Additional Information

Elements & Principles of Design

Principles are guidelines for producing good artwork. Elements are the components you can manipulate to achieve the principles of design.

A typical list of elements/principles might look like this. For the purpose of this text I won't get into all of them this time ^_^.

Elements

- Line
- Shape
- Form
- Value
- Color
- Texture
- Perspective
- Space

Principles

- Unity / Harmony
- Variety / Contrast
- Balance
- Emphasis / Dominance / Focal Point
- Scale / Proportion
- Repetition
- Pattern
- Rhythm
- Movement
- Economy

Elements

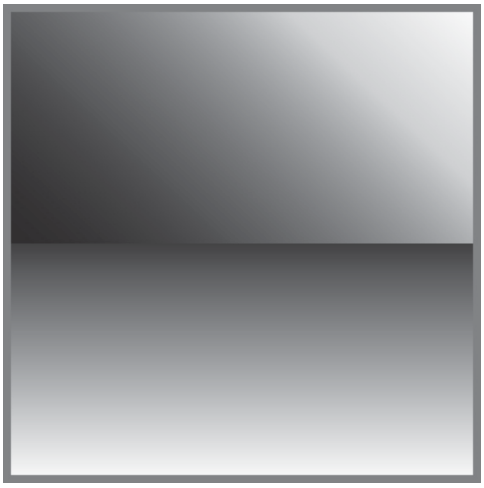
Some properties are universal to all elements.

Scale is the independent size of an element whereas **proportion** is size of one element relevant to another.

Location is the placement of an element on the picture plane… we'll revisit that in just a moment.

Line

Line - In art terms a line is the result a moving point across the picture plane.

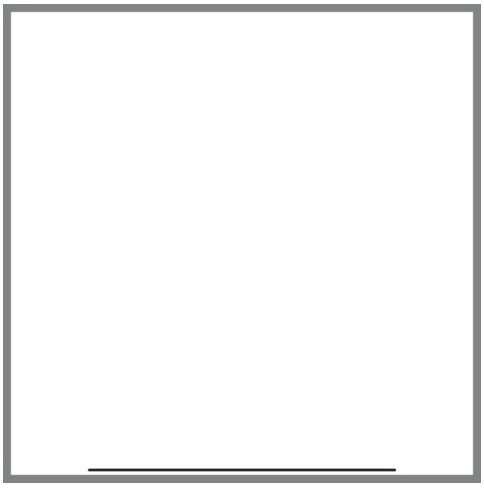


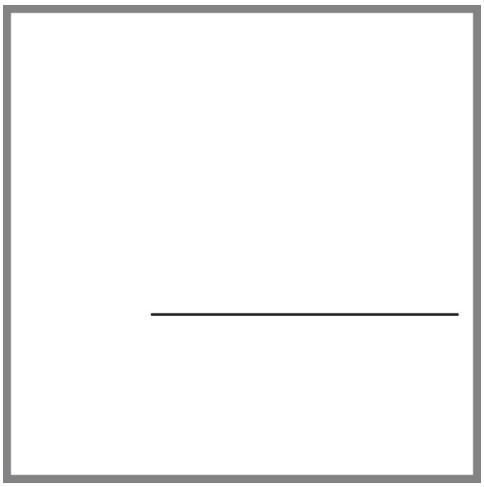
In real life there are practically no lines although we perceive them as the gestalt effect of a series of points, or, as in the case above the difference between two different areas. There is no horizontal line across the middle.

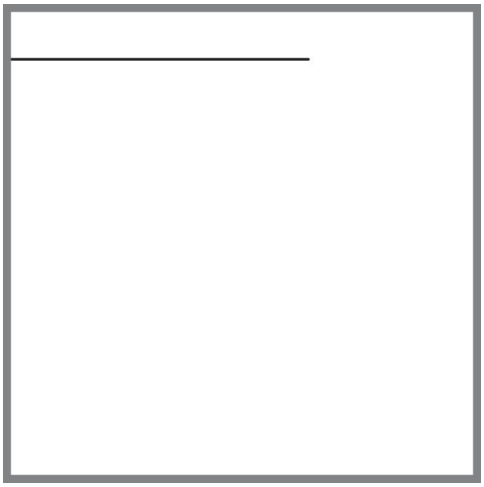
The following are properties of a line…

Location

Location - location is where a line is placed on the picture plane.

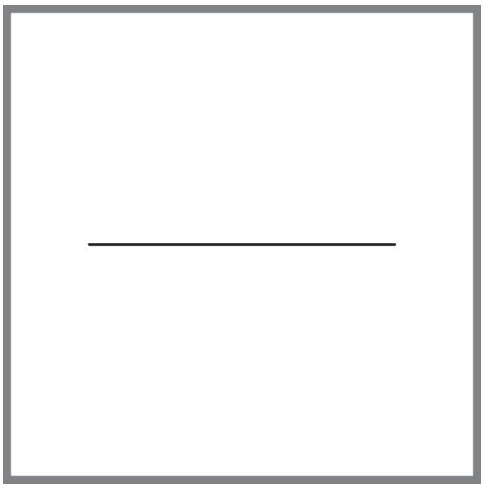




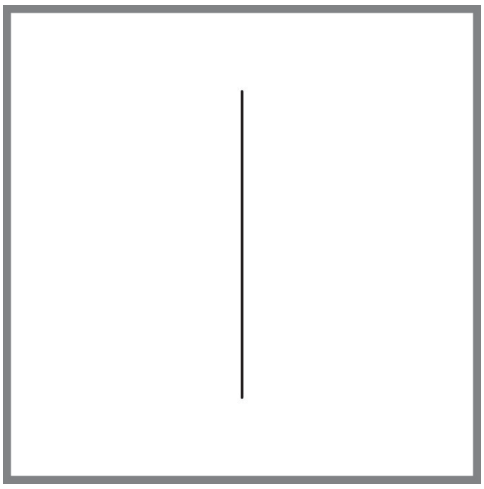


Direction/Slope

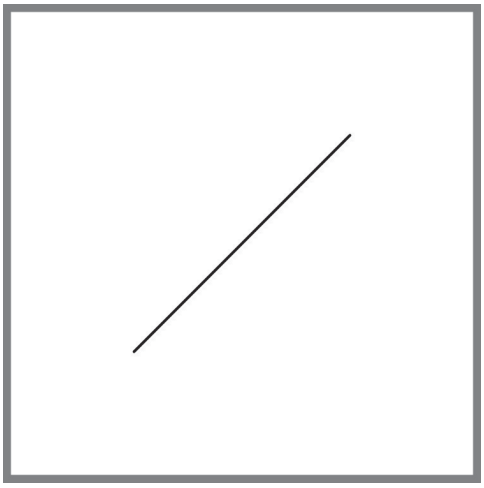
The general direction of the line within the picture plane



Horizontal lines convey absolute stability & rest.



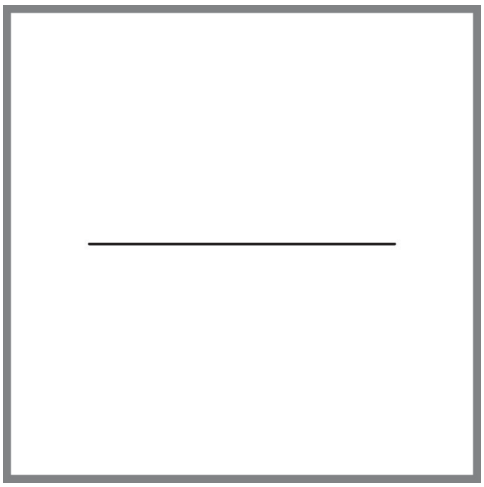
Vertical lines convey stability & (possibly) power.



Diagonal lines convey dynamism, movement or potential movement.

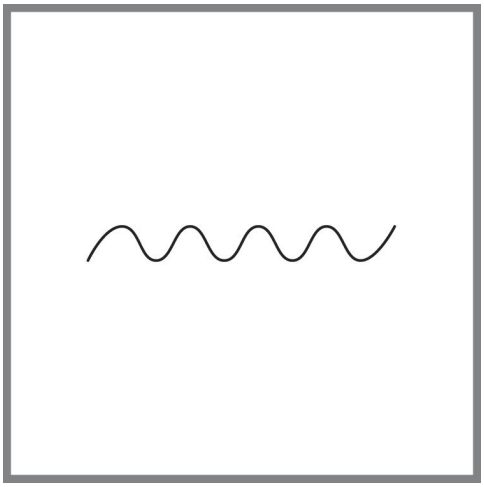
Type

Type of line indicates smaller scale directional changes or the lack thereof.



Straight

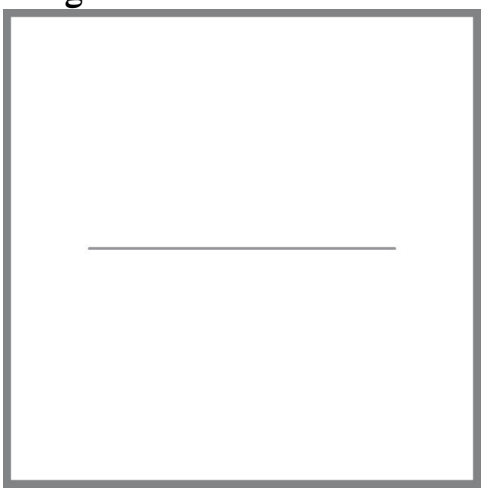
Rectilinear - Straight lines with sharp corners e.g. zig-zag.

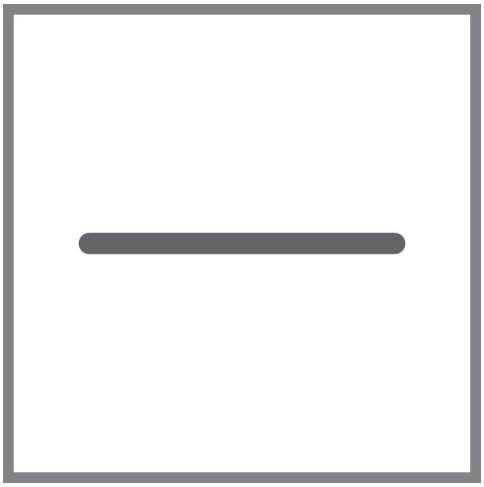


Curvilinear - Curved lines with no corners .e.g. wavy.

…& combinations thereof.

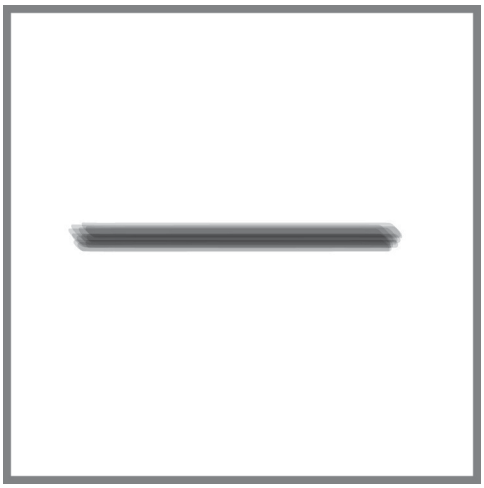
Weight





Strictly speaking, line weight is just the thickness of the stroke - although with many media a thicker stroke is created by applying more pressure & therefor results in a darker stroke as well.

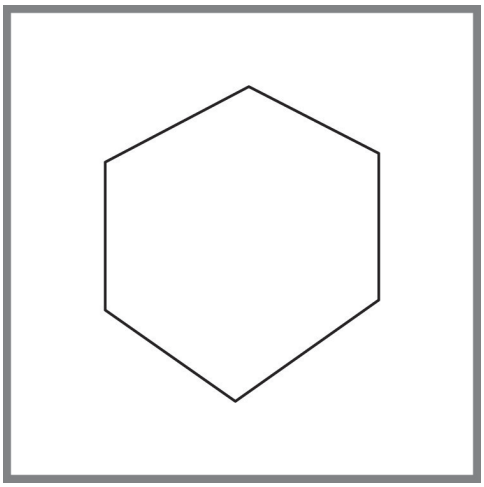
Character



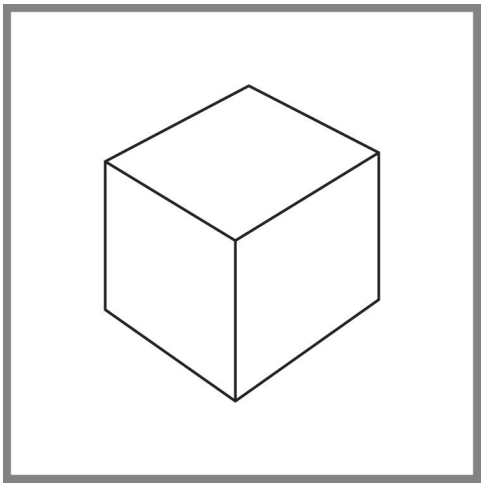
In analogue terms character refers most directly to what tool was used, which can effect the edge quality, texture, & opacity of the stroke.

Functions of Lines & Types of Mark Making

Contour

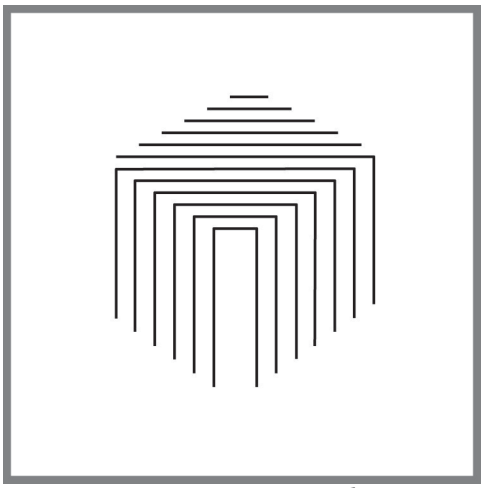


The Contour of a given object defines its outermost limits.



Contour Lines could also define different areas of a given object, such as the faces of a cube.

Cross-Contour



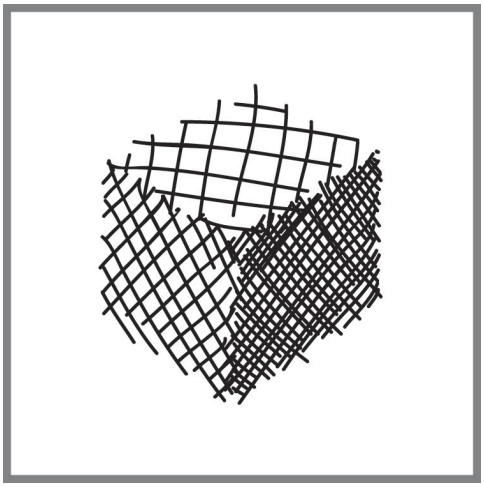
Cross-Contour Lines travel across an object, changing direction as they traverse shifting

planes. To get an idea of what cross-contour lines would look like on an organic form you could imagine rope or fishnet wrapped around it.

Hatching

Hatching lines occur as as series of approximately parallel lines. Hatching is one of the most common ways of creating varied value through line.

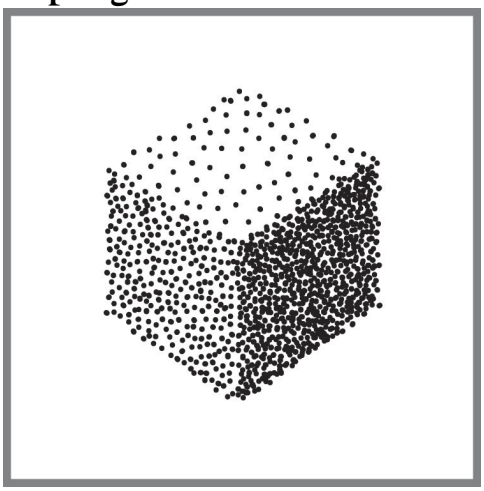
Even though these hatching lines don't continue from one face to the next you might still think of them as cross-contour.



Hatching in opposite directions creates cross-hatching. Note that the directions of lines corresponds to the angle of the face they are drawn on.

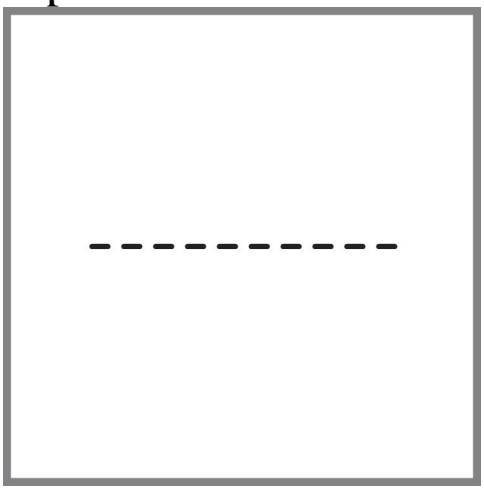
There are multiple variations of hatching.

Stipling



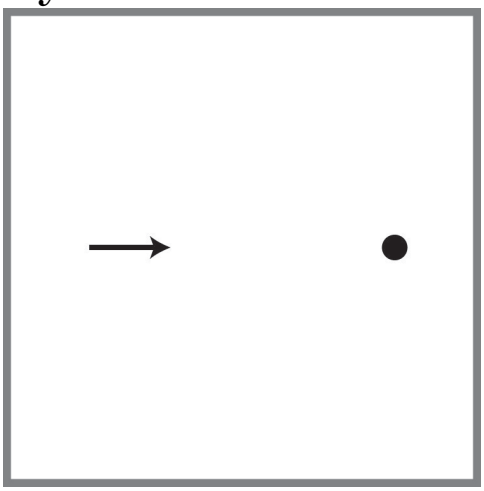
Stippling creates value by applying pointed marks in various density.

Implied



Implied lines aren't actually drawn out, but inferred. What you are seeing is a series of short lines but what you perceive is single dashed line.

Psychic

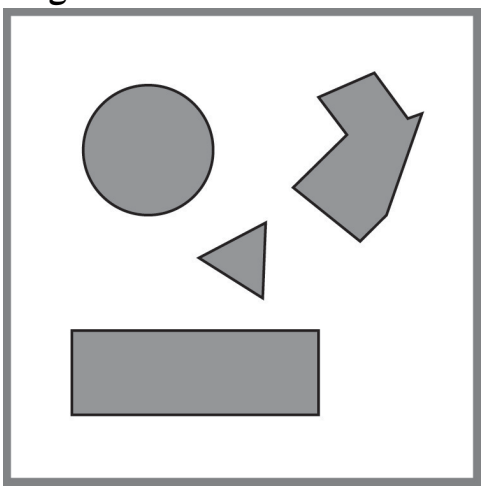


The path your eye follows between the arrow the dot is an example of a psychic line. Psychic line is a type of implied line.

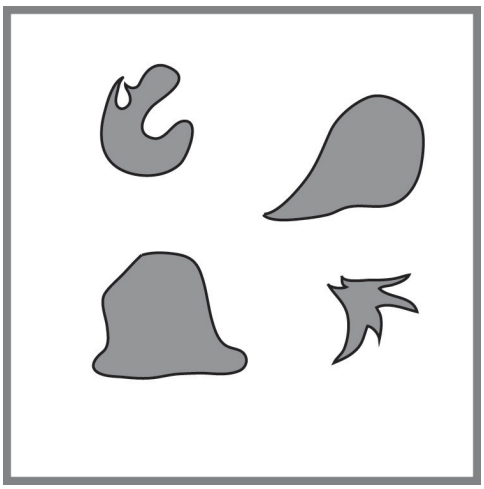
Shape

Shape - Through the gestalt effect a mass of colored points are interpreted as a single entity.

Organic v. Geometric

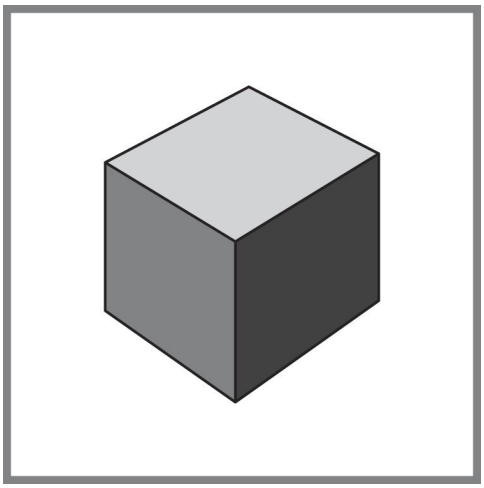


Geometric shapes are generally made with rectilinear lines. They may be hypothetical or appear artificial.



Organic shapes are generally composed of curvilinear lines & appear to be more naturally formed.

Form



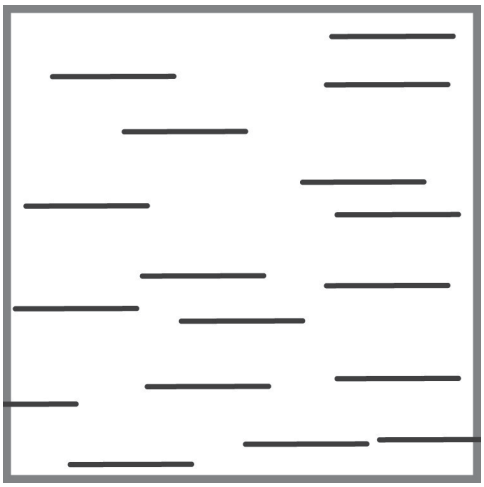
Form is like shape, except that the gestalt is interpreted as a three-dimensional object.

Principles

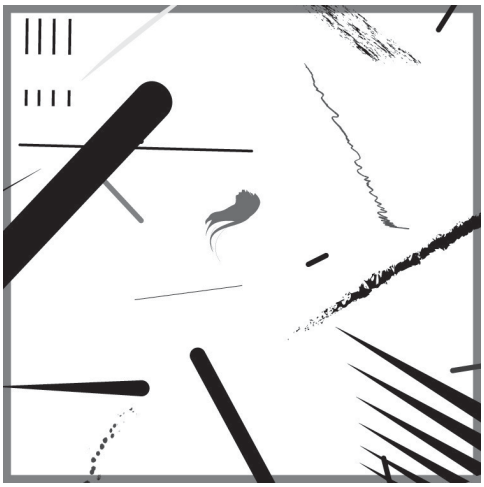
The creation of a successful artwork boils down to creating a balance between unity & diversity of elements.

Generally speaking, if your artwork appears incoherent or unintentional, choose a property of an element to conform throughout the piece. If the artwork is not stimulating, choose an element to vary.

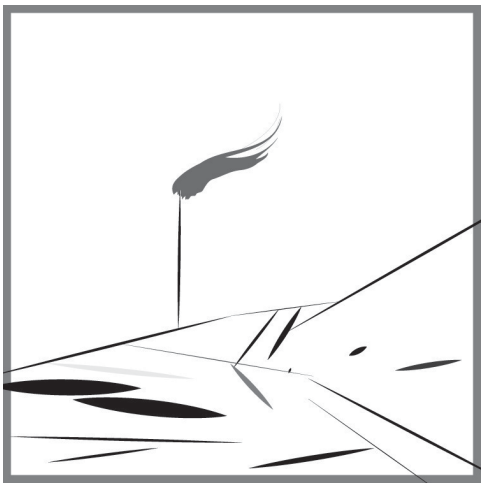
Unity vs. Variety



Unity is the principle that elements should be cohesive (i.e., look like they belong together in the same picture). Generally this is achieved by making elements more similar to one another. Sometimes this is called harmony, but harmony has additional connotations of calm/serenity. E.g., if this picture were composed of diagonal zig-zag lines it could still be equally unified but it wouldn't be as harmonious. Completely unifying an image runs the risk of making it too boring.



Variety is the principle of varying elements in order to produce stimulation. Technically this picture could be more varied. It's already somewhat unified in the sense that it is composed entirely of lines, & that it is monochromatic (grayscale). It's also somewhat unified in the sense that the degree of variety is almost unanimous. In any case the variety here creates more stimulation, but the result seems somewhat incoherent & random.



This image has approximately the same number of lines as the first two. The variety of grays has been preserved from the previous picture. Now there is a balance between variety/unity of line characters & of direction. The location of most lines has also been shifted toward the bottom except for two, creating an emphasis on the one vertical line, the line with the unique character. There is some additional stimulation unrelated to variety in the sense that the gestalt may appear to reference something from real life.

While these examples only dealt with line, any visual artwork can be considered according to the unity or variety of its various elements. If your work appears too incoherent, make some of the existing elements more similar. If the work is too monotonous consider how you might vary existing elements.

Color Schemes/Groups

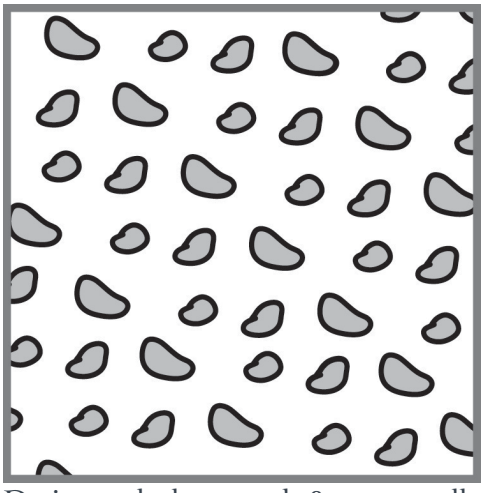
There are many options for unifying color in an artwork according to its properties.

- Hue - I recommend this website: http://mudcu.be/sphere/# From there you can pick a color & see multiple others that can be paired with it. Note that the color wheel there is always keeping the saturation/values consistent. It is also possible to choose a color scheme & then afford different saturations/values to different hues within that scheme - although you may not need to worry about it as the program you use might render different values, e.g. depending on lighting. If you want to experiment with colors on your own, here are some different schemes that can be used with a traditional color wheel.
    - Monochromatic - Tints tones & shades of the same color.
    - Analogous - Three adjacent hues.
    - Triadic - Three equidistant hues
        - Primaries - Blue, Red, Yellow
        - Secondaries - Orange, Purple, Green
        - Tertiaries
    - Complementary - Opposite on the color wheel. Mixing two such hues reduces saturation; producing a neutral gray.
        - Split Complementary - A hue & the two hues adjacent to its complement.

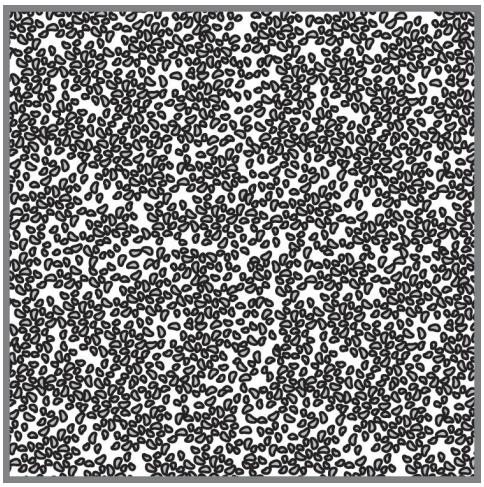
        - Tetradic/Double Complement - A pair of two complements. Forms a rectangle on the color wheel.
    - Warm/Cool Colors - A given color also appears warmer as a function of its value & saturation & vice versa.
        - Warm Colors - Generally Red to Yellow
        - Cool Colors - Generally Blue-purple to Blue-Green
    - Soloist - Limited use of a single color which is outside the dominant color scheme. Useful for creating a focal point.
- Saturation - Using a limited range of saturations.
- Value - Using a limited range of values.

Repetition

Repetition is great because with some slight changes it can simultaneously create both unity & variety.



Do it regularly enough & on a small enough scale within a composition you'll have a **pattern** (an element).



Keep shrinking/repeating enough & you'll end up with a **texture** (also an element). This is an example of a visual texture - you can't actually perceive it with with yours sense of touch. When you are working with 3D modeling you might differentiate visual texture from simulated texture, as even though your perception may be visual the program is simulating a surface quality. Actual texture is texture you can perceive with your sense of touch, e.g. a piece of sandpaper.

Rhythm is a phenomenon whereby repetition creates a sense of movement/undulation.

Economy

Economy is principle of 'not trying to put too much' into a single piece. Every addition to an artwork either adds to or subtracts from the total quality of that work. If there are too many concepts, they may end up competing with one another.

Effects/Phenomenon

There are other effects/phenomenon which may add stimulation but are not strictly necessary.

Working representationally can also be used to create stimulation. Representation may be a lifelike depiction or even just a phenomenon from real life applied to an abstract/non-objective composition.

Space is the sense of three dimensional space created in a two dimensional work.