

CHAPTER 1

ELEMENTS OF DESIGN

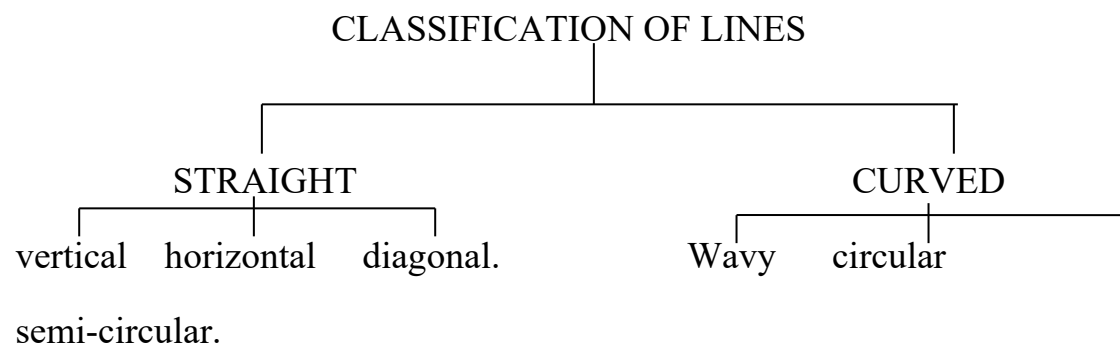
What are Elements of Design?

The elements of design are the basic components used as part of any composition, they are the objects to be arranged, the constituent parts used to create the composition itself and in most situations the elements of design build upon one another, the former element helping to create the latter, and the elements are line, form & shape, space, texture and colour.

LINES:

Lines is drawn by joining any two points .it shows its effect in the design. Lines can be straight or curved. It can be broken, continuous, thick or thin, hard or soft, dark and heavy or very faint and delicate.

Lines in any design suggest movement. Every line of any type has some meaning, it can also be straight or dotted, horizontal or vertical, curved or slanting, Zigzag or crossed or parallel. It all depends on how you draw a line and use its effects in design. Line is the key element of art.



BASIC TYPES OF LINES

1. STRAIGHT LINES

2. CURVED LINES

STRAIGHT lines is essentially just a line, with no curve. Straight lines may be drawn in different direction and are given three names, they are

a) Horizontal lines

b) Vertical lines

c) Diagonal lines.

Horizontal lines go side to side, they are straight lines that extend from side to side laying down parallel. They look like they are lying down, at rest, asleep. They suggest calm and quite, a relaxed comfort. Horizontal lines cannot fall over. They are stable and secure.



Vertical lines go up and down, they can also be used to divide space separately images into columns. They are perpendicular to the horizon. Vertical lines are strong and rigid, they can suggest stability, especially when thicker. Vertical lines accentuate height and convey a lack of movement. Which is usually seen as horizontal.

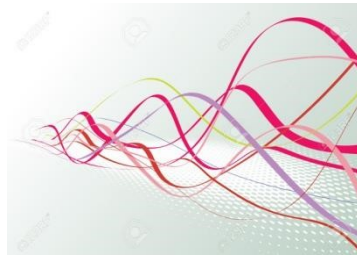


Diagonal line are unbalanced .they are filled with restless and uncontrolled energy. They can appear to be either rising or falling and

convey action and motion. Diagonal lines are more dramatic than either horizontal or vertical lines.



CURVED LINES are softer than straight lines. They sweep and turn gracefully between end points. They are less definite and predictable than straight lines. They bend, they change direction. Curved lines express fluid movements, they can be calm or dynamic depending on how much they curved. Curved lines are drawn in three types, they are wavy, circular, semicircular lines.



WAVY LINES

Wavy lines are rising or swelling in waves.



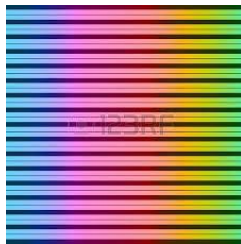
EFFECT OF LINES:

1. **Vertical lines:** they show rigidity firmness and stability.

Uninterrupted vertical lines express stateliness and dignity when vertical. In design they express qualities of alertness.



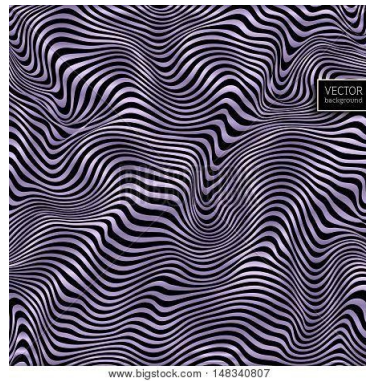
2. **Horizontal lines:** It follows the position of things at rest and suggests silence, repose and peace in design it gives a character of quietness and serenity.



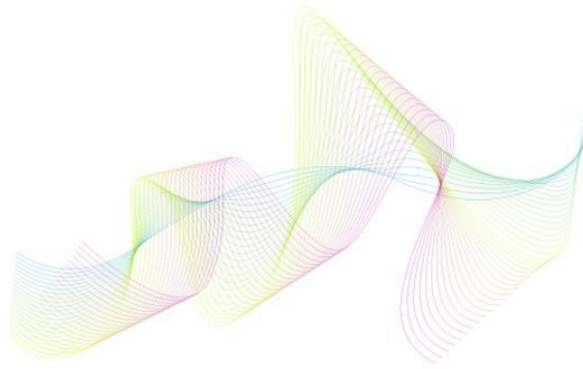
3. **Diagonal lines:** Active, dynamic diagonal lines assume the character of the direction which they most nearly approximate. As diagonals flatten out, they assume the tranquility of horizontal and consequently have a broadening effect



4. **Curved lines:** it create different moods and are considered to be more graceful, these lines are the lines of nature flowing soft and graceful.



5. **Spiraling curve:** Repeated spiraling curve in design show dynamic movement. When used all over the effect is very exhausting and confusing.



6. **Zigzag line:** Repeated zigzag lines is as disturbing as chain lightening, their movement and generally very violent and their effect vary with the angle.



7. **V-shape line:** It moves like alphabet "V" and so called v-shape line. They express increase in length, if the angle between two lines is kept less and broadness in design if the angle between two lines is more. Inverted V-shape lines gives shape effect in opposite direction.



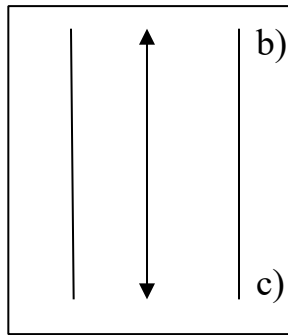
8. **Broken line:** In this type of line, vertical and horizontal lines are kept same, but their direction are changed after regular intervals called broken lines in design they are used to show the mixed effects of vertical and horizontal lines.



OPTICAL ILLUSION BY LINES:

Two identical may look different with two types of arrow on it. One looks longer than the other.

Optical illusion a) straight vertical lines



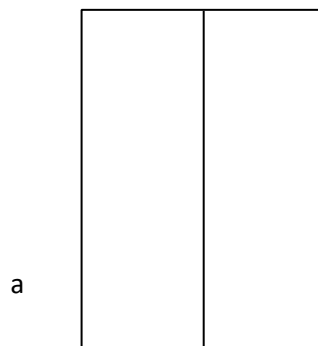
b) Downward arrow on both sides makes lines little shorter

than a,

c) Outward arrows on both sides make line looks longer

a b c Than b

(a, b): Rectangle divided by vertical line.(a) looks narrow than an identical rectangle divided by horizontal line (b).

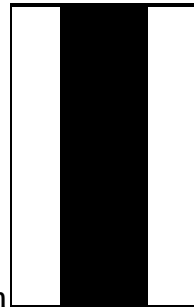
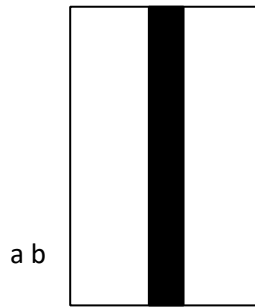


a

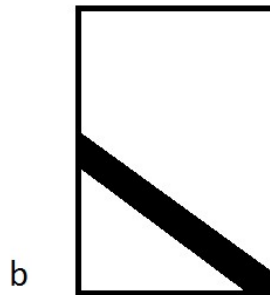
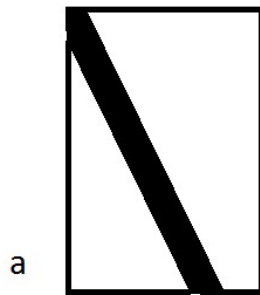


b

(a, b): In two identical Rectangles one divided with the narrow panel (a) appears much narrower than the one divided with the wide panel (b).

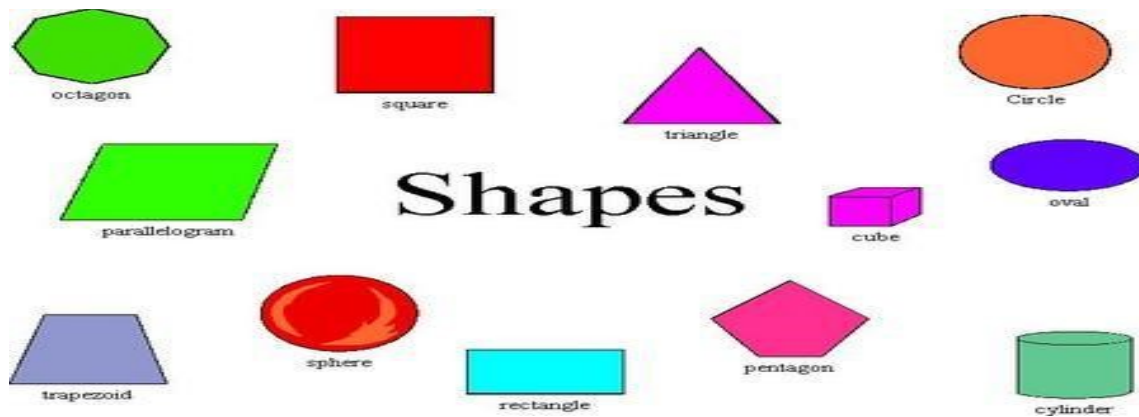


(a, b): diagonal lines with different slant when divide rectangle give different look.



Shape & Form

FORM is composed of lines of various types. The shape of an object is called form. This form may be actual or imaginary. All forms are the variations and combination of the four basic shapes the sphere, the cone, the cube, and the cylinder.



Basic types of Forms

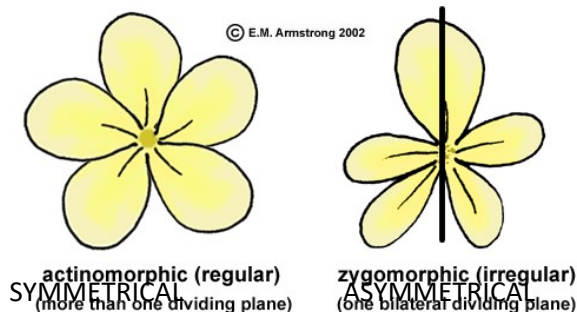
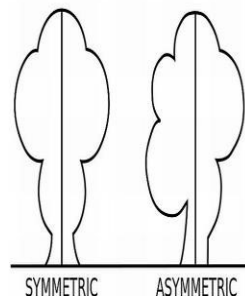
Forms or shapes may be of two types:

1. Symmetrical or regular

Have two halves which are identical. But these shapes have monotony and little creativity is exhibited through these in design.

2. Asymmetrical or irregular

Have two identical halves but asymmetrical forms are more interesting to look at and these are difficult to balance too, as shown in fig.



□ Effects of forms

Form too has symbolic meaning,

1. Square or rectangle forms shows Strength, stability and unity.



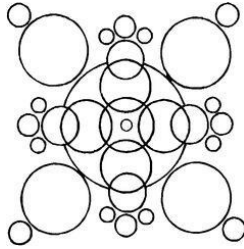
2. Irregular forms have permanence, security, evolution.



3. Oval forms designs have grace charm and creativeness in designs



4. Circular forms have fullness charm and motion.



Methods of creating different effects by forms

- 1) Monotony of design can be avoided by use of various sizes of same forms



- 2) By use of different colour combination and texture in the same form



SPACE

Space is an important element of visual design. It is the area from which a composition is made, it may be two dimensional or three dimensional. Smaller areas are usually called as shape and larger areas as space. A patterned surface is more easily named as shape then a plain area, which

is generally perceived as space .there are two kinds of space they are negative space and positive space.

POSITIVE SPACE

Positive space are the area that are occupied by an objects and forms. It refers to the main focus of a picture.



NEGATIVE SPACE

Negative space is the area in between, around through or within an object negative space refers to the background.



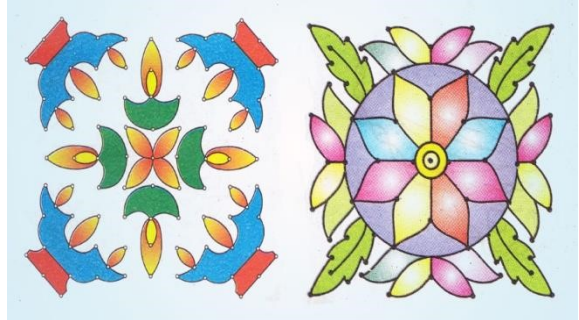
□ ADVANCING TECHNIQUE

This technique is for creating bold effect, in this technique shape should be small and completely surrounded by solid thick line and shapes should be in advancing colours.



□ FLATTENING TECHNIQUE:

This technique is for creating soft effect in it. Shape should be of neatly equal size to space. The Shape should touch each other and



should not be completely surrounded by space. Lines used to enclose the shape should be fuzzy, thin and broken. And their shape should be in receding colours.

SPACE AROUND A DESIGN:

Enough empty space to clarify the pattern is an important as the quality of the motif. pattern should not have so much space around it, that the eye leaps from unit to unit.

Always judge the arrangement of the units. To stabilize the pattern, the space around each unit must be greater. Or less than the unit itself never equal to it.

A dotted, or striped design or pattern and background equally spaced is dazzling to look at.



DIVISION OF SPACE

FORMAL DIVISION: Lines are so draw that the design space is equally divided horizontally and vertically. This division exhibits balance, unity and equality.

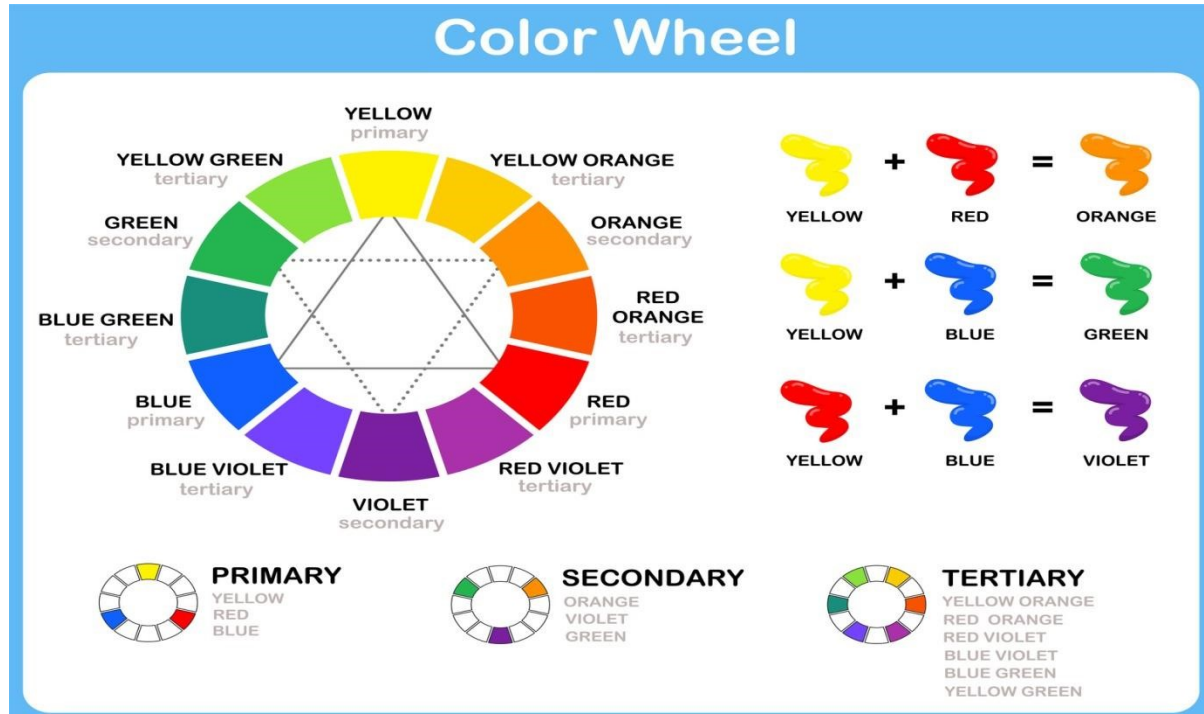


INFORMAL DIVISION: Lines are drawn to make shapes but not in a symmetrical way. But a feeling of balance is brought. This division symbolizes progress, creativity, and action.

In design one shape should lead and should be supported by all the others. A combination of varied shapes produces the most arresting patterns solid masses, such as stylized flowers and leaves combine with thinner lines such as steam .the thin lines connecting the solid shapes produce continuity of motion.



COLOUR



Colour has three properties, the first is hue, which is the name of colours. The primary hues are yellow, red and blue. Secondary colours are made by mixing two primaries. Intermediate colours are mixtures of a primary and an adjacent secondary colour.

The secondary property of colour is value, which refers to the lightness or darkness of hue

The third property of colour is intensity, which refers to the brightness or dullness of hue also called Chroma.

COLOUR AND COLOUR SCHEMES

Introduction to Colour:-

Obviously there are thousands of variations of colors but any one dye color can look quite different on two different fabrics because of the contrast in texture. Think of the difference in appearance between a piece of blue velvet and a piece of canvas in the same blue. Dyes are more like ink than they are like paint, that is why being colored they

are also transparent and will only stain a paint if sufficient coats are applied will obliterate the color underneath it. So when dyeing, you must remember that the final result will be strongly influenced by the original color of the article. For e.g. a light blue dress dyed rose red will not come out rose red but will turn purple. You can only dye to a color which is darker than the original color of the item. However because of the staining as opposed to covering properties of dye, you can have a lot of fun trying out different color combinations on both plain single color fabrics and on multi-colored patterned material.

A bright fabric can be dyed to any color but a pale color fabric may influence the new dye color depending upon how intense the original color is. A pale grey rust dyed cream will become a pale greyish-cream rust, a much better idea would be a strong red or blue.

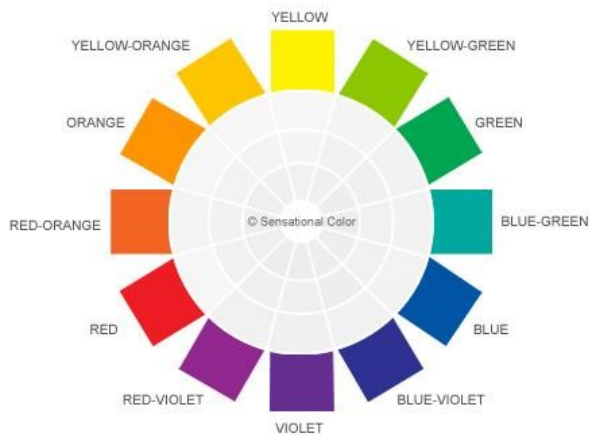
Any color can be dyed to black but don't expect a selection of different colored items to come out all looking the same black some may appear bluish – black others brownish – black, some a very dark grey.

You might be surprised to learn, that the human eye sees as many as six to seven million colors. Colours can inspire .Colours can influence .Colours can have a huge impact on our lives. It is one of the least expensive factors that can be altered in the production of clothing. It is the essence of dressing successfully, it is the first thing that others see about you & probably what they will remember about you.

Once you understand & use the magic of colours, you will be able to harness its power to look better, feel healthier & energize you and the people you meet & all of that just from colour.

To work with color, you need a system that organizes hues into a logical pattern. Such a system can help you manage any possible color combinations and determine how the colors work together. Artists color wheel is a system that places colors around a circle. Position on the wheel show how the colors relate to each other.

The color wheel:



- **Primary Colors:** Red, Yellow, and Blue are the three primary colors, the basic colors from which all other colors are made. These three colors are equally spaced from each other on the wheel.
- **Secondary Colors:** Combining equal amounts of two primary colors create a secondary color. These three colors appear halfway between the three primary colors. Blue and yellow makes green. Blue and red makes violet, which is often called purple & Red and yellow makes Orange.
- **Intermediate Colors:** If you combine a primary color with a neighbouring secondary color, an intermediate color is created. Blue and green combine to make blue – green. Red combines with orange to make red-orange, likewise yellow-green, yellow-orange, red-purple, blue-purple, colours are obtained.

There are many theories of colour, but most commonly used is PRANGS COLOUR THEORY. . Prang was a printer and developed a four-color printing process known as chromolithography in the 1860's. Prang's system was the first workable system to reproduce color in print. He is sometimes referred to as the father of the American Christmas Card. The Prang color system is most often used by artists in determining what paint pigments to mix in order to produce desired colors out of the basic primary colours.



Prangs colour theory.

The Prang color system is the basis of the artist's color wheel, and it uses red, blue and yellow as its **primaries**. This system theorizes that the three primary colors can't be produced by mixing other hues.

Secondary/Binary colour: These are orange, green and violet in the Prang system. These can be produced by mixing together two primary hues.

Intermediate colour: When a primary and a neighboring Secondary/binary are mixed, the resultant is an intermediate hue. In appearance, the intermediate hue is halfway between the two colors. There are six of these intermediate hues: yellowgreen (YG), blue-green (BG), blue-purple (BP) or blue violet (BV), red-purple (RP) or red violet (RV), red-orange (RO), and yellow-orange (YO).

Tertiary colours: When two binary colors are mixed a tertiary colour is obtained. The tertiary colors are yellow, blue, and red, much neutralized. Tertiary yellow resembles a smoky yellow, Tertiary blue is known as slate blue, & Tertiary red is the colour of old red brick.

Secondary colours	Tertiary colours
Orange + Green = (R+Y) +(Y+B)	Tertiary Yellow (Ty) (Smoky yellow) (2Y+1R+1B)
Purple + Orange = (B+R) +(R+Y)	Tertiary Red (TR) (Old red brick) (2R+1B+1Y)
Green + Purple = (Y+B) +(B+R)	Tertiary blue (TB) (Slate blue) (2B+1Y+1R)

Quaternary colours.

A mixture of two tertiary colors gives a quaternary. The quaternary colors are green, purple, and orange, much neutralized. They are sometimes spoken of as olive, prune, and buff. Quaternary green is a mixture of the tertiaries yellow and blue. Tertiary yellow (B + Y + Y + R) added to tertiary blue (R + B + B + Y) gives this sum of colors- three parts of yellow, three parts of blue, and two parts of red. The result of the mixture is green, from the predominance of yellow and blue, and it is much dulled with the red. The quaternary purple is 'a mixture of the tertiaries blue and red. R + B + B + Y and Y + R + R + B make three parts of red and three parts of blue, giving purple, with two parts of yellow to dull it. Quaternary orange is tertiary red (Y + R + R + B) mixed with tertiary yellow (B + Y + Y + R). This makes three parts of yellow and three parts of red, which give orange and the two parts of blue neutralize the orange.

Tertiary colours	Quaternary colours
Tertiary Yellow + Tertiary Red= (2Y+1R+1B) (2R+1B+1Y)	Quaternary Orange (Qo) (Buff) (3Y+3R+2B)
Tertiary Red + Tertiary blue (2R+1B+1Y) (2B+1Y+1R)	Quaternary Purple (Qp) (Prune) (3R+3B+2Y)
Tertiary blue + Tertiary Yellow (2B+1Y+1R) (2Y+1R+1B)	Quaternary green (Qg) (Olive) (3B+3Y+2R)

Dimensions of colour:-

On a color wheel, the colors are very bright and vivid. Most colors that you see around you, however, are lighter, darker, or softer than the hues on the color wheel. Just as every object has length, breadth, width, every colour has three properties or qualities of colour also known as the dimensions of colour. They are hue, value, & intensity.

a) Hue:

Have you ever owned a box of crayons that offered more colors than you knew existed, with names that were just as imaginative? A crayon might be cherry, ruby, or flame. A more precise way to describe color is with the specific names that identify them, such as red, green, and blue. These are called Hues. A HUE is the purest or brightest form of a color that have not been mixed with white, gray, or black. The difference between blue & the green is the difference in hue just as soon as green turns bluish, it has changed its hue & would be called blue-green instead of green.

b) Value :-It is the second dimension of colour, it is independent of its hue. It tells the lightness or darkness of a hue. The lighter values are called **tints** and the darker ones are **shades**. The hue may be mixed with just a touch of white or with so much white that the hue is very faint. A color that is lightened by adding white is called a TINT. The pastels of pink, mint green, and baby

blue are tints. A color that is darkened by the addition of black is called a SHADE. Navy blue is a shade of blue; brown is a shade of orange. . The hue mixed with any amount of gray is considered a TONE of the hue.



TINT



SHADE



TONE

Adding white or black to a color changes its value. Every color has a wide range of value, from very light to very dark. e.g. Red can go from a very pale pink to a dark burgundy. A value scale runs from white to black. White is pure light, black is the total absence of light, adding white lightens a colour and adding black darkens it.



c) Intensity or Chroma:-

The third dimension of colour refers to how bright or dull a colour looks, bright colors are considered more pure, they have a higher intensity as compared to pale or dull colours, For example, Chroma is considered to refer to the brightness of a color when it is compared to the brightness of another color that appears white. Bright colors are deep and vivid because they contain the most colour pigment, they are Jewel intense. Tones, such as emerald green and ruby red, are examples of high intensity colors.

Dull colors, despite the term, are not necessarily boring or drab. Colors like dusty rose and khaki green are softer, muted, or subdued. You can reduce the intensity of a color by adding grey or its complimentary color. Adding grey to yellow for example, creates beige. Like pure colors, tints and shades can also have different intensities. The pink of a rose petal can be very soft and pale, while pink nail polish may be fluorescent bright. The higher intensity hues are known as jewel tones while the pale intensity hues are called muted tones (dull colors can appear indistinguishable or gray)

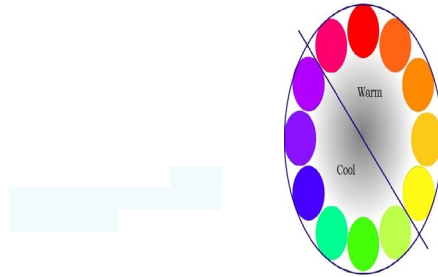


Colour Types:

Warm colours, cool colours, & neutral are three colour types. Colors have symbolism and meanings & telling us something about the personality of the wearer. As you design, it is helpful to keep in mind how the eye and the mind perceive certain colors. Sometimes colors create a physical reaction (red has been shown to raise blood pressure) and at other times it is a cultural reaction (in the N.A. white is for weddings, in some cultures, white is the color for mourning and funerals). Colors follow trends as well.

- a) Cool Colors** (calming): colors that symbolize cold temperatures are ice, water, sky i.e. blue, green and light purple have the ability to calm and soothe. Where warm colors remind us of heat and sunshine, cool colors remind us of water and sky. The cool colors have a receding effect that is, making the objects appear smaller

and farther away as compared to the objects in warmer hues. Therefore they have a minimizing effect on the body.



b) Warm Colors (exciting): Colors that symbolize to make you think of sunlight and heat, fire and make your body temperature rise, i.e. Red, Yellow, Orange (& Black). As the name indicates, they tend to give warmth. Warm colors look as though they come closer, or advance (as do).

dark colors

Mixed Cool/Warm Colors: Colors that are made of both a warm and a cool color. The symbolism of a mixed color depends on whether there is warmer or more cool used to make the color, i.e. green, Purple.

c) Neutral Colors (good for backgrounds): Colors with no strong differentials.

You may wonder why black and white are not on the color wheel. In technical terms, they are not true colors because they do not have color pigment. You see them because of what happens to light. When all the light rays are absorbed by a surface, you see the surface as black. When all the light rays are reflected from a surface, you see white.



Black and white are called neutral colors. Gray, a combination of black and white, is also a neutral color. Sometimes tints and shades of beige are being considered neutrals, but they aren't true neutrals because they have yellow or green base. Neutral colors are very useful. You've already seen how they can change the value and intensity of a color. E.g. Adding white to orange produces a peach tint. Adding gray to orange softens the intensity to buff. Neutral colors have become very popular over the past several years for their versatility and ability to pair with many other colors and materials. Gray paint color can be cool or warm **Creating a color scheme:**

Suppose a young family member puts on an orange and blue shirt with a pair of dark red pants. You might decide to suggest a color combination that is more pleasing to the eye.

Knowing what colors work well together takes an understanding of color and the differences between the many values and intensities. To make it easier, experts have identified several color scheme that can be used as guidelines. A color scheme is a plan for using a color or a combination of colors – to decorate a room or put together an outfit.

Color schemes:

Colour schemes are often described in terms of logical combinations of colors on a color wheel. Color schemes are used to create style and appeal. Colors that create an aesthetic feeling when used together will commonly accompany each other in color schemes. A basic color scheme will use two colors that look appealing together. More advanced color schemes involve several related colors in "Analogous" combination.

Related colour

schemes: a)

Similar

harmonies:

- **Monochromatic colors:** Are all the colors (tints, tones, and shades) of a single [hue](#). Monochromatic color schemes are derived from a single base hue, and extended using its shades, tones and tints (that is, a hue modified by the addition of black, gray (black + white) and white. As a result, the energy is more subtle and peaceful due to a lack of contrast of hue.



- **Analogous colors:** (also called **Dominance Harmony**) color scheme are groups of colors that are adjacent to each other on the color wheel, with one being the dominant color, which tends to be a primary or secondary color, and two on either side

complementing, which tend to be tertiary e.g. Blue- violet, Blue, Blue- green.

It is the scheme which creates a rich, monochromatic look. It's best used with either warm or cool colors, creating a look that has a certain temperature as well as proper color harmony. It lacks contrast and is less vibrant than complementary schemes.



- **Accented Neutral:**

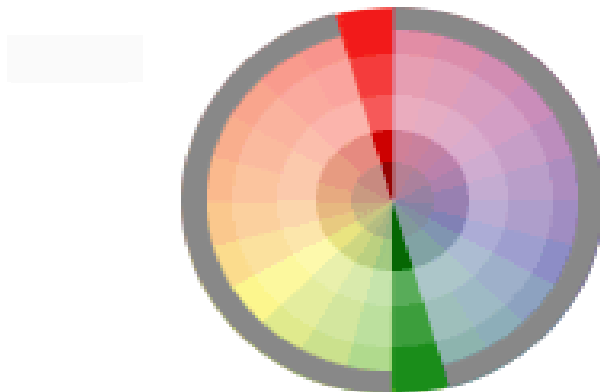
Since neutrals have no hue, they combine well with any color. Matching white, black, or grey with a smaller amount of a color results in an accented neutral color scheme. The accent color brightens up the neutral color. A gray suit might be accented with a yellow tie or scarf, or a blue handkerchief. An accented neutral scheme is more often used to create a focal point, or point of interest. The eye is drawn to the accent color, making the areas more noticeable.



b) Contrasting harmonies:

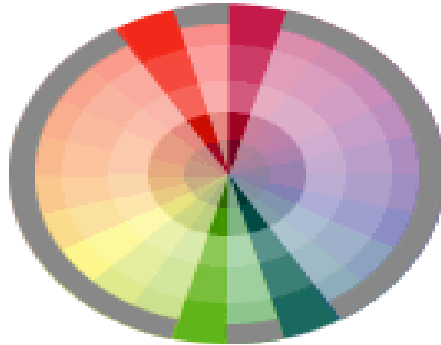
- **Simple complementary colors:**

Those colors across from each other on a color wheel e.g. Green, Red.

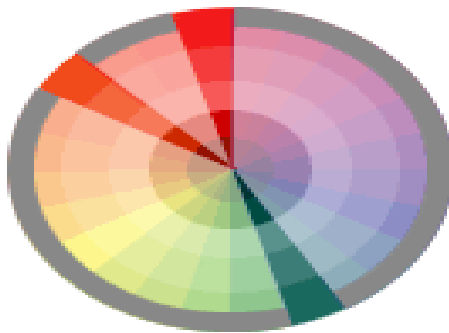


- **Double complementary:**

Two complementary color sets; the distance between selected complementary pairs will effect the overall contrast of the final composition e.g. Red, Red orange, Green, Blue green.



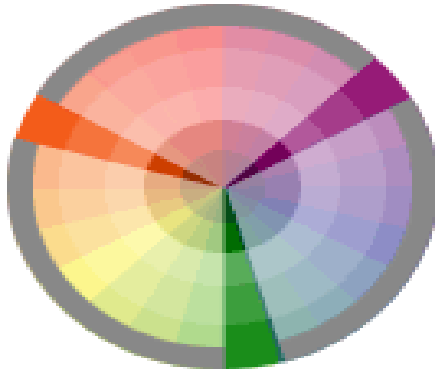
- **Split-Complementary:** One hue plus two others equally spaced from its complement e.g. Blue green, Red, Orange.



Triad color:

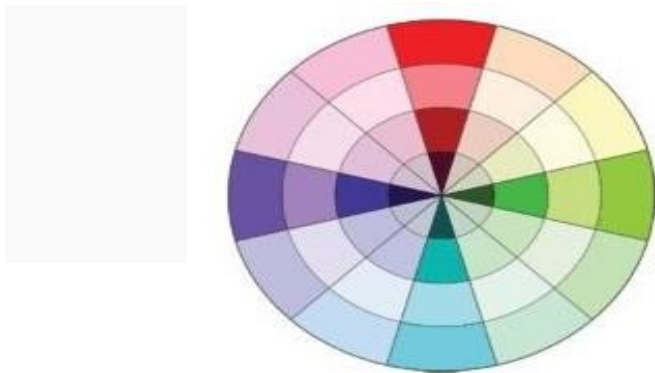
The triad color scheme uses three colors equally spaced around the color wheel. The easiest way to place them on the wheel is by using a triangle of equal sides. Triad color schemes tend to be quite vibrant, even when using pale or unsaturated versions of hues, offers a higher degree of contrast while at the same time retains the color harmony. This scheme is very popular among artists because it offers strong visual contrast while retaining

balance, and color richness. The triad scheme is not as contrasting as the complementary scheme, but it is easier to accomplish balance and harmony with these color e.g. Purple, Orange, Green.



Tetrad colors

The tetradic (double complementary) colors scheme is the richest of all the schemes because it uses four colors arranged into two complementary color pairs. This scheme is hard to harmonize and requires a color to be dominant or subdue the colors; if all four colors are used in equal amounts, the scheme may look unbalanced e.g. Orange, Yellow green, Blue, Red purple.



TEXTURE

Texture refers to the surface quality, both simulated and actual of artwork. Everything has some type of texture, things as being rough, smooth, silky, shiny, and fuzzy. Some things feel just as they appear this is called real texture and things looks like they are rough but are actually smooth texture, created to look like something it is not, is called visual texture.

