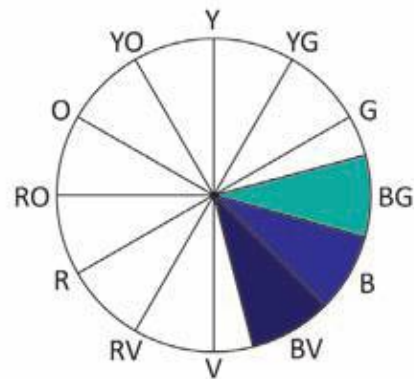


The kitchen has a neutral background of white against which red wood tones and green paint provide complementary contrast. The blue door and orange wood tones are also complementary hues.

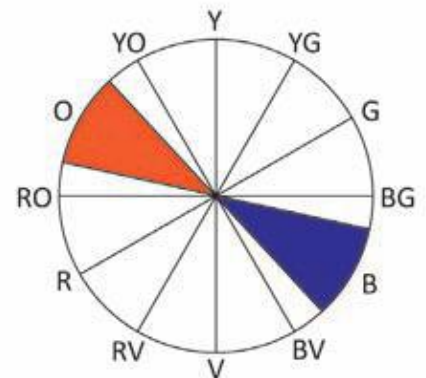




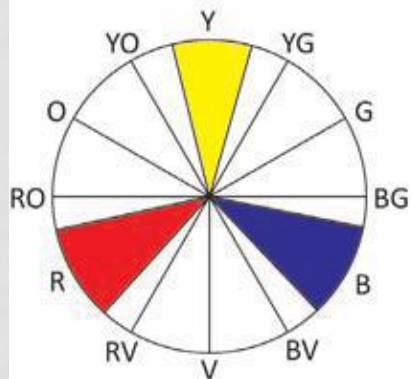
MONOCHROMATIC



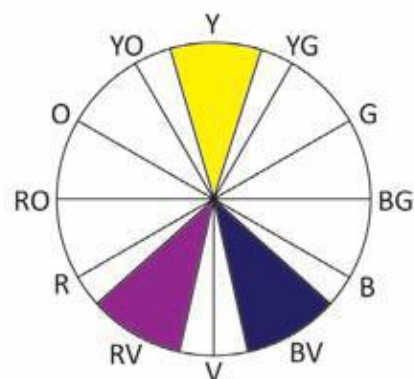
ANALOGOUS



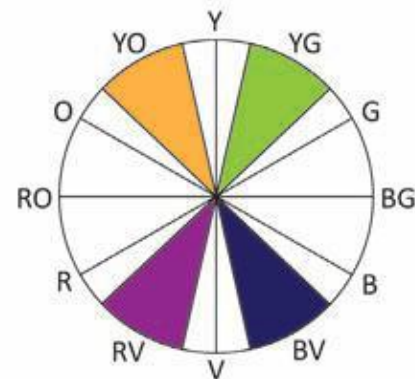
COMPLEMENTARY



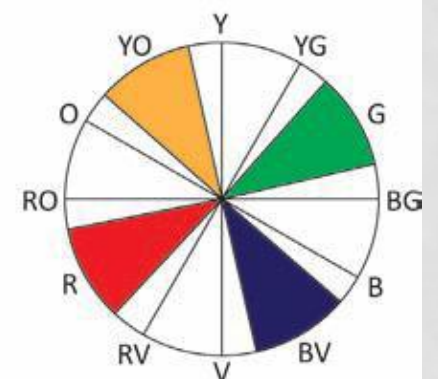
TRIAD



SPLIT-COMPLEMENTARY



DOUBLE-COMPLEMENTARY



TETRAD

COLOR SCHEMES

- **Other Color Schemes**

- **NEUTRALS**

- A simple color scheme can be created by using black, white, gray, off-white, beige, tan, or brown.
- Interiors with neutral schemes tend to visually expand a space and make good backgrounds for colorful furniture, artwork, and accessories.



COLOR SCHEMES

- **Other Color Schemes**
- **NEUTRALS**

Neutral backgrounds are advantageous in that they are flexible; it is easy to change color schemes through varying accent colors, rather than changing wall and floor colors.

The building elements of this interior are done in an off-white color scheme, with color used as accents for furniture, carpets, and paint.



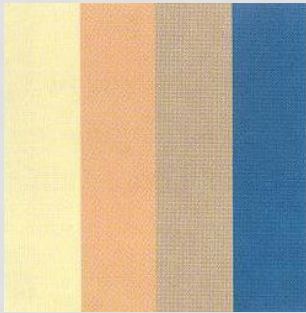
COLOR SCHEMES

Discordant Colors for Special Effect

- Some Times breaking the rules of color harmony is useful and very effective.
- So far all of the color harmony principles discussed describe fairly symmetrical color balance.
- However, perfect color harmony can be boring.
- A strong discordant color thrown into a scheme can make the design more dynamic.
- Discordant colors can also be used to make attention or to add an element of surprise.
- The important consideration is whether the color is drawing attention to the right thing at the right time.

COLOR SCHEMES

Discordant Colors for Special Effect



This kitchen on the facing page is composed of many warm earthtones. The blue accent walls provide a welcome relief to all the warm colors.



COLOR SCHEMES

Discordant Colors for Special Effect



The seat covers in this dining room provide multicolor accents which are a delightful surprise in an otherwise subdued room.

COLOR SCHEMES

Discordant Colors for Special Effect

This most unusual interior incorporates virtually every color in the color wheel. The room looks like ribbon candy, an edible fantasy.



COLOR SCHEMES

Discordant Colors for Special Effect



These discordant colors are reminiscent of high-style interiors from the 1960s. The effect is wonderfully stylized and theatrical.

Thank You!

