

Fundamentals

The fundamentals of two-dimensional or three-dimensional design are technique, form, and content. They are so interdependent that without any one of the three, the work seldom has any importance.

The elements and principles of order or design are quite recognizable in many works. Most develop naturally but not without effort. As artists progress (sculptors, painters, printmakers, graphic designers, architects, interior designers, etc.), the fundamentals are always apparent in their work. These basics were achieved through hard work. Technique must be mastered, form must be understood, and content must be sought.

Novice artists unnecessarily worry about style. Some are disturbed that their work is not unique enough for its style to be easily recognizable. Often a particular "look" is contrived by a beginner. This is not a good practice because it results in more of a copy than an original work.

Style refers to the particular characteristics acquired from technique, subject matter, skill, instruction and time. Seldom is a true style obtained early in an artist's career, even though the work may be of good quality. Styles are not to be aimed for artificially, but naturally acquired and evolved. As artists experience various materials and methods, and as their ideas mature, their styles will emerge. Their styles will become as natural, personal and identifiable as their own handwriting.

As a student, we study various styles and techniques, trying to find a way to approach our work and refer to many different examples of styles. In order to facilitate a beginner's work, he / she must examine many different "styles" and approaches to art through art shows and exhibitions, learning how other artists work, looking at and reading articles from art journals and magazines or perhaps the internet. The exploration into the styles, and forms of other artists helps to demonstrate technique as well as diversity of content.

To utilize the elements of design, there is an order, an arrangement of the elements that aids the artist. This arrangement is known as the principles of order or principles of design - the organization of the elements of art into an aesthetic form. Good art may incorporate all of these principles or very few of them. The more conscientiously a beginning art student works toward these principles, however, the more likely his or her earlier works are to succeed.

LINE -

A mark made by a moving point.

Functions:

*outline and form *movement and emphasis *pattern and texture *shading and modeling

*Lines outline shapes, create patterns, indicate space, and can create rhythm. Basic lines include: straight, curved, thick, thin, rough, smooth, soft, hard, rigid, and flexible. The inner quality of a line may suggest feelings and emotions.

*Horizontal lines imply foundations, dividing lines, focal points, where top and bottom meet, where background and middle or foreground meet.

*Vertical lines imply stability, and lack of movement. Horizontal and vertical lines together, are elements of stability.

*Diagonal lines provide motion, tension, and activity, as well as suggest danger, falling, and instability. In other words, diagonal lines suggest action.

*Jagged lines suggest destruction.

*Round lines often express a feminine quality.

Lines in Three Dimensional Design are referred to as Planes.

Planes are surface areas defined by abrupt variations in direction. A cylinder has a top plane, a bottom plane, and a continuous side plane (only one continuous direction). Often the word line is incorrectly used instead of plane. For example the word "lines" of a car should be called the "planes" of a car. (Line tends to be a two-dimensional term.) Though sculptures sometimes have a linear quality (shape or space defined by a thin material), they are still composed of planes, whether real or implied. Lines, if used are usually decorations placed on a three dimensional object.

Line direction and Similarity Grouping

All lines in any composition must relate to each other in some way, either by similarity or difference. Lines that tend to deviate from the upright and level by the same degree, whether or not they are close to each other, will group together because of their similarity. If a conscious decision is made to distribute lines of related direction in different parts of the composition, the result will be visual grouping that links the separate parts. The result is an integrating action that contributes to the unity of a work.

TYPES OF LINE:

Mechanical - Juan Gris (unvarying) Spontaneous-Max Beckman Virtuoso- Hokusai **Contour** (reinforced by light modeling) -Ingres, Degas, Reubens Negative, Positive, Cross, Blind, Weighted, Non-Weighted Fragmented Line - Cezanne Calligraphic Line - China, Japan, Rembrandt, Mark Toby Moves from thick to thin, determined by the gesture, which is in interplay with the instrument, media, and surface it is applied to. (varying) Lyrical- Les Fauves, Raoul, Duffy (Ease) **Emphatic** - Van Gogh, Emile Nolde (Tension) Flowering - Matisse (Airy, Lightness, Lines move effortlessly) **Crabbed** - George Groz (Short stroke, Controlled or crabbed tension) Meandering - Edouard Vuillard (meandering irregular movements contribute to atmospheric evocation) **Encompassing** - Maillol (circular lines move over the entire form rather than defining the edges) **Symbolic Implied** - Delineating Edge **Boundary** - Lines Formed By Edges Gesture- Quick strokes to capture an image quickly Actual

TEXTURE -

The actual and /or visual feel of a surface.

Everything in nature and in the man-made environment has texture or pattern.

Tactile texture

Every substance has tactile texture (which is the texture that is touchable). Visual texture that which is seen but not felt.

Types of texture

There are many textures: rough, smooth, soft, hard, shiny, dull, fuzzy, slippery, bumpy, these are only a few. Textures may be used to give emphasis and help give surfaces importance.

Texture is seen in the surface quality of the objects represented. It is inherent in the artists materials used. Ex) course chalk on rough paper. The artist's personality is seen in the manner of the work and rendered texture will vary with different personalities.

Perception of multiple units of texture-

We see similar things as making up a unit. The cornea of the eye records all leaves of a tree, but the mind groups all into units and identifies such units as wholes (closure).

Disciplined texture Pen and ink / silver point Albrecht Durer

Uniform texture

Seurat - gestural lines are applied. These build together to create a uniform texture in values ranging from very dark to almost white

Freely rendered texture Freely sketched lines with unstilted movements that seem to follow the artist's hand and eye in all directions. This uses many combinations of lines.

Texture as gesture in a rendering Becomes the handwriting of each artist.

Three-Dimensional Work and Texture

Texture as expressed in sculpture is either natural or human made. Natural texture includes wood grain, found texture of stone and the like.

Human-made texture is usually part of a planned design such as the overall structure of a surface, or the tool marks that remain. Though some textures may be visually exciting, they do not always affect the viewer's tactile (touch) reactions as they do vision. A good example is a smooth-finished stone with very active visual texture.

The tactile sensations received from touching sculpture are one of the most important aspects of three-dimensional artwork.

Shape -

Area, mass, form with a specific character and often defined by outline or contrast. All shapes in nature may be reduced to the square, circle, and triangle. Variations of shapes can be **geometric** or **BIOMORPHIC** (which means related to life or living organisms). Shapes can be altered, changed, or combined to make other shapes. The edges of shapes can either be **soft or hard**.

Shape and Sculpture (3 - D)

The Shape of Sculpture is the total of its parts. Shape can be drawn in simple terms like an outline of the sculpture and yet it contains much more. It is the total volume. Shape is how the viewer sees the sculpture, the masses of media and yet the penetrations of space through and about the work. It becomes the form that light and dark patterns are demonstrated upon. The easiest shape we recognize is the human shape.

FORM - Sometimes referred to as Form & Value

The external shape or appearance of a representation, considered apart from its color or material. This may include sculpture or 3 - d forms and the illusion of 3-d form on a two dimensional plane. Forms may be **geometric, biomorphic, or representational.**

3-D Forms have extension in every direction in space: height, width, and depth.

Forms can express feeling or emotion. Form can be regular or irregular. Symmetrically regular forms suggest unity, safety, and inner strength. Irregular shapes and form are more active. Form can be solid or airy.

Five basic forms



Value -

Lightness or darkness of an object, caused by the presence or absence of light.

The relationships between light and dark.

The lightest value that we see is white.

The darkest value that we see is black.

The strongest contrast in art is caused by black/white.

Artists use values to make contrasts. Contrast adds depth to a work of art. Without value contrast the work would appear flat. Two types of contrast are:

<u>1. High keyed contrast</u> - (light values): works with lots of white and light values. Examples: bright, sunny day, snow. This suggests the dramatic.

<u>2. Low keyed contrast</u> - (dark values): works with lots of black and dark values. Examples: gloomy day, dusk, night. These create a more even mood.

<u>3. Value contrast</u> - adds depth to a work of art. Without value contrast the work will appear flat.

Value & three-dimensional works

Value refers to the light and dark areas of sculpture demonstrated by the shadows or lack of them caused by the planes, textures, and shape of the work. Since many sculptures are monochromatic (one color), value is necessary to demonstrate the form. Lighter surfaces allow the greatest use of value since the shadows show up much better, while darker surfaces hide the more minute detail.

Value vocabulary

Continuous tone drawing - even usage of pencil values, no presence of line

Gradation - a gradual change in value, from light to dark or dark to light.

Achromatic colors - colors on the gray scale that have no hue, or color.

Cross-hatching - a system for building up tones or values by using a series of lines at various angles. **Hatching** - one stroke drawing, lines do not intersect.

Value - lightness or darkness of a color.

Tone - the general effect due to the harmonious combination of light and shade.

Shade - the value formed by the addition of black to a hue.

Highlight - the lightest spot or area in a drawing or painting, which is produced by the reflection of the source of light. It usually occurs on the crest of a smooth or shiny surface. It is a reflection of light source.

Light - light source

Shadow - opposite of light

Reflected light -

Cast shadow - light cannot pass through objects. We are actually seeing the light around an object. The higher the light source the shorter the shadow. The shadow will tell you what time of day it is. **Rule of simultaneous contrast** - lights look lighter next to darks, and darks look darker nest to lights. This creates interest or emphasis.

Value Scale - step-by-step range from light to dark. Most people can see between 30 and 40 different values.

When working with a pencil, we create the value (light & dark) by changing the amount of pressure and the angle of the pencil.

Chiaroscuro and form

Clearly defined areas of light and shadow, reflected light and cast shadow.

Reflected light_- light cast back into the shade area by surrounding surfaces, which illuminates the movement of form within the shadow.

Cast shadow - the shadow thrown by a solid object upon a nearby plane Core of darkness - establishes the division between the light and shade

Space -

Indicates areas in a drawing (positive and negative) and /or the feeling of depth in two-dimensional works of art.

Two-dimensional space

The picture plane The surface on which an artist works.

Flat space

- When **flat shapes** touch each other on the picture plane, the space seems compressed and a flatness is felt, because no depth is experienced.
- **Outlined shapes** tend to appear flat when there are no shadows or when no shading appears on the shapes.
- Flatness is produced by closely related values, colors, and pattern
- When values (darks and lights) are closely related, space appears to be flattened.
- Closely related colors (all containing one common color) will appear to be flat.
- A picture plane covered with **pattern** eliminates a feeling of depth. Repeating shapes, lines, or colors in a regular system develops a strong two dimensional feeling.

The illusion of depth in art

Overlapping flat shapes produces a feeling of depth (the third dimension)

Size variation also shows depth.

Objects of similar size appear smaller when they are farther away.

Objects **closer** to us will overlap some that are farther away.

Closer objects and surfaces are more detailed and defined than those farther away.

Objects and shapes placed higher on the picture plane seem farther away.

Deep space

The **depth or shallowness of a space** is relative. You can see depth when objects of a known size, such as mountains, seem tiny in the distance. The smaller an object appears, the deeper the space. Often objects of a known size seen in the foreground help to create the illusion of deep space because they give a **sense of scale** to the total scene.

Perspective

Linear perspective

The art of delineating solid objects upon a plane surface so as to produce the same impression of relative positions and magnitudes or of distance as the actual objects do when viewed from a particular viewpoint. It shows three-dimensional space on a two-dimensional surface, and uses lines to show depth.

Baroque artists: Correggio Tiepolo Reubens

Mannerist painters

Parmigianino Tintoretto El Greco

One point perspective

Linear perspective was devised during the renaissance and used to give the appearance of depth through receding line. Renaissance artists discovered that when parallel straight lines move away

from the observer, they seem to converge at a point in the distance called the vanishing point. The vanishing point is the place where objects seem to disappear. An example of this is train tracks.

In one point perspective there is only one vanishing point and only one side of an object is being drawn parallel to the picture plane.

Two point perspective

This type of perspective deals with objects sitting at odd angles with the viewer's eye. The receding parallel lines seem to converge at two points set far apart. Boxes or city buildings are examples of this type of perspective.

In two point perspective there are two vanishing points and the edge of an object is parallel to the vertical side of the picture plane.

Three point perspective

Aerial perspective

Based on 2 observations:

1. Air is not completely transparent and a thin ever-increasing layer of obscuring atmosphere gradually comes between the seen objects and the viewer.

2. As objects go into the far distance and appear to become smaller, the eye gradually fails to perceive individual forms and the separate facets of light and dark that makes up individual forms.

In aerial perspective values blend together and cancel out one another, leaving a general prevailing middle value, which in turn, is further obscured by the intervening layer of light colored air to become a medium light value.

*Forms blur and become less distinct

*Values and colors loose their intensity

*Texture becomes less evident

Point of view

Conventional spatial relationships change as your angle or point of view changes. This can produce dramatic or provocative spatial effects.

Birds eye view

Looking at an object from above. The size of the objects appearance depends on the distance between the object and the viewer.

Ants eye view

Looking at an object from below. Objects will appear very large.

Child's eye view

Looking up at objects, seeing the underside of objects.

Isometric perspective

Objects do not get smaller as they recede into space.

Tiered space

Levels of action placed one on top of another like the Egyptians did.

Horizon line or eye-level line

An imaginary line that represents the level of the observer's eye. The curve of the earth obscures what is beyond this imaginary line.

Vanishing point

The point on the horizon line at which parallel lines seem to converge. Located on the horizon line or eye-level line.

Using Perspective

1 Diminution

(Diminishing sizes) objects appear to diminish in size as they become more distant. This gives the illusion of depth.

2 Overlapping forms

Objects close to the viewer look as though they overlap and obscure more distant objects when they are in the same trajectory of vision. This makes the overlapping (front object) appear closer to the viewer.

3 Foreshortening and convergence

Parallel lines such as a wall or road appear to converge as they become more distant.

4 Detail and focus

Distant objects appear less distinct. Objects, which are extremely far away from the viewer often, appear out of focus.

5 Value

Distant objects appear lighter in value.

6 Intensity of color

The colors in distant objects will appear grayer or lower in intensity.

7 Color temperature

Distant objects will appear cooler than those, which are closer to the viewer.

8 Position and placement

A distant object that is on the same level with other objects is usually placed higher on the picture plane. This does not apply with various surface elevations. (Hills, valleys, or objects in the sky)

Three-dimensional space

Three-dimensional space adds **depth** to the concepts of height and width. It includes **solidity**, **volume and mass**. We are not only concerned with the object we create or view. We should also be concerned with its surrounding or **negative space**.

Space often evokes a sense of depth. Good sculpture demands space, an area about the sculpture that belongs to it that it cannot do without.

*Space - the immediate area around the sculpture that is not a mass

*Space flows through things:

*Holes in forms connect one side of the form with the other side of the form. A balanced relationship develops: space invades the form and the form occupies its surrounding space.

Shallow space:

Low relief - illusionary space. Like deep space shallow space is relative. We can often identify shallow spaces because of the shadows that are cast in them. When the light changes the sense of space might disappear and then the surface would tend to become flat.

Protrusions above any surface into the surrounding shallow space produces a roughness, or texture, that can be felt.

Depressions into any surface allow space to enter the surface; they also produce texture.

Congested space

Space that is filled with something. Lack of openness - the fullness of the enclosed area. Getting very close to some things may give you a sense of congestion. Artists may capture the sense of congestion by actually showing congested situations or by using colors, shapes, and lines in abstract or even non- objective ways, which suggest congestion.

Inside space

Space is also inside things. When we look into things many times we cannot see the inner details because the space inside looks dark or even black. This is because the light has not reached the interior space and it appears dark by contrast with the outside form. Shadows help to define the inside space curved shadows indicate a round form straight edged shadows indicate a linear form

The effect of light on space

Light is necessary for three-dimensional space to be seen correctly. If light is not present or is diffused or filtered, depth may be flattened or nonexistent. Awareness in the changes in value makes drawing and painting interior space more understandable and easier. You can see three-dimensional space most accurately when the light source (sun or light bulbs) is above or to the side of an object.

Objects throw shadows (cast shadows) that will help our eyes to read the depth and space.

Back lighting occurs when the light source is behind the object and shining at us. Back lighting tends to flatten the object.

Less light tends to flatten objects and space.

Diffused light tends to create a flatter look.

Shadows and space

Insufficient light flattens space.

Abundant light emphasizes space.

Cast shadows are caused by bright light.

Bright light causes objects in its path to cast shadows,

our eyes read the results between objects and shadows.

Shadows make things appear three-dimensional and give them form.

We sense texture and shallow relief because of shadows.

The amount of light between an object and its shadow will determine the sharpness or fuzziness of the shadow.

Subjective space

Our eyes see what is actually in front of us, but if we also use our imagination and emotions we can surpass the best camera lens in our ability to detect space.

Cubism redesigned space:

Pablo Picasso George Braque Juan grips

These artists believed that painting was not intended to imitate nature and the space on their canvasses did not have to appear like actual space in nature. They flattened space, fractured forms, experimented with color, added lines where none existed and generally reshaped nature.

Ambiguous space

*Artists who depict ambiguous space show space that is not what it appears to be. *Reflections, mirrors, distorted glass and metal show ambiguous space.

*Contemporary artists deceive the eye with line, shape and color

causing us to question whether the space is flat or dimensional. Renee Magritte, op artists

Figure-Ground Interdependence

It is difficult to see things in isolation from their surroundings. Whatever the focus of attention may be, we see it usually only within the context of a larger field of vision. In design, we make an arbitrary definition of the field. In two-dimensional design, the field may be defined by a sheet of paper or a field marked out on the sheet, or it may be defined by a canvas on a stretcher. It may also be defined by the size and shape limitations of any number of other materials. The field of action, or ground, must be considered to be important in the conception of the whole. Any action determined by an introduction of figure to ground creates an important point of emphasis, but it must be always viewed as part of the whole. The figure can have no independent existence apart from the ground. An understanding of the interdependence of figure and ground is an important first step in understanding the process of perception. The Search For Unity, Eugene Larkin

- Frame of Reference,
- Picture Plane or
- Ground
- Negative Space
- Positive Space,
- Figure

COLOR

One of the most exciting aspects of our environment. It appeals directly to our senses and emotions and is universal in appreciation. It identifies natural and manufactured things in our environment as being red, yellow, blue, orange, etc.

Neutral Color

A color not associated with a hue - (Black, White, Gray)

Hue

The common name for a color in or related to the color spectrum. Another word for color.

Primary Color

Red, Yellow, Blue - Pure color - All other colors are made through the combination of two or more primaries.

Secondary Color

Orange, Green, Violet. These are made by mixing two primaries.

Tertiary or Intermediate Color

Made by mixing one primary color and one secondary color together.

Red-orange, Red-violet, Blue-green, Blue-violet, Yellow-orange, Yellow-green.

Value in color

The darkness or lightness of a surface. Value depends on how much light a surface reflects. **Tint** - Light values of pure color. Can be made by the addition of white to a color,

Shade - Dark values of a color. Can be made by the addition of black to a color.

Chroma

The intensity of a color - The brightness of a hue.

Intensity

The brightness or dullness of a hue.

Pure Hue - is called high intensity color

Dulled Hue - is called low intensity color. Best achieved by mixing a color with its compliment.

Complimentary Color

Colors which are directly opposite of one another on the color wheel.

Red - Green

Blue - Orange

Yellow - Purple

When compliments are mixed together they make a neutral brown or gray.

When they are used next to each other they create strong contrasts.

Looking at a color for a long period of time creates after-image sensation in the eye and brain, and they appear as complimentary colors.

Color Spectrum

Band of colors produced when light shines through a prism. The prism separates the light into different wavelengths. Visible colors are always seen in the same order, from the longest wavelength to the shortest: Red, Orange, Yellow, Green, Blue, and Violet.

A rainbow displays the color spectrum. A color wheel shows the spectrum arranged in a circle.

Color Wheel

Circular chart (sometimes) of colors of the visible spectrum. Commonly used to remember color relationships when working with pigments

Warm Colors

Red, Orange, Yellow. They are so called because they are often associated with the sun and remind people of warm places, people, and things. They have the longest wavelengths in the color spectrum. They also seem to advance or come forward as you look at them.

Cool Colors

Blue, Violet, Green. They are so called because they remind people of cooler places, things or feelings. They also appear to recede.

Warm vs. Cool

Warm colors advance & cool colors recede.

Rule of Simultaneous Contrast

Deals with the contrast of related hues. For example, in a monochromatic color scheme of Blue - some of the colors will appear warmer and advance, while others will appear cooler and receding. The same is true for any other color scheme: warm, cool, analogous, etc.

Analogous Color

Colors that are closely related because they have one hue in common. They appear next to each other on the color wheel. You might even think of them as a color family. Ex. Blue, Blue-violet, Violet.

Split complimentary Color

A color scheme based on one hue and the hues on each side of its compliment on the color wheel. Ex. Orange, blue-violet, blue-green.

Triadic Harmonies

Primary, Secondary, Three colors which are located equal distances apart on the color wheel. **Monochromatic**

Made of only one color or hue and its tints and shades.

Polychromatic

All colors.

Earth Colors

Colors associated with the earth or natural world.

High Key Effects

Painting with many light or bright colors. It could have many tints, sometimes a single color, but not always.

Low Key Effects

Painting with many dark colors.

Transparent Effects

Allowing light to pass through so that the underlying layers on the surface can be clearly seen. Watercolor, Acrylic Glazes.

Translucent Color

Allowing light to pass through so that the exact colors and details of underlying layers cannot be seen clearly, but they can be vaguely seen. Glaze, thin layers of paint.

Opaque

Not allowing light to pass through. You cannot see through an object that is opaque.

Impasto

Very thick textured layer of paint.

Harmonic

The placement of color or elements of a composition in a way that is pleasing to the eye.

Chiaroscuro (Key - AH - ro SKUH - ro)

An Italian word meaning light and shadow. In 2-D art it is the gradual or sharp contrasts which make something look 3-D. It is also called modeling or shading.

Trompe Γ oeil (trump Γ oy)

French for "fool the eye" or "trick they eye". A term for painting in which objects look so 3-D that the viewer may wonder if the image is a painting or a real object.

Color Scheme

Plan for selecting and organizing color. Common color schemes might include:

- o Warm
- o Cool
- o Neutral
- o Earth
- Monochromatic
- o Analogous
- o Complimentary
- Split-Complimentary
- o Triadic

Optical Color

Color seen by the viewer due to the effect of atmospheric or unusual light on the actual color. Successive, Simultaneous, Color Constancy (afterimage).

Arbitrary Color

Color chosen by the artist to stand for an idea or express an idea.

Decorative Color

Color which is chosen to fit a purpose. For daily living these may be chosen to give a restful background.

Impressionistic Color

Looks like shimmering light, usually no black is used.

Color in Sculpture

Color in sculpture usually is a natural aspect of the medium, such as a natural wood colors or clay colors. Sculpture takes up real space; so human-made color is not a necessity as it is with illusionary painting. Sculptors will often intermix media of different hues to create color, rather than resort to paint. Some sculptors add surface color to enhance a medium such as ceramics or steel. Caution must be exercised, however, so the natural beauty of the media is not destroyed.