Architecture & Town Planning

Lecture 1:

Introduction to Architecture
Principles of Architectural Design
Elements of Basic Design

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Architecture

What is Architecture?

Architecture is the art, science, and profession of planning, designing, and supervising the construction of new buildings, landscapes, communities, and furnishings in their totality, examining their environment in accordance with the principles of utility, strength, and aesthetics.

Other Definitions of Architecture

- **Architecture** is both the process and the product of planning, designing, and constructing buildings or any other structures. Architectural works, in the material form of buildings, are often perceived as cultural symbols and as works of art.

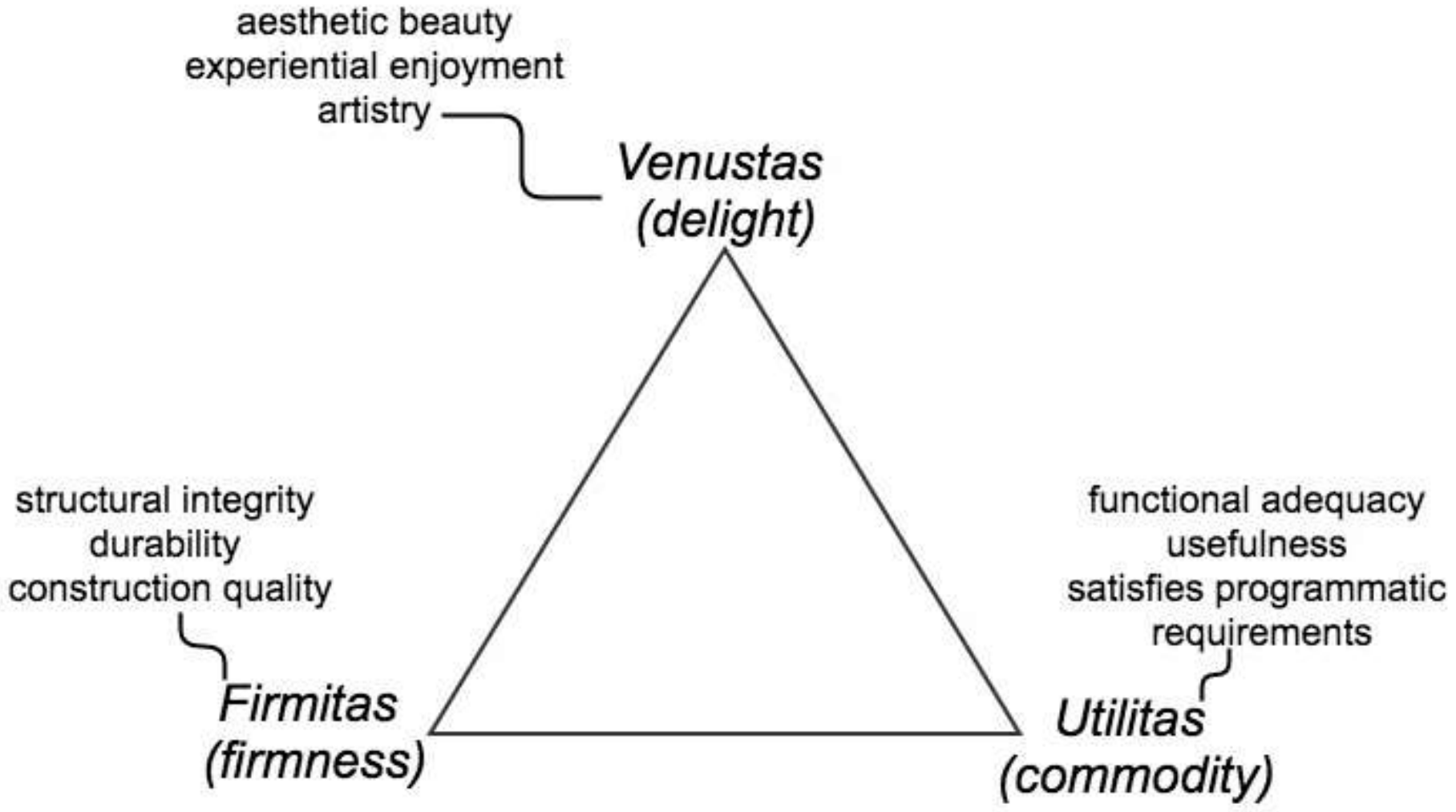
- Architecture provides a sense of place and support of all types of human activity.

- Architecture helps the man-made fit in harmony with the environment while promoting health and well-being, enriching lives aesthetically and spiritually, providing economic opportunities, and creating a legacy that reflects and symbolizes culture and traditions.

Other Definitions of Architecture

- The selection of forms, shapes, materials, texture, color, etc. for a structure to make it look elegant and beautiful is called Architecture. It tells us how to provide support to the building economically from the point of view of materials as well as of space.
- It makes use of applied services such as structural engineering, sanitation, hygiene and ventilation, etc.
- It utilizes proper materials at the proper places and in appropriate form.

Principles of Architectural Design



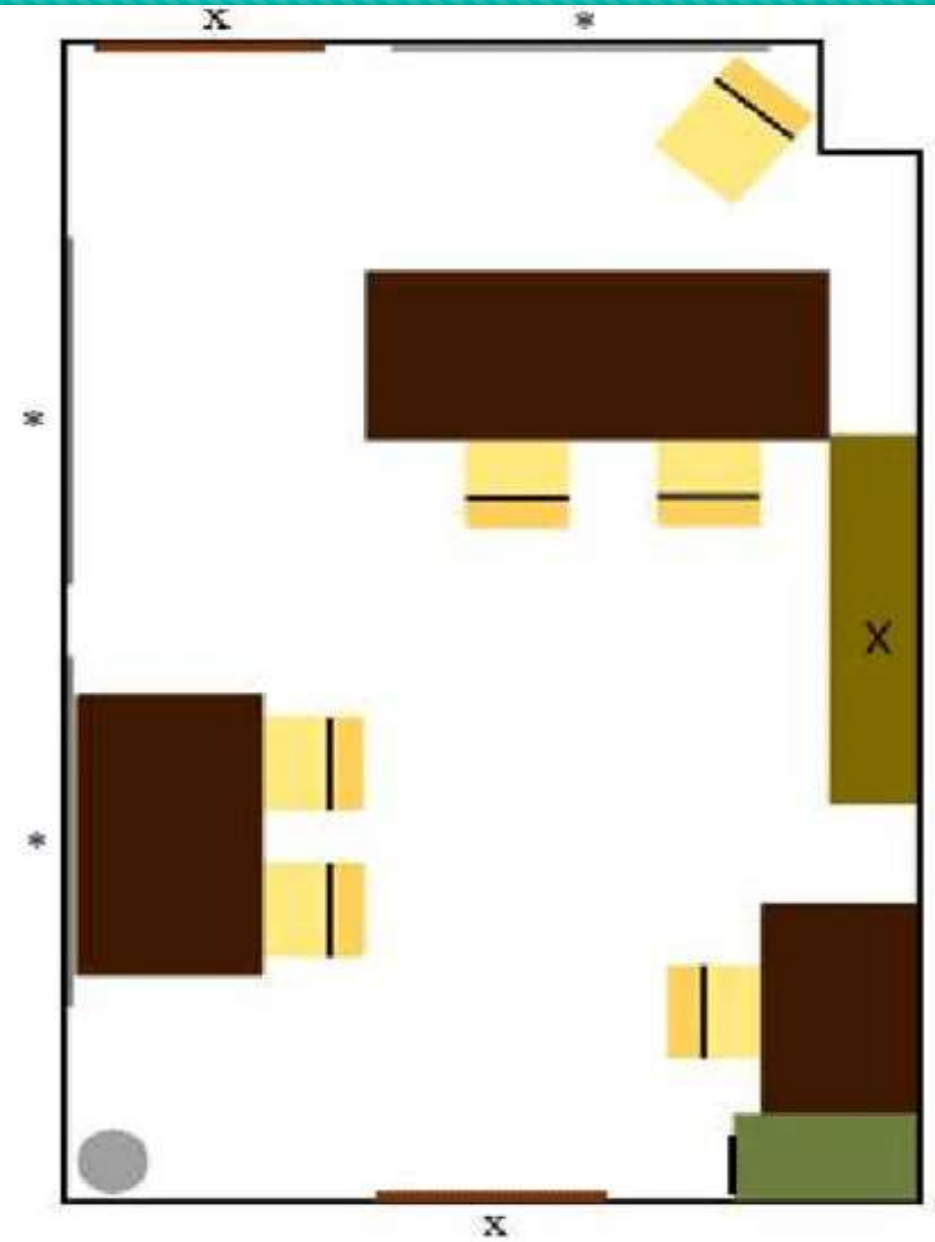
Delight (Example of Beauty in old Buildings)

Delight (Example of Beauty in New Buildings)

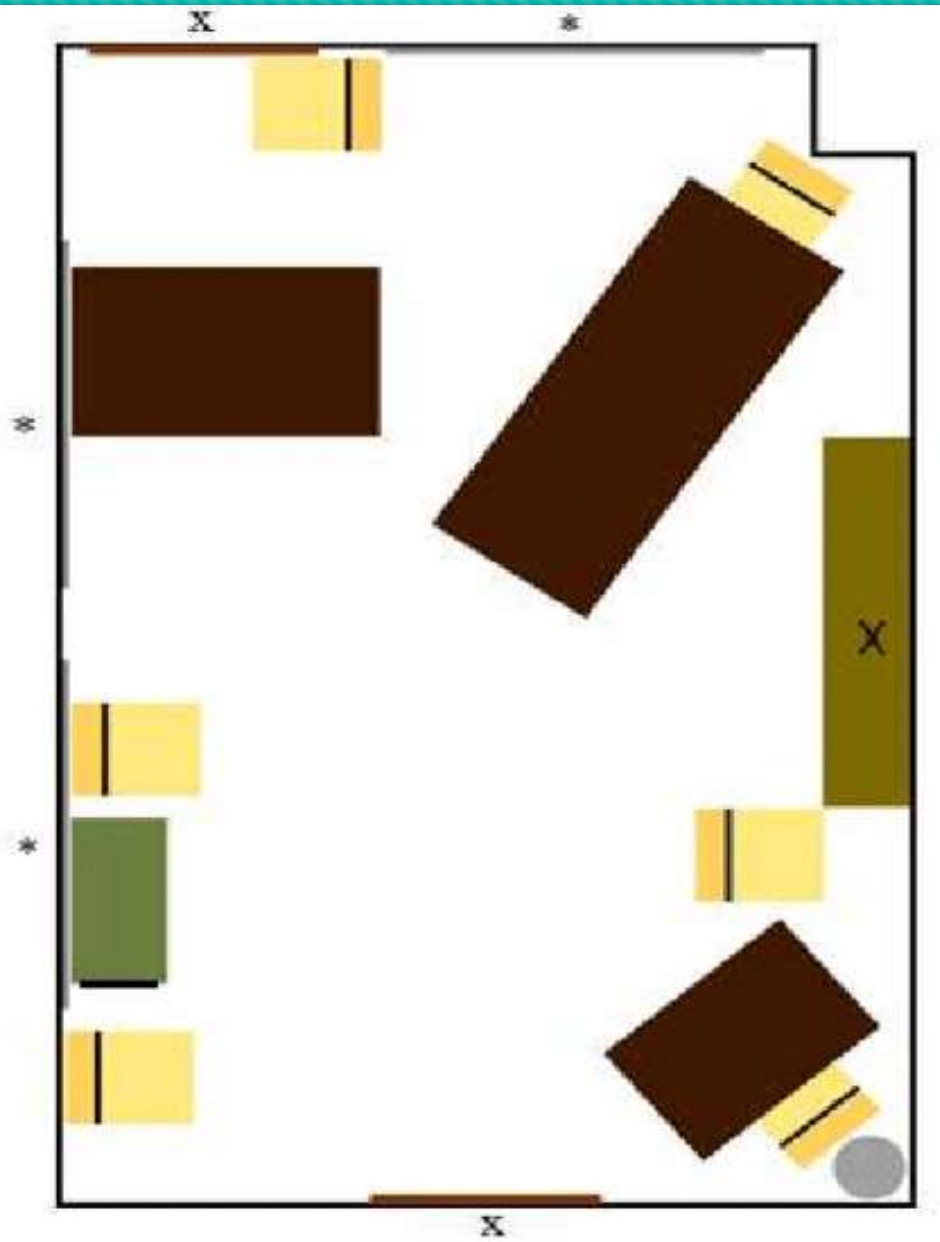
Falling water by Architect Frank Lloyd wright

Firmness (Example of structural stability Buildings)

Commodity (Example of Room Layouts)



Functional Arrangement



Non-Functional Arrangement

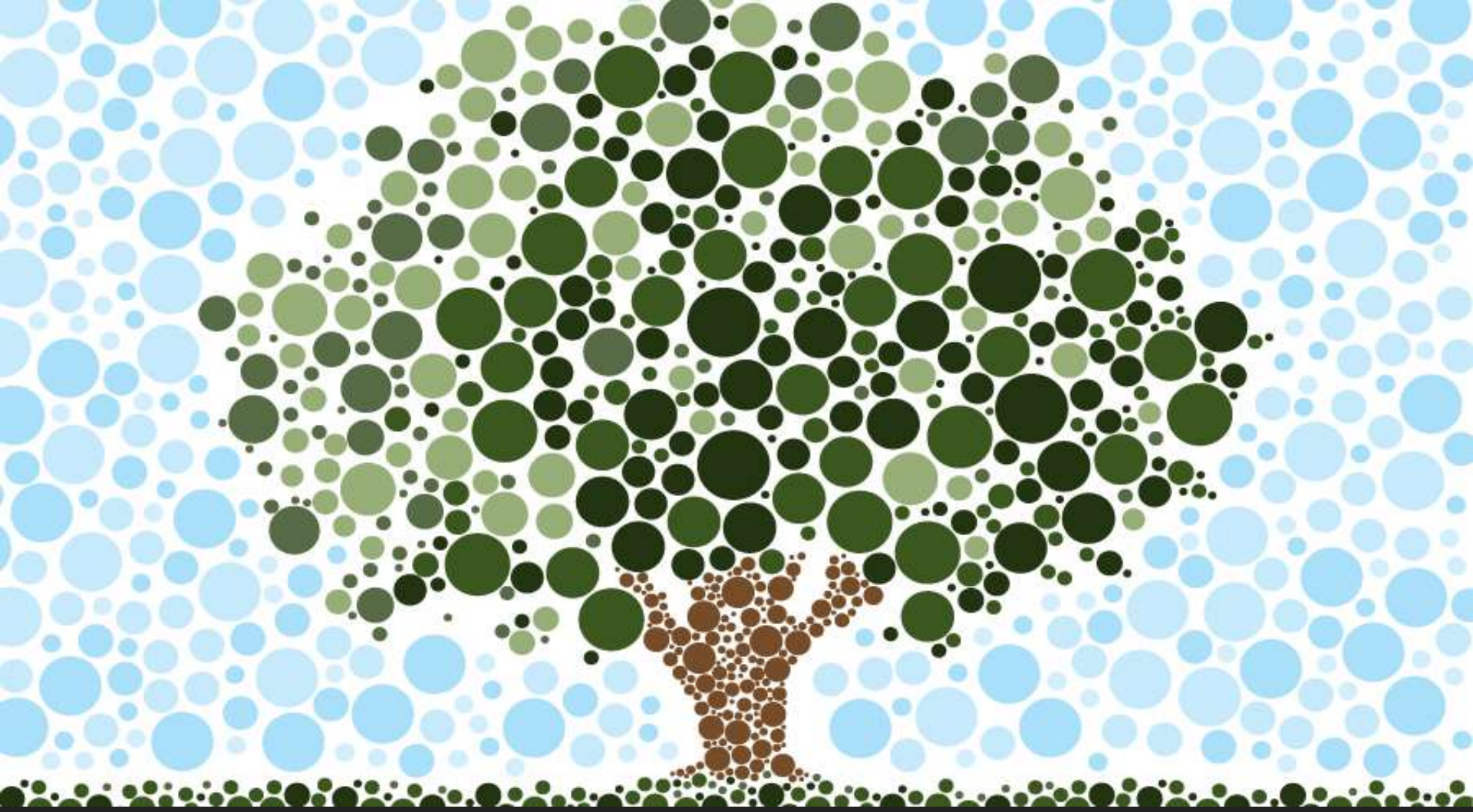
DESIGN ELEMENTS

Design elements are the things we actually use in a design.

Elements of Basic Design

- Point
- Line
- Shape
- Form
- Space

- Size
- Color
- Value
- Texture



Point

A point marks a position in space. A point is a pair of x, y coordinates in space, without dimension or area. It has no mass at all. Graphically, however, a point takes form as a dot, a visible mark. There are about 70 points in 1 inch

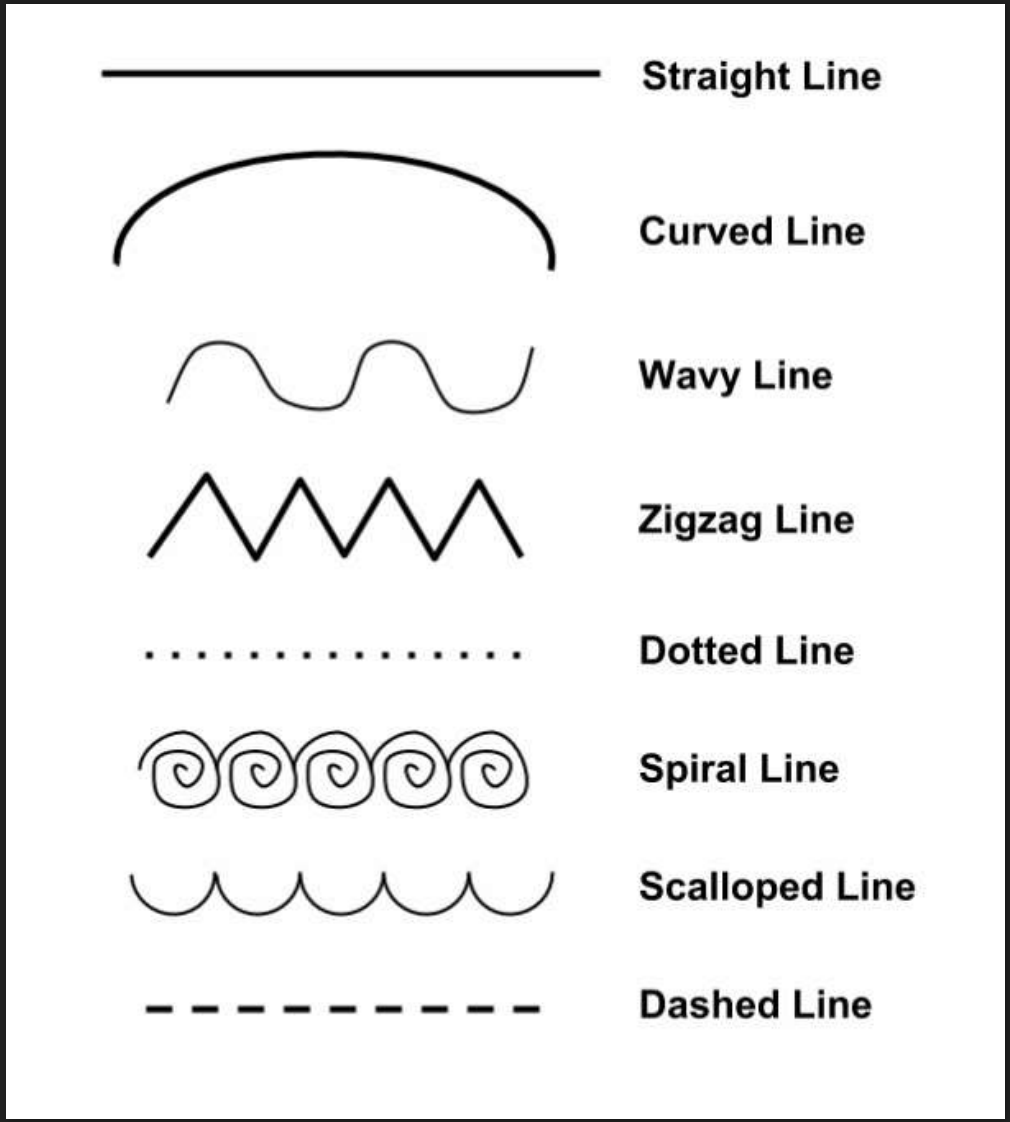
Line

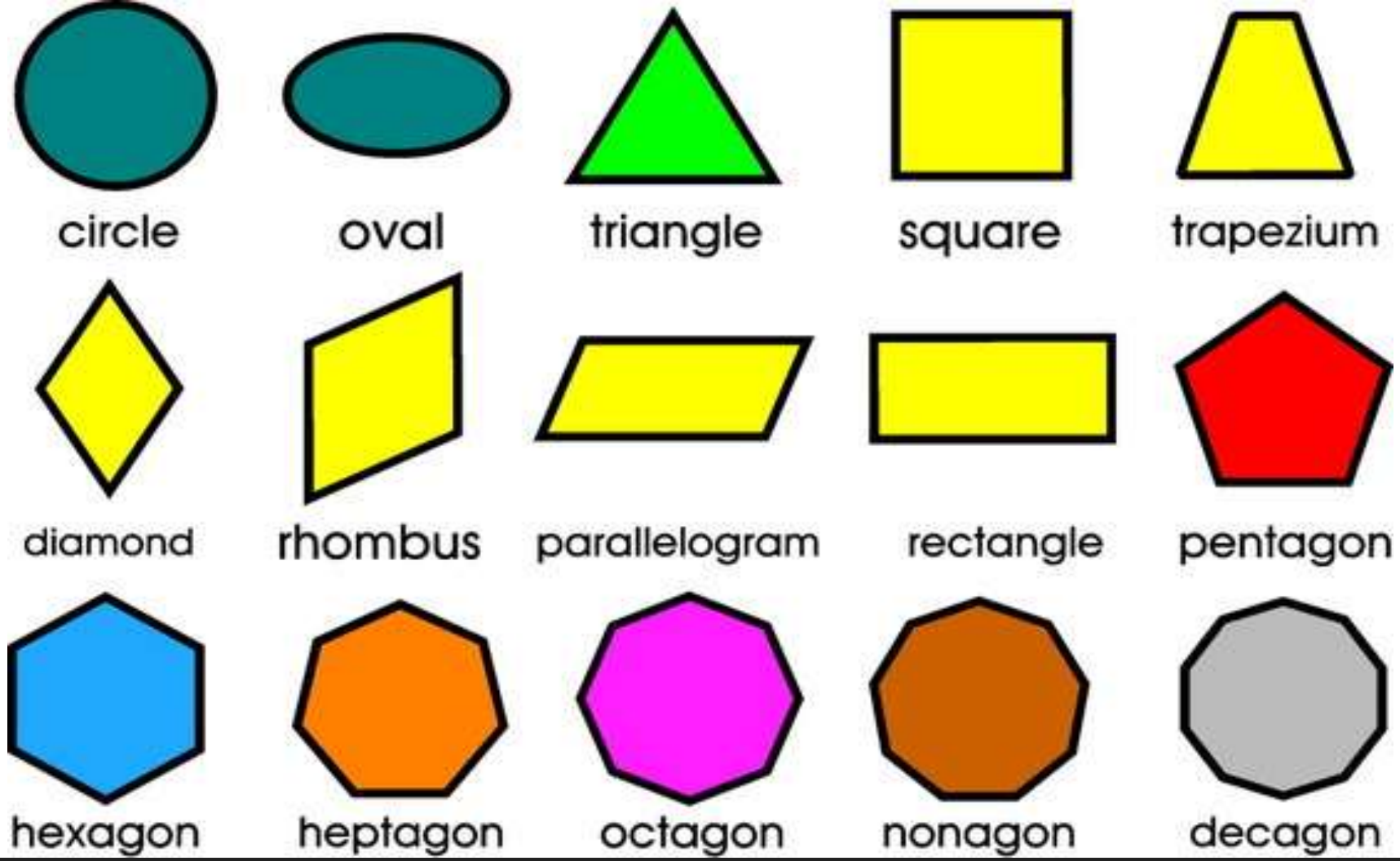
Line is a mark between two points or series of adjacent points. Lines can be used for stressing a word or phrase, connecting content to one another, creating patterns and much more. They have one dimension. Dots attract attention and lines are about movement and direction.

Types of Line

There are various types of lines.

It can be straight, squiggly, bent, curved and more.

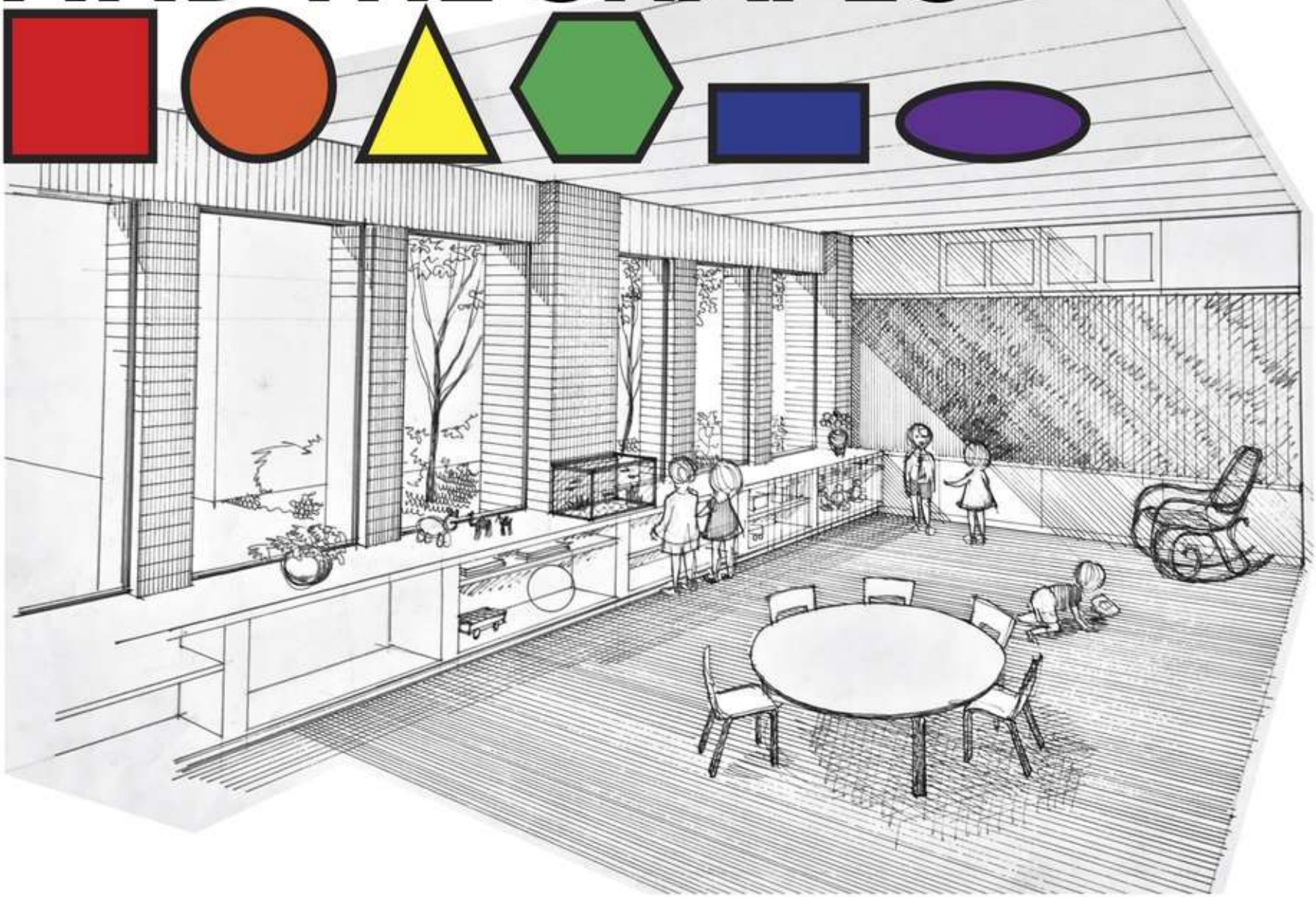




Surfaces/ Planes/ Shapes

Height + width = shape. Each is essentially a flat object without depth. Odd or lesser seen shapes can be used to attract attention. Shape is two-dimensional and comes in many types and sizes.

FIND THE SHAPES



Types of Shapes

There are three basic types of shapes

GEOMETRIC

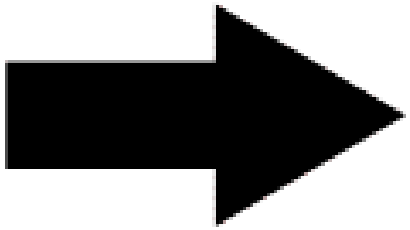
- Triangle
- Square
- Circle
- Rectangle

NATURAL/ ORGANIC

- Leaves
- Animals
- Trees
- People

ABSTRACTED

- Icons
- Stylizations
- Graphic representations

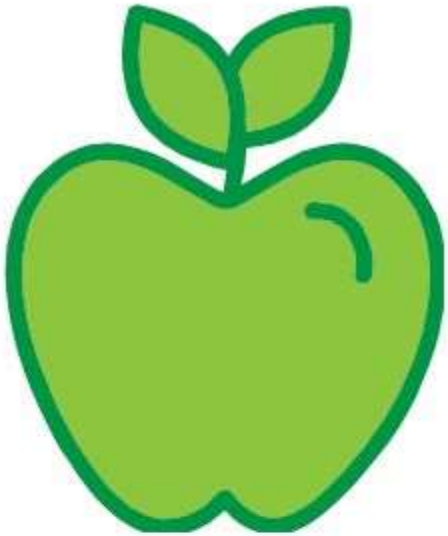


Geometric

Organic

Abstract

Organic Shapes



Geometric Shapes

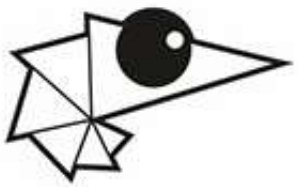
Patterns from Geometric Shapes

Abstract Shapes (Icons)

Abstract Shapes (Stylizations)





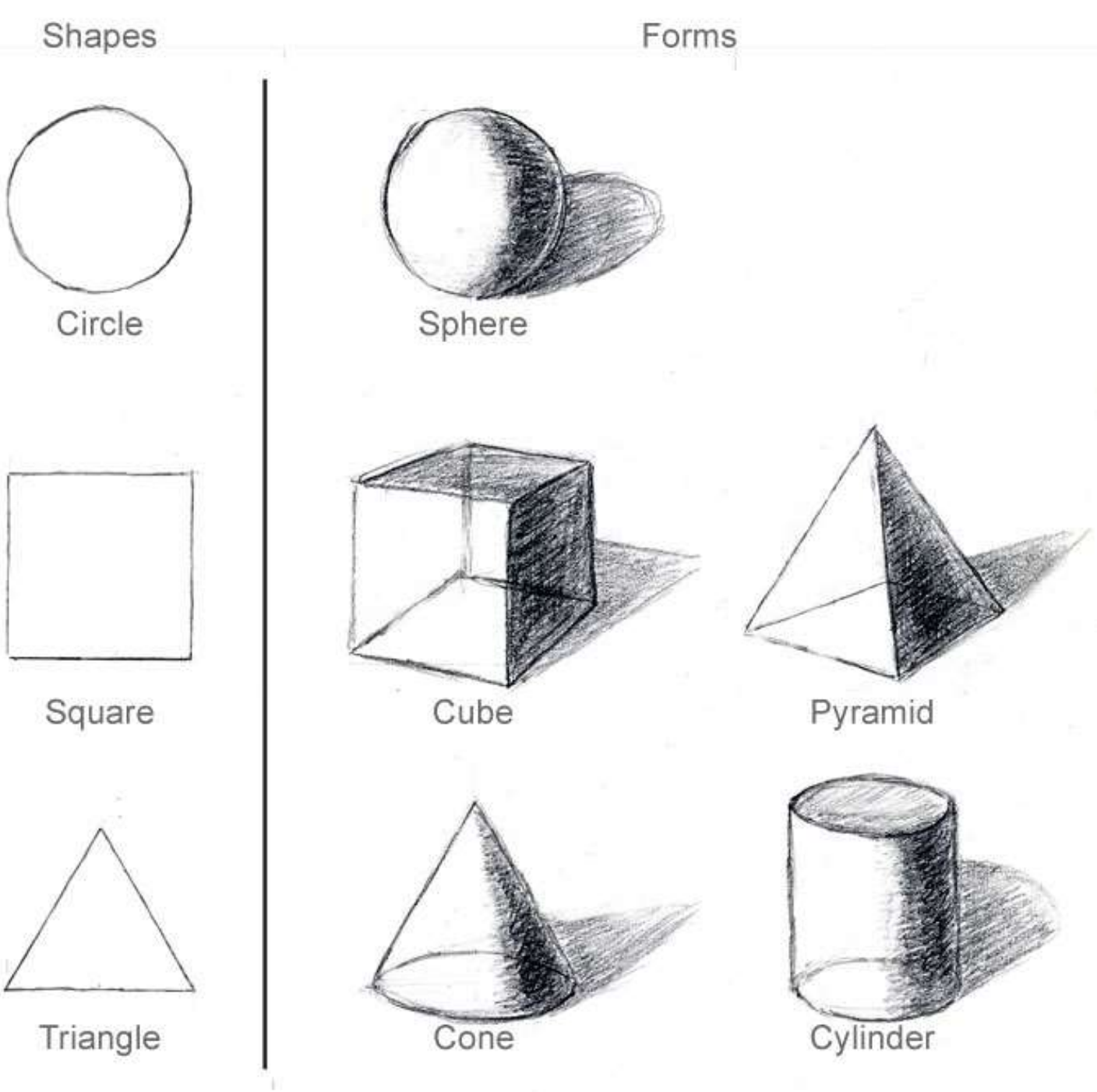




Abstract Shape (Graphic Representation)

Form/ Volume/ Mass

Form is three-dimensional and takes up space



Form/ Volume/Mass

Size

It is how small or large something is e.g. a small shirt vs. an extra large shirt.

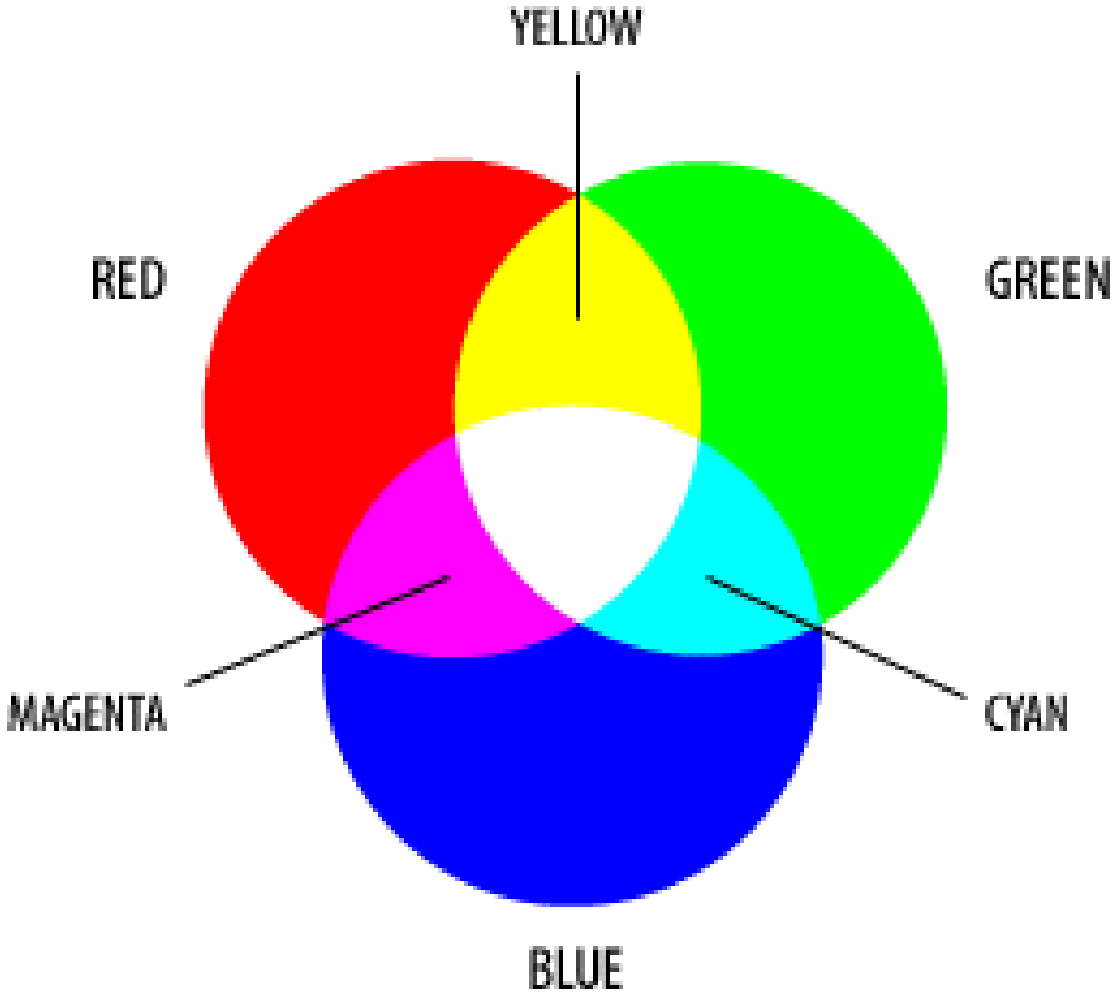
Size is the definition of dimension and space occupied by an object.

Space

Space refers to emptiness. It is the area around or between the elements in a design. It connects and separates elements.

POSITIVE SPACE: The Shapes or Forms of interest

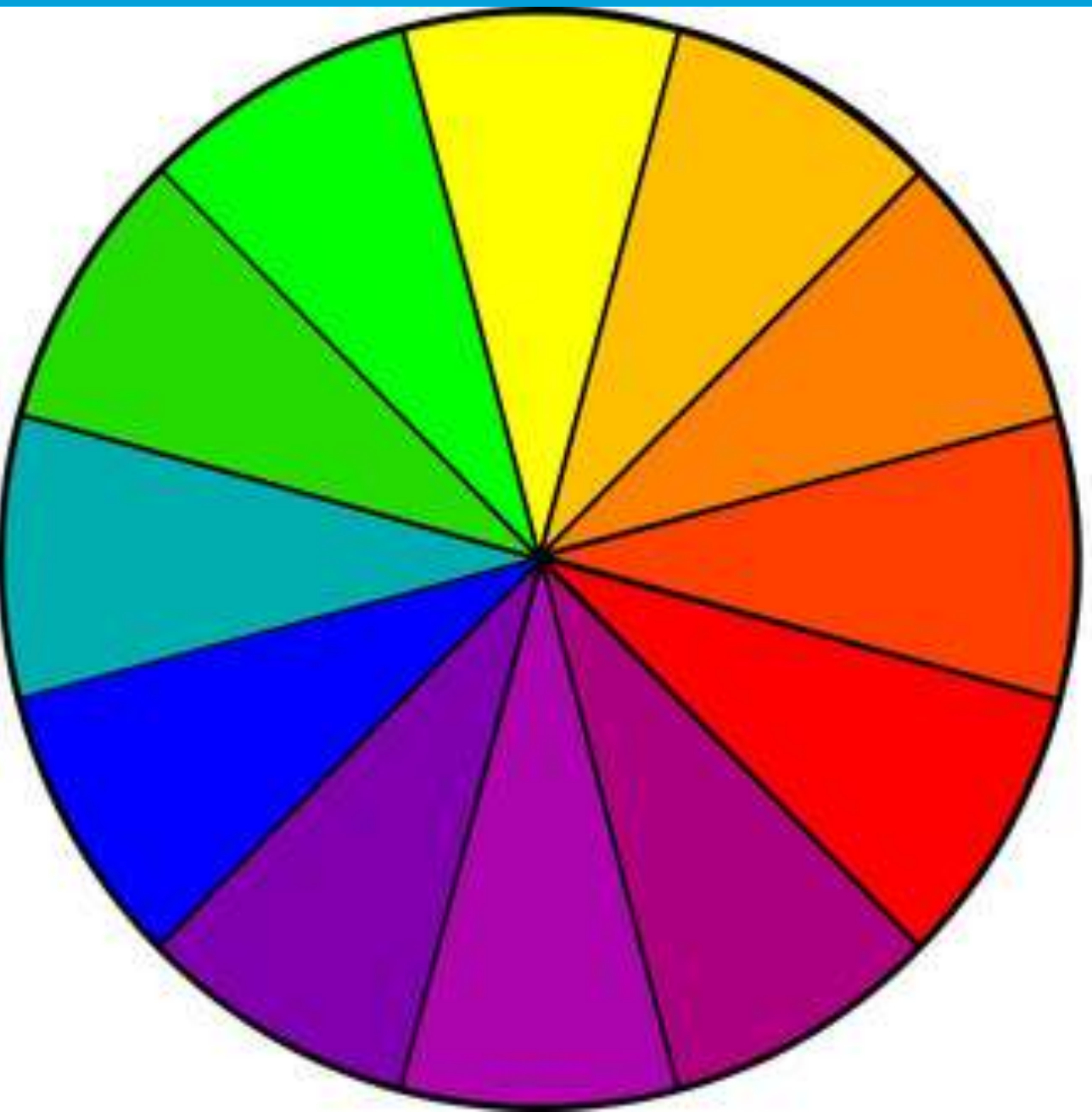
NEGATIVE SPACE: the Empty Space between the form or shapes



Color

Color is how we see the reflection of light waves. Color is used to generate emotions, define importance, create visual interest and more. CMYB (Cyan, Magenta, Yellow and Black) is subtractive, RGB (Red, Green and Blue) is additive.

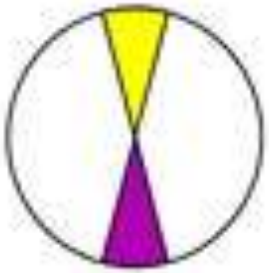
Colors Harmonies



primary

analogous

secondary



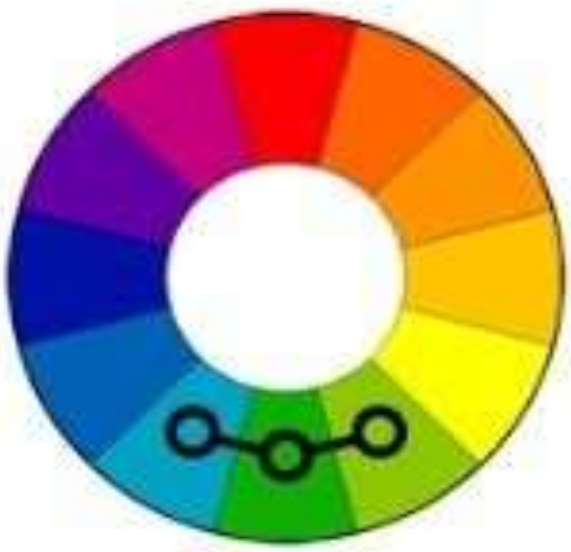
complementary

intermediate

split complementa

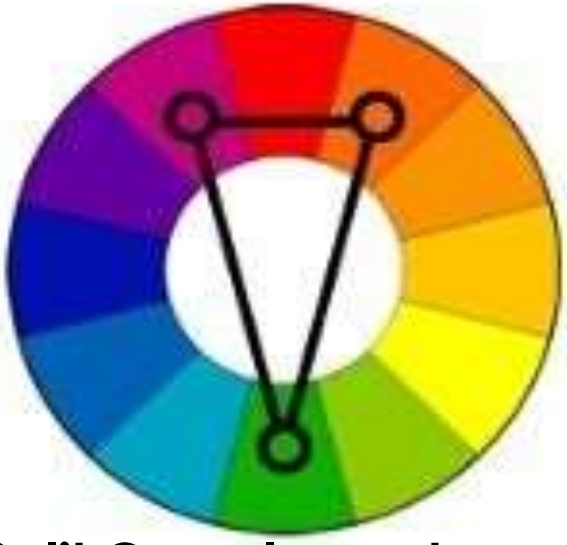
Colors Harmonies

Complementary colors



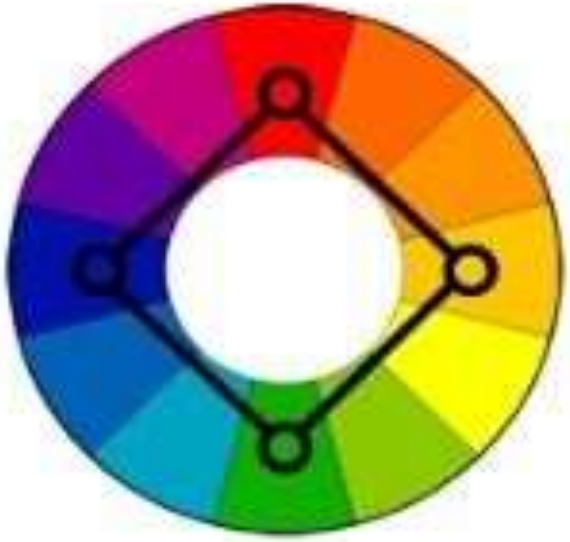
Analogous colors

Triadic colors



Split Complementary

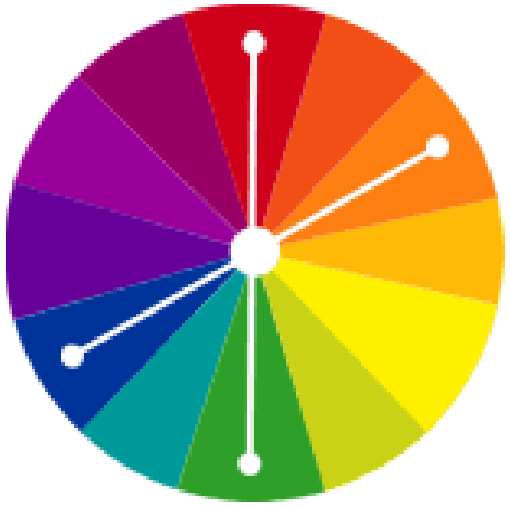
Tetradic colors



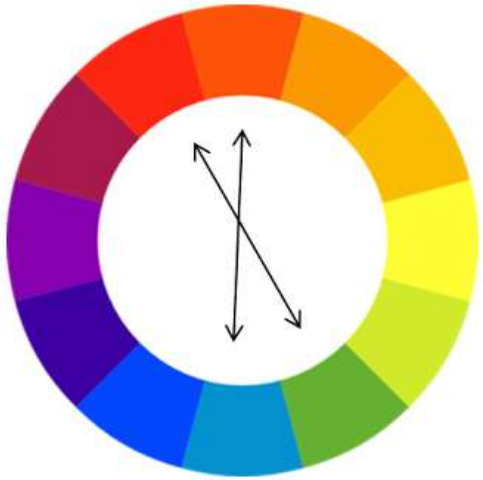
Square colors

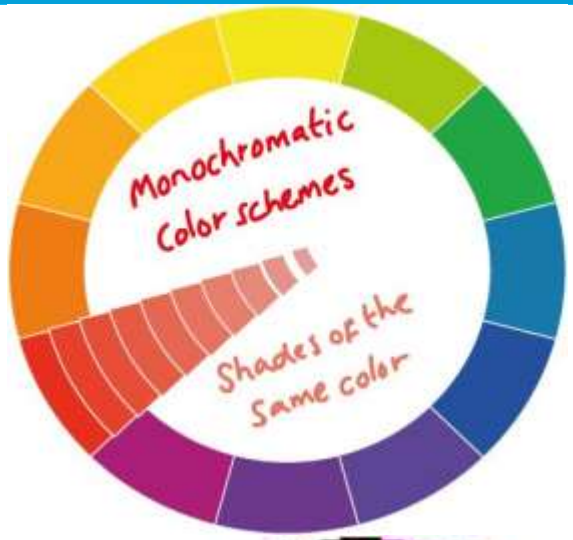
Colors Harmonies

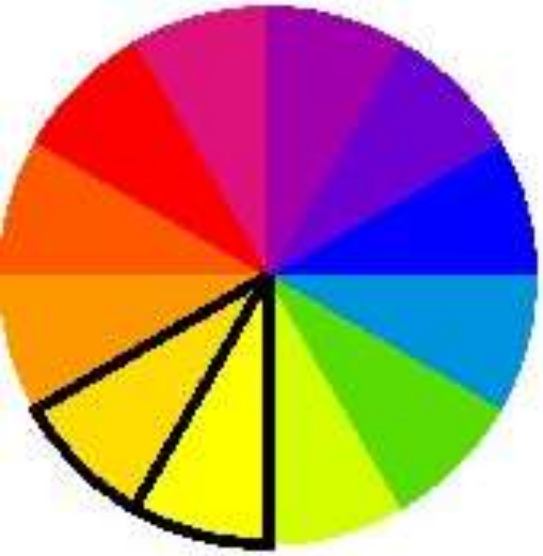
Double complementary



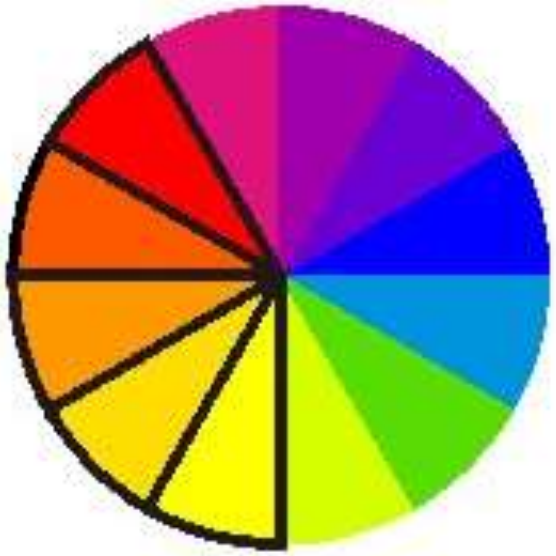
Compound



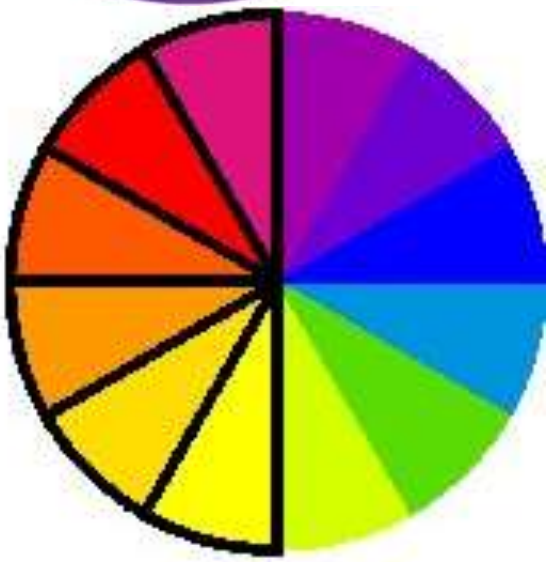




Basic analogous scheme

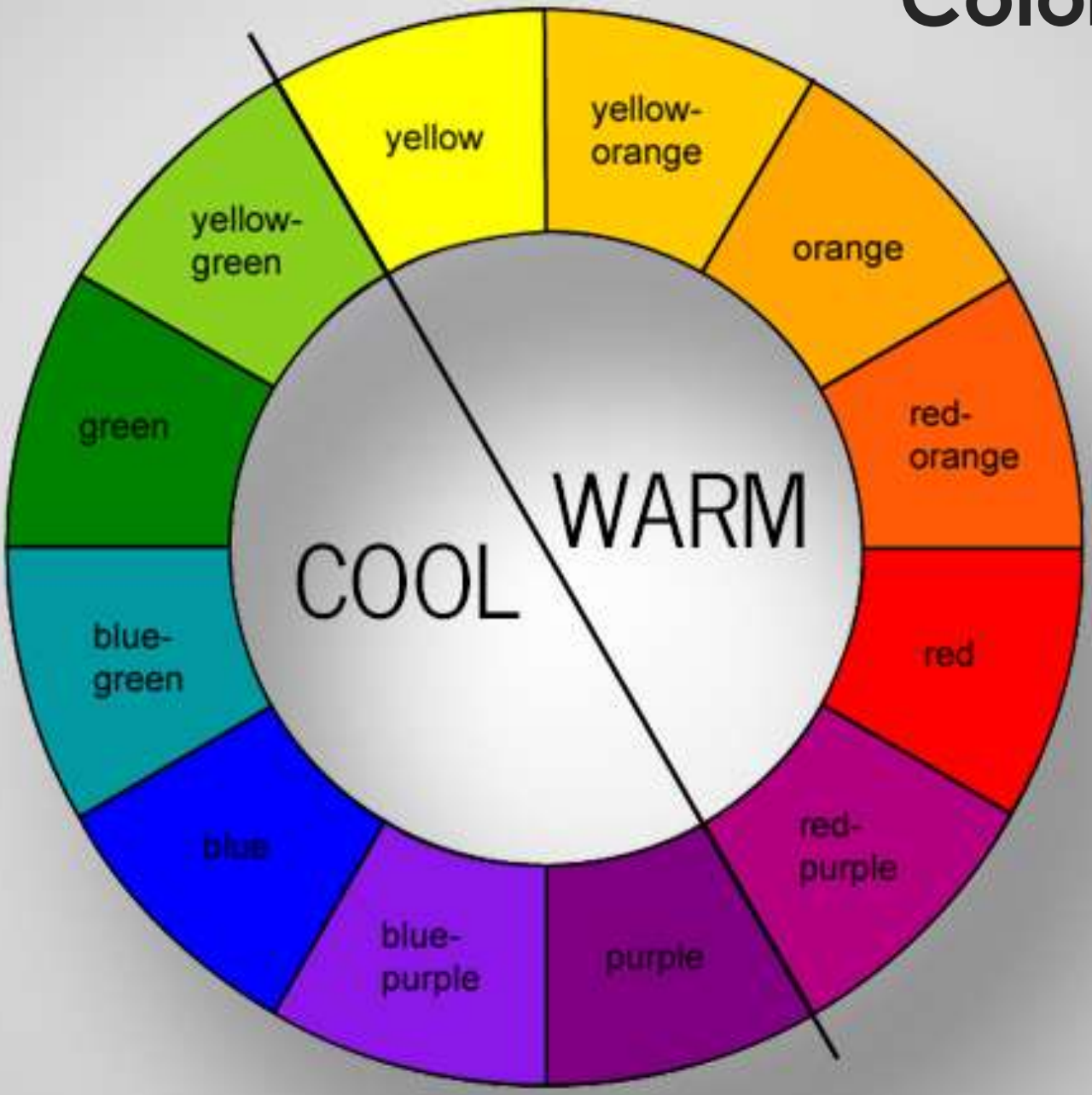


Broad analogous scheme

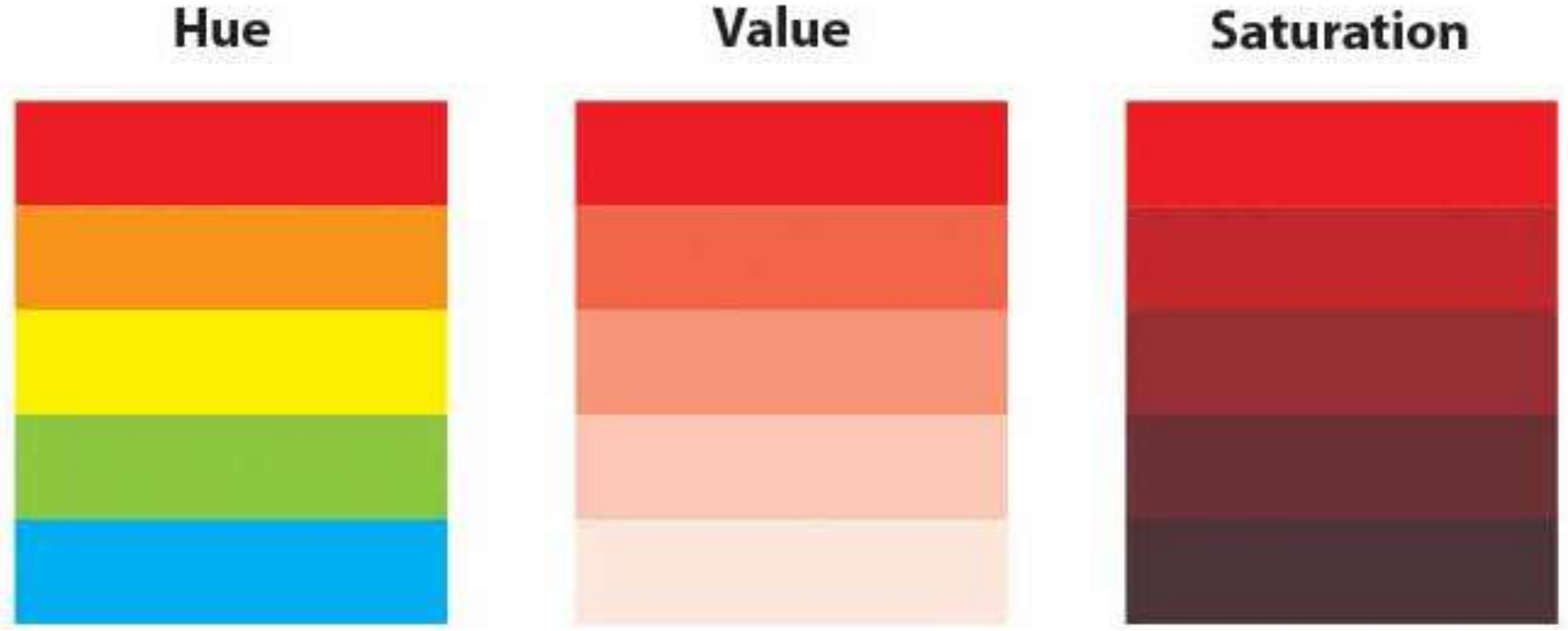


Complex analogous scheme tending to complementary

Color Types


yellow
yellow-orange
orange
red-orange
red
red-purple
purple
blue-purple
blue
blue-green
green
yellow-green
COOL
WARM

Color Properties



Terms Defined

Hue: the wavelength of the color (at what angle does it fall on the wheel)

Value: the lightness/darkness: tint (lighter) or shade (darker).

Saturation: describes how pure/intense/strong the hue is.

Pure Magenta = 100% Saturation

Pure Magenta + 4 drops of white = Magenta Tint

Pure Magenta + 2 drops of Cyan + 2 drops of Yellow = Magenta Shade (adding cyan and yellow to magenta is like adding black because it's the complement to magenta aka green)

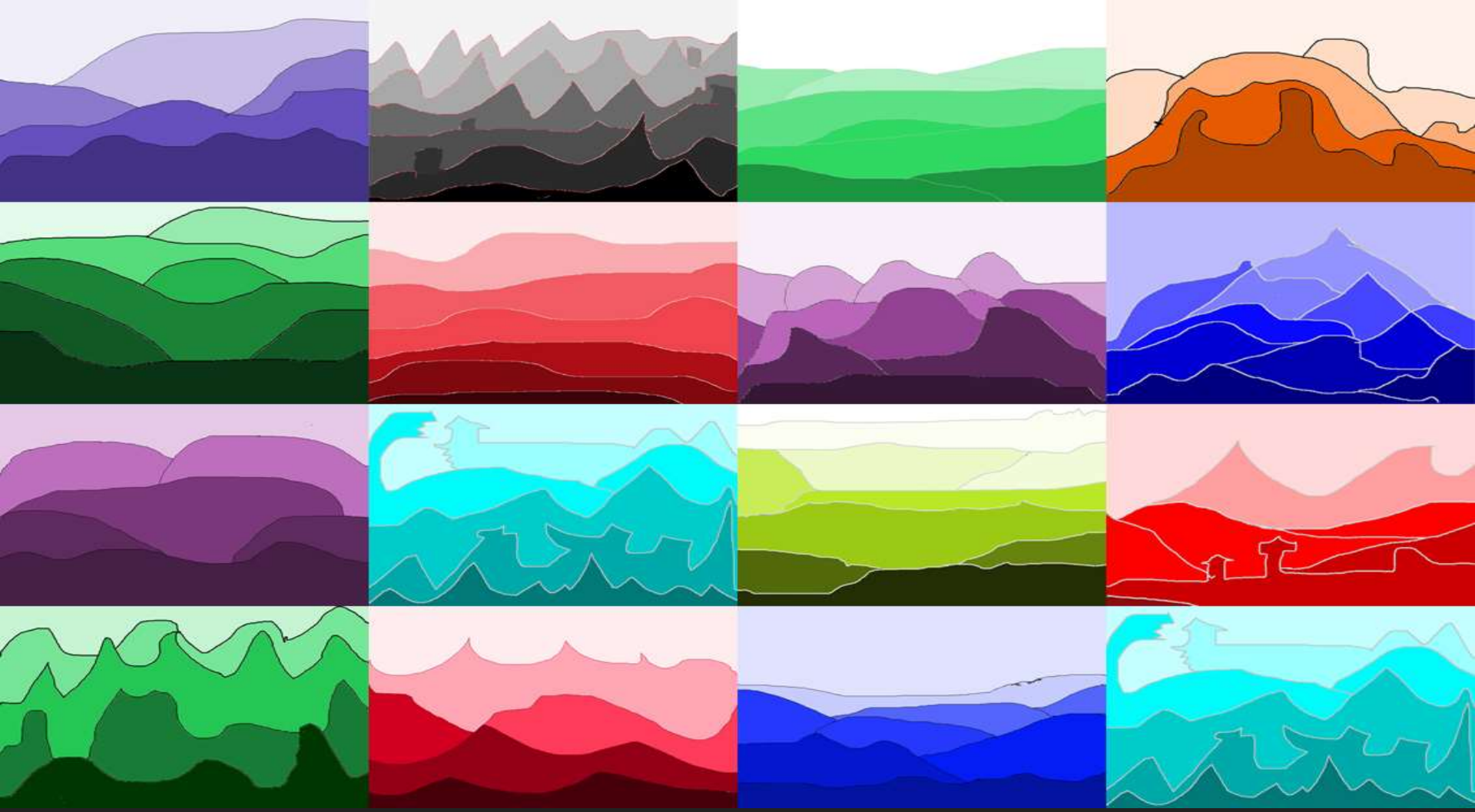
Pure Magenta + 2 drops of white + 1 drop of cyan + 1 drop of yellow = Muddy Magenta

The Magenta Tint, Magenta Shade and Muddy Magenta all have the same amount of decreased saturation (from the Pure Magenta) because you diluted each of them by the same amount (4 drops total) but the Muddy Magenta has the same Value as the Pure Magenta because adding white and black (cyan & yellow) at the same time correct any change in value.

Magenta Tint (lighter value and less saturation)

Magenta Shade (darker value and less saturation)

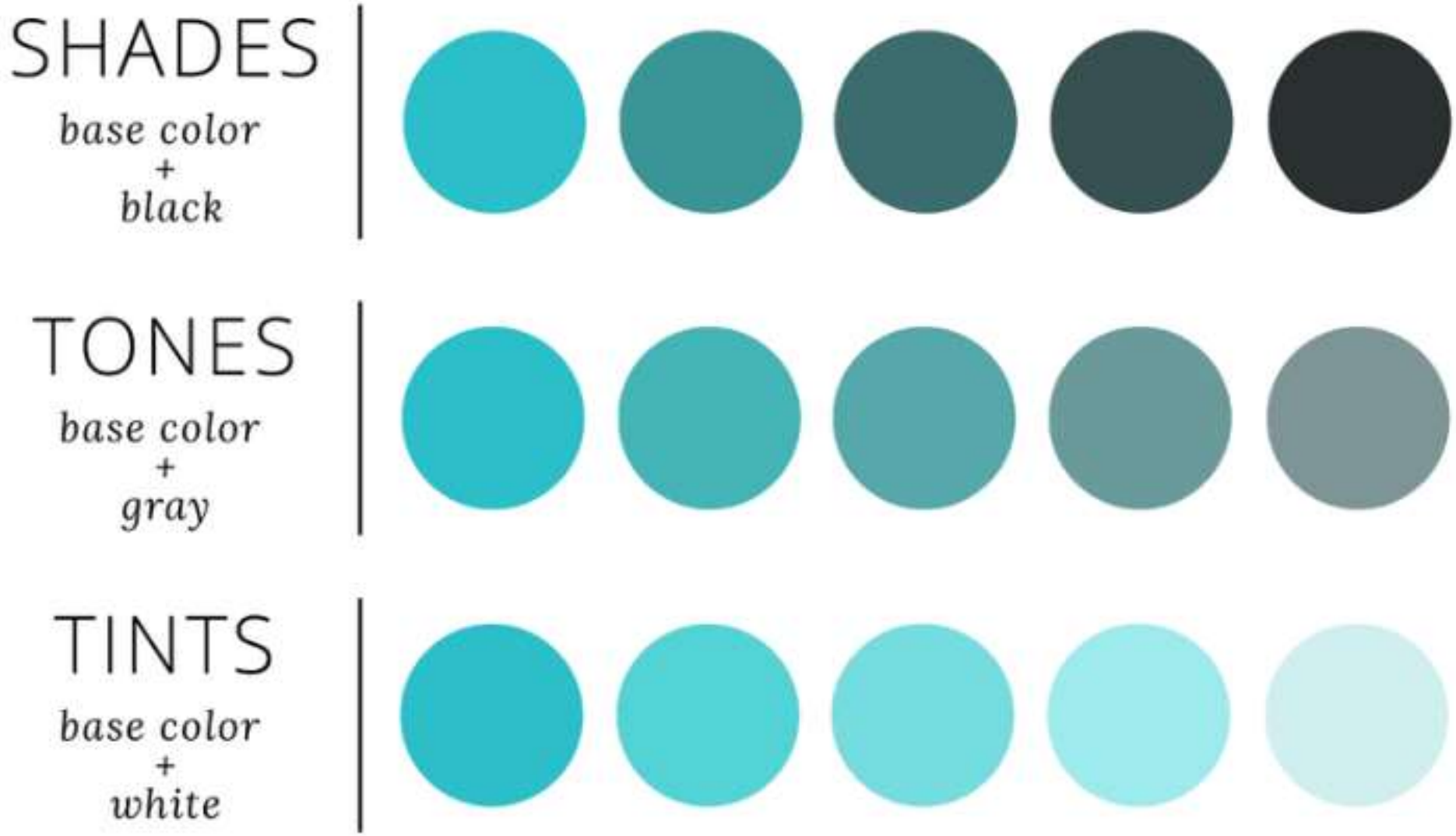
Pure Magenta value = Muddy Magenta value (same value but Muddy Magenta has less saturation than Pure Magenta like the Magenta Tint and Magenta Shade)



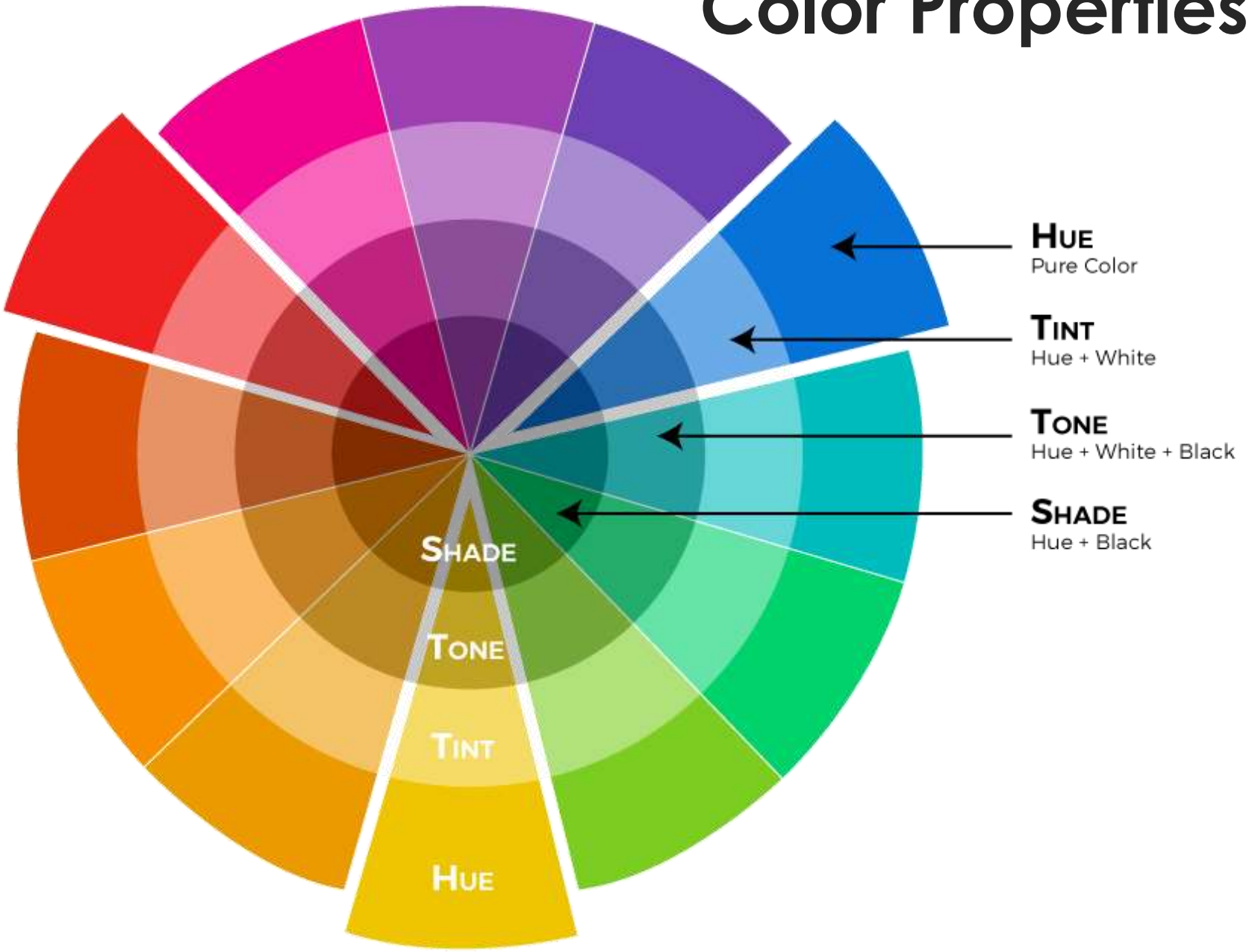
Value

It is how light or how dark an area looks. A Gradient is a great way to visualize value- everything from dark to white, all shades in between, has a value.

Color Values



Color Properties

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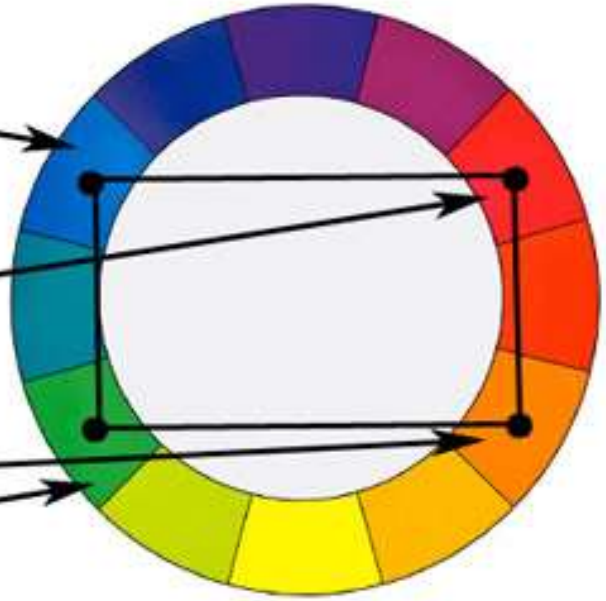


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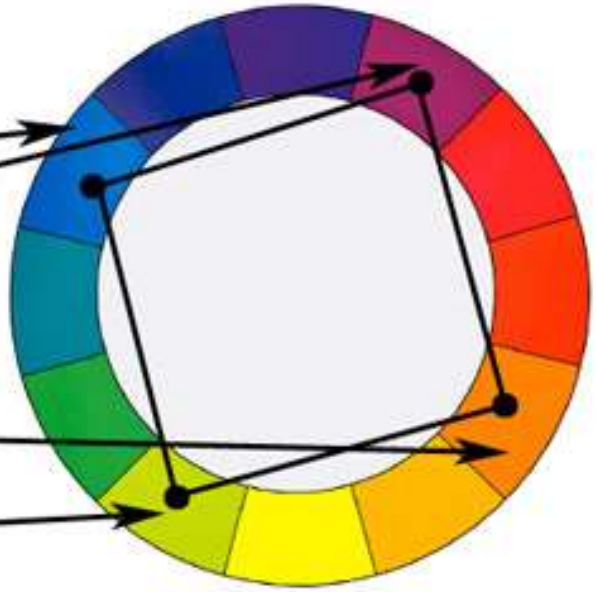


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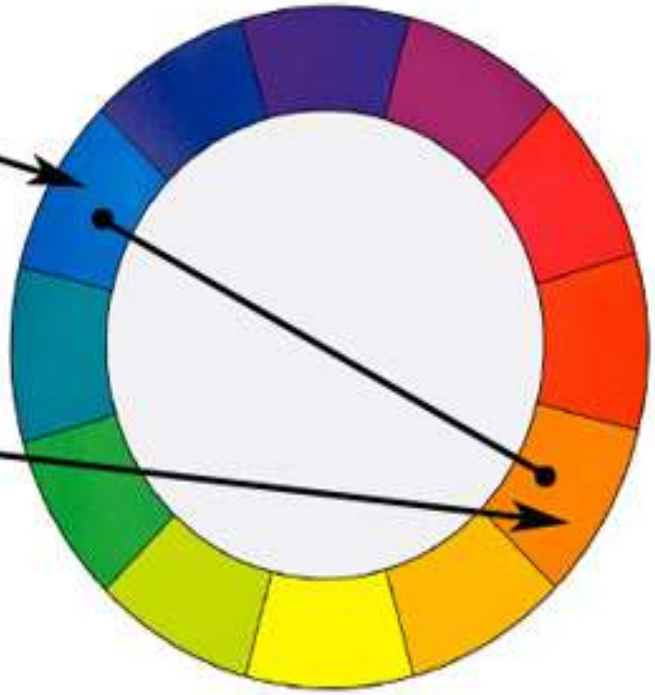

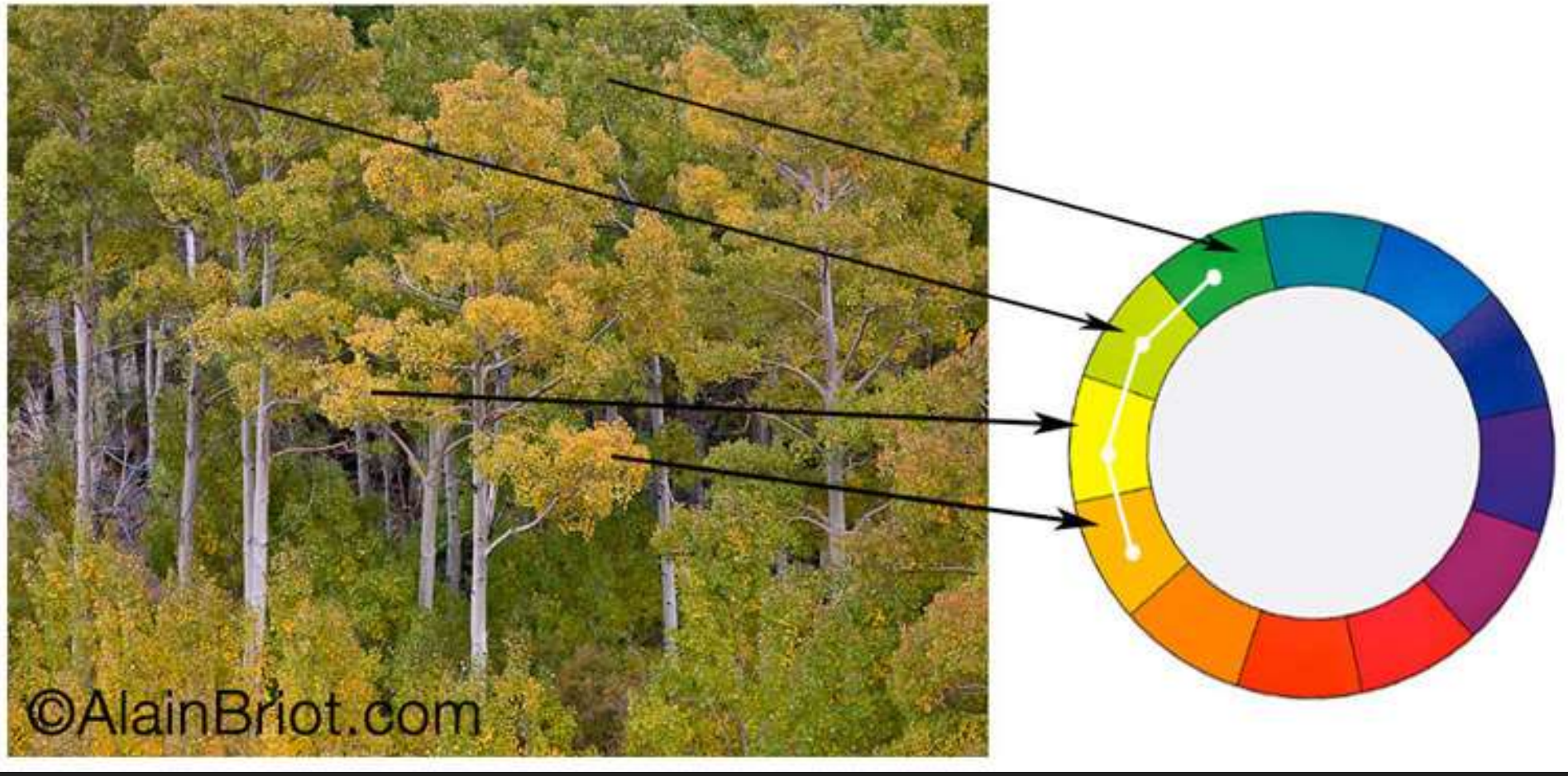
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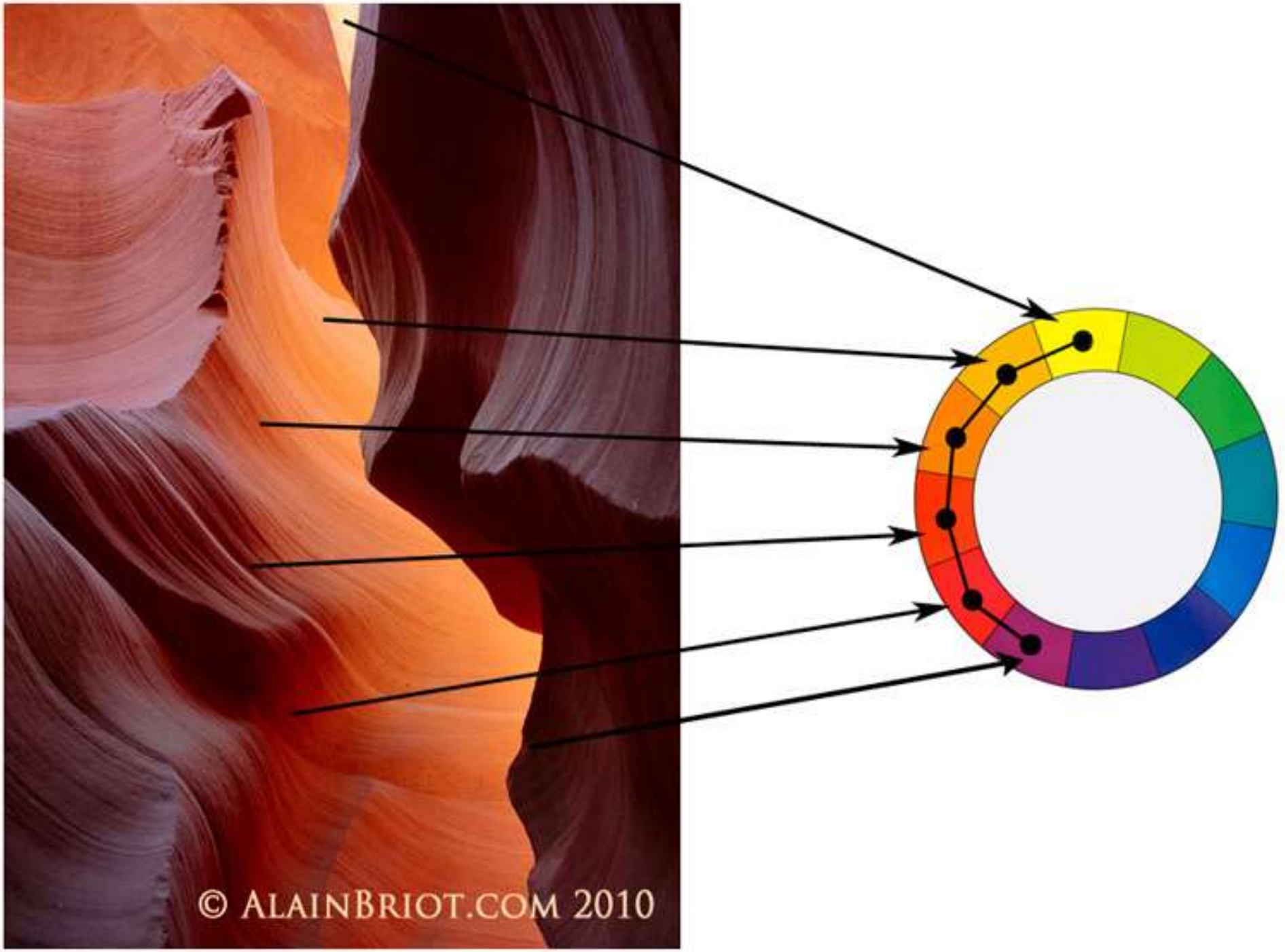
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blue i style

Texture

It is how the surface of something feels or looks. Concrete has rough texture, fur has smooth & soft texture. Using texture in design adds depth and visual interest. Printed material has actual, textile texture while screen material has implied texture

Types of Textures

ACTUAL TEXTURES: the way something actually feels when it is touched

IMPLIED/ VISUAL TEXTURE: The Visual feel of something. The way something appears to feel.