Elements of Design: Color II
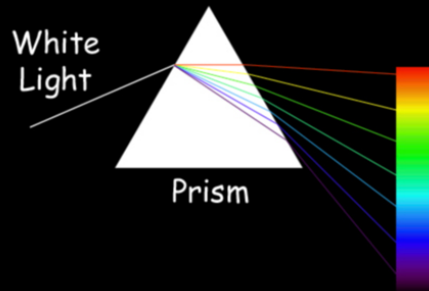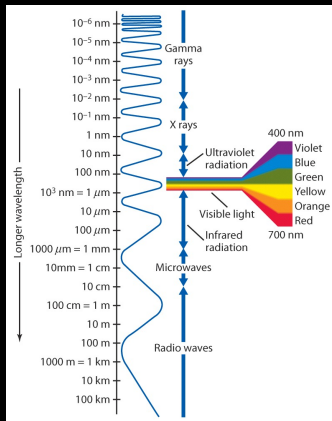
Claudia Jacques de Moraes Cardoso
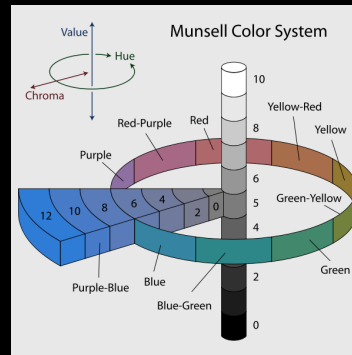
2D Design – Typographic Design

Color

Property of Light

Color Systems

NEWTON

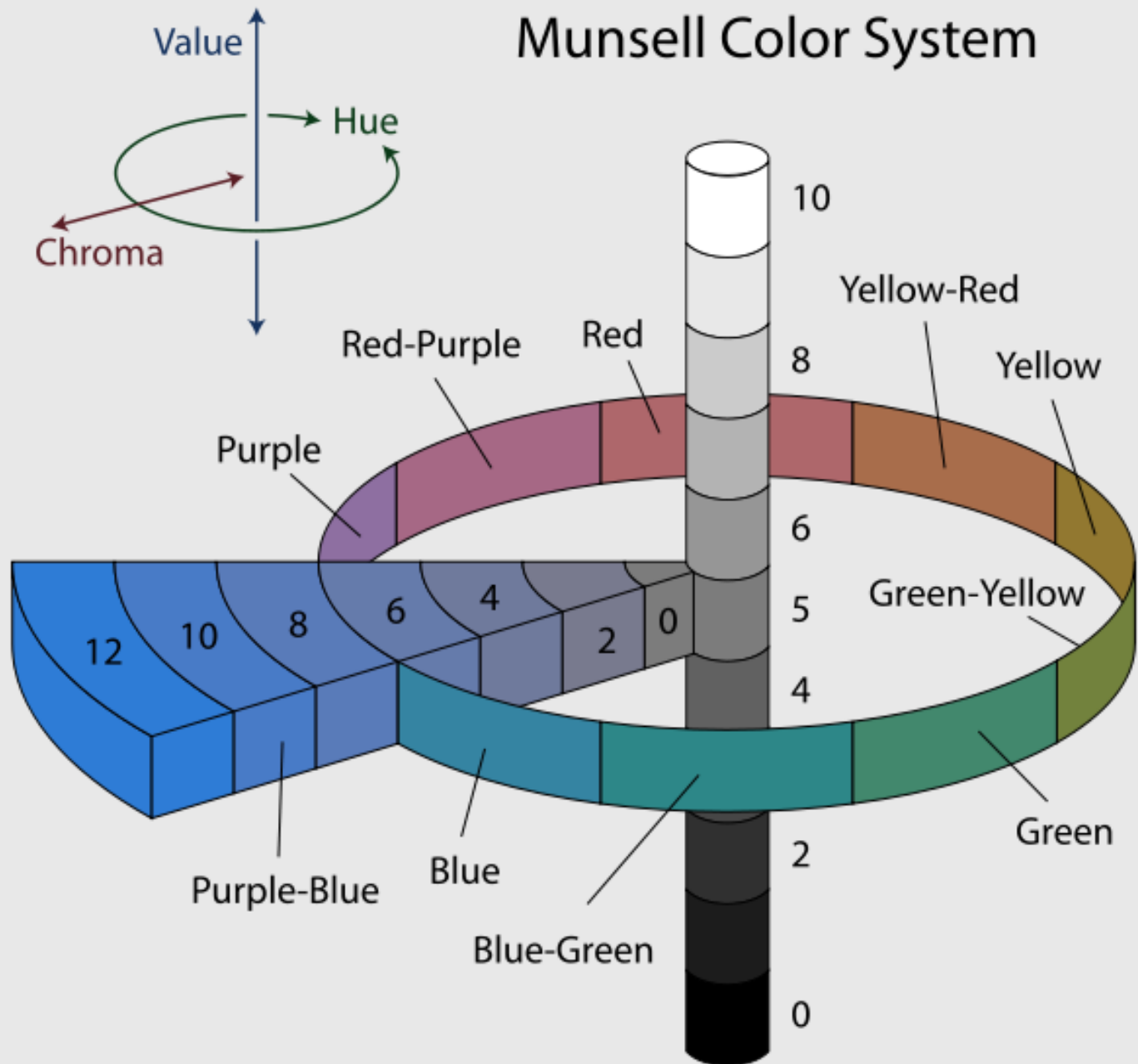Munsell Color System

Color Properties

Hue
Value
Chroma

Color & Illusion of Depth

Atmospheric Perspective:
Value Range
Hue Range
Chroma
Temperature

cool colors | warm colors

Color System

Munsell Color System

Color

Munsell Color System:

- **Universal Color Standard**
- 3D Color System
- Numerically Describes 300 Colors
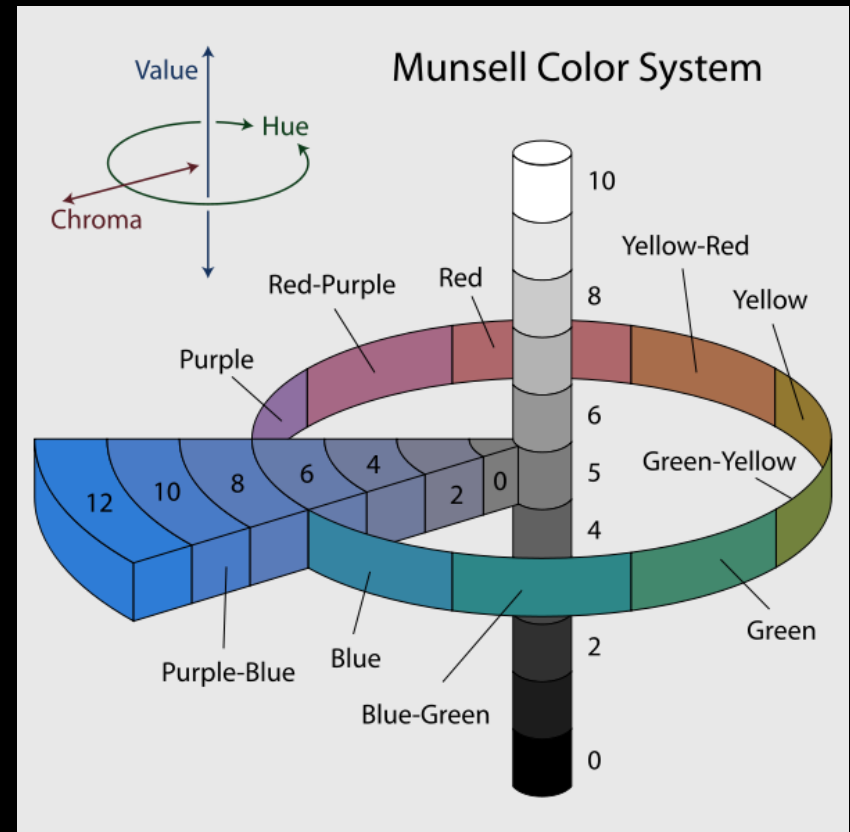
Color Properties

Hue – color

red, green, blue, etc.

Value – lightness or darkness of the color

(coded numerically, the higher the number the lighter the color/ the lower, the darker)

Chroma - the dullness or purity of a color (US – Saturation)

(coded numerically, the higher the number the purer the color / the lower the number, the more dulled or greyed)

Color Nomenclature

Munsell Color System

Color = perception of wavelength.

Hue = position in the spectrum.

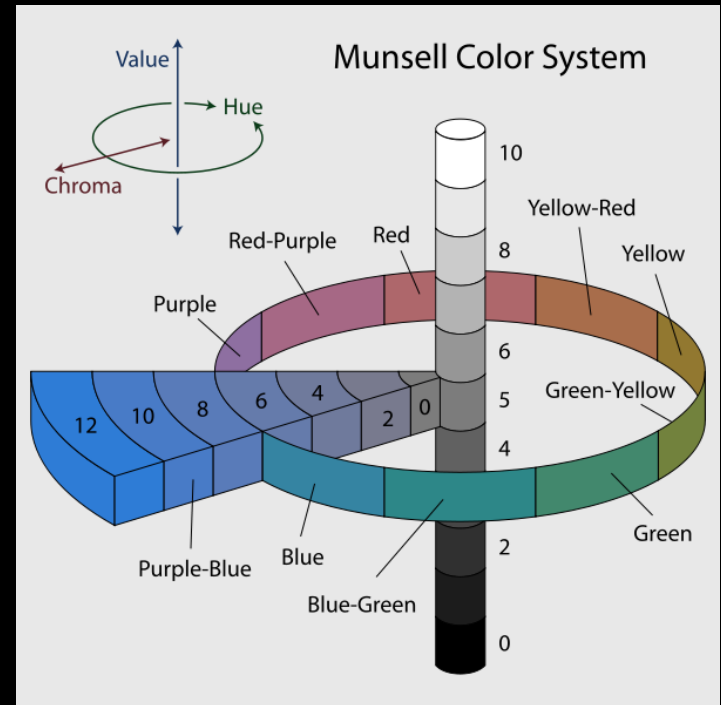**Chroma** = how pure a hue is in relation to gray.

Saturation = degree of purity of a hue.

Shade = A hue produced by the addition of black.

Tint =   hue produced by the addition of white.

Intensity = hue brightness or dullness of a hue.
One may lower the intensity by adding white or black.

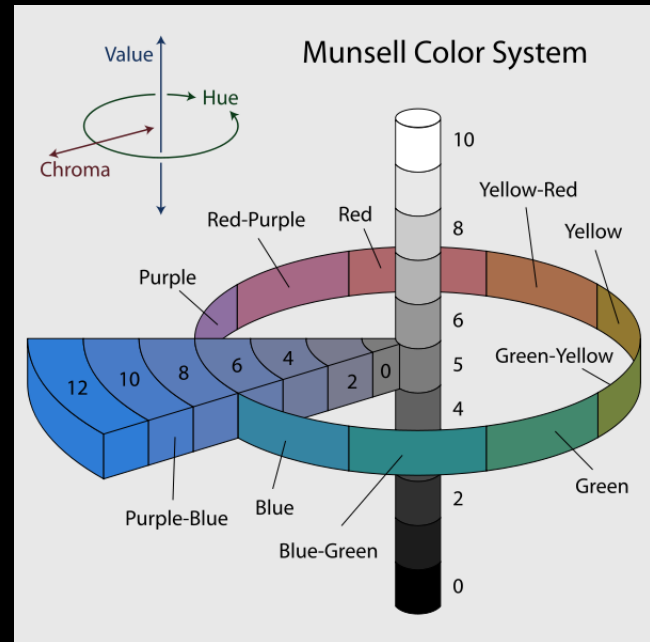**Luminance | Value** = Amount of light reflected from a hue.
Hues with a high content of white have a higher luminance or value.
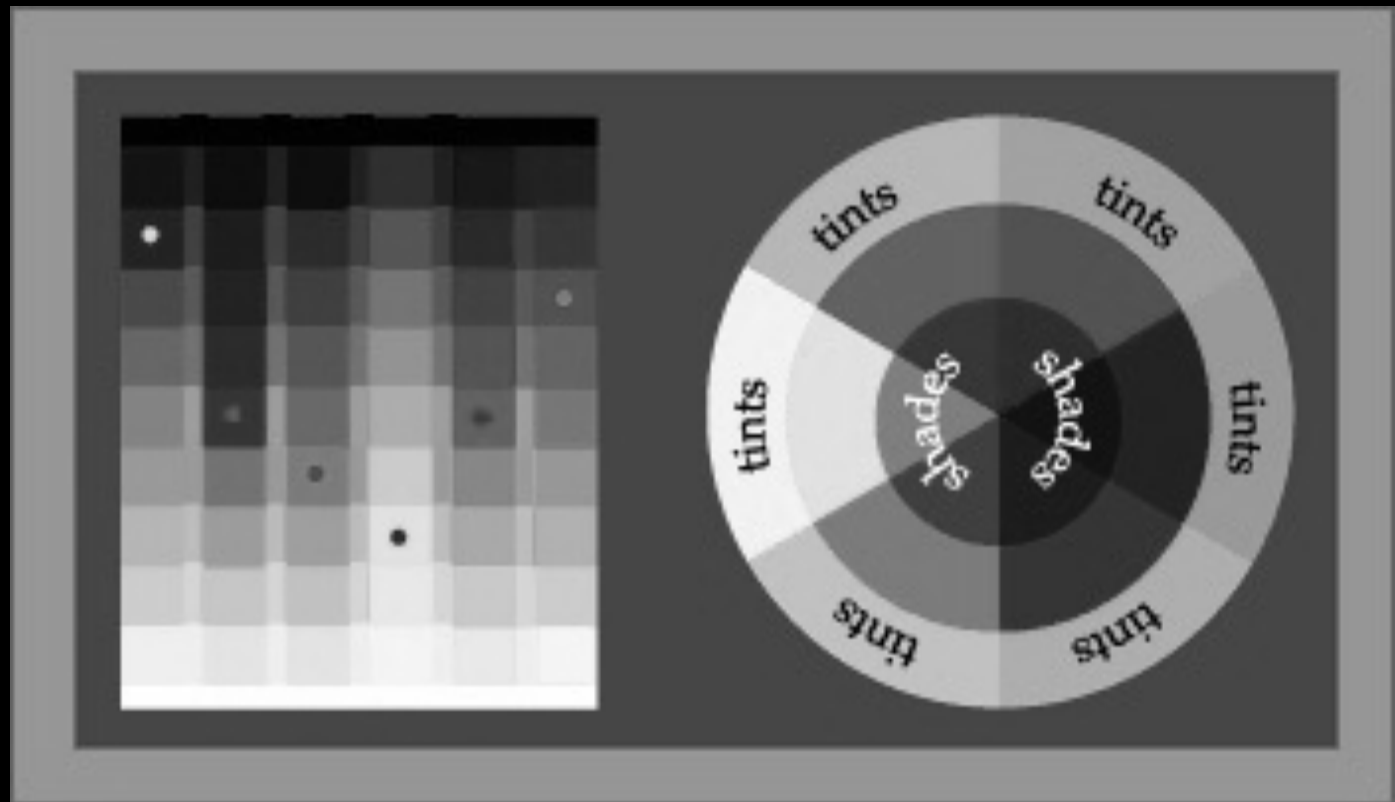
Color Properties:
Hue | Value | Chroma
Color

NEWTON

Munsell Color System

Value

Hue

Chroma

Red-Purple   Red   Yellow-Red
                                    Yellow
Purple   10
                                    8
12 10 8 6 4 2 0   6
                                    5   Green-Yellow
                                    4
Purple-Blue Blue   2   Green
        Blue-Green
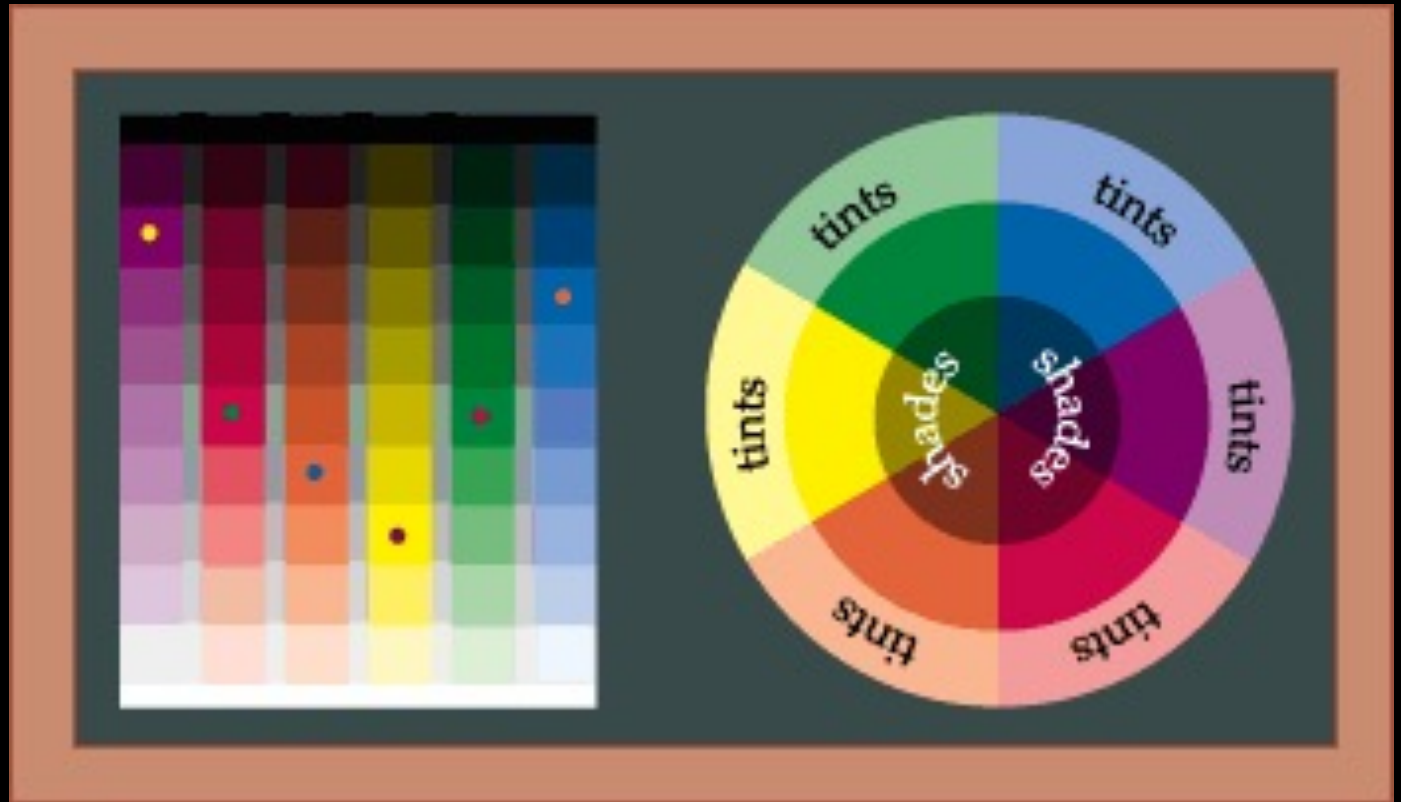   0

Color Properties:
Hue | Value | Chroma
Tints, Shades & Tones

Value: relative degree of light or dark of a color

Color Properties:
Hue | Value | Chroma
Tints, Shades & Tones

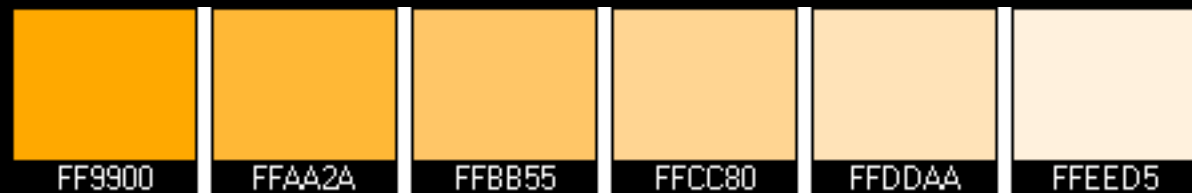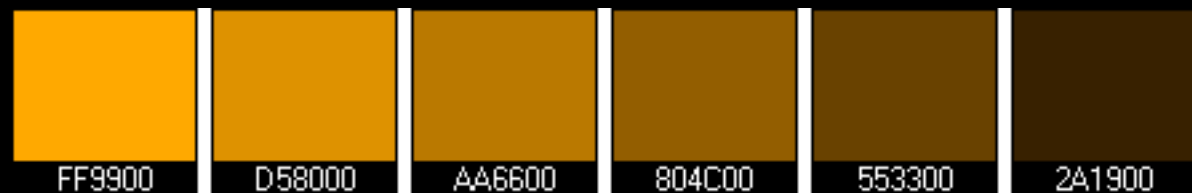Value: relative degree of light or dark of a color

Color Properties:
Hue | Value | Chroma
Tints, Shades & Tones

Tints - adding white to a pure hue:

| FF9900 | FFAA2A | FFBB55 | FFCC80 | FFDDAA | FFEED5 |

Shades - adding black to a pure hue:

| FF9900 | D58000 | AA6600 | 804C00 | 553300 | 2A1900 |

Tones - adding gray to a pure hue:

| FF9900 | EA9C27 | D59C47 | BF9960 | AA9371 | 958B7C |
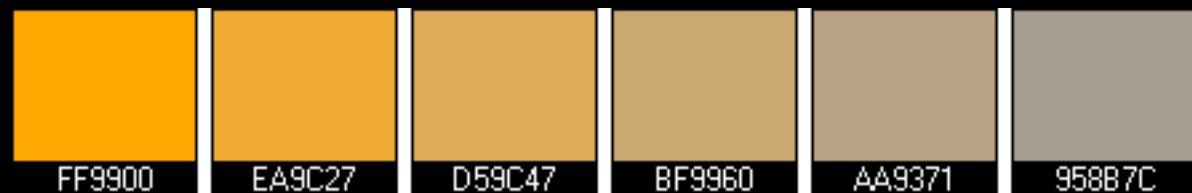
Color Properties:
Hue | Value | Chroma
Saturation

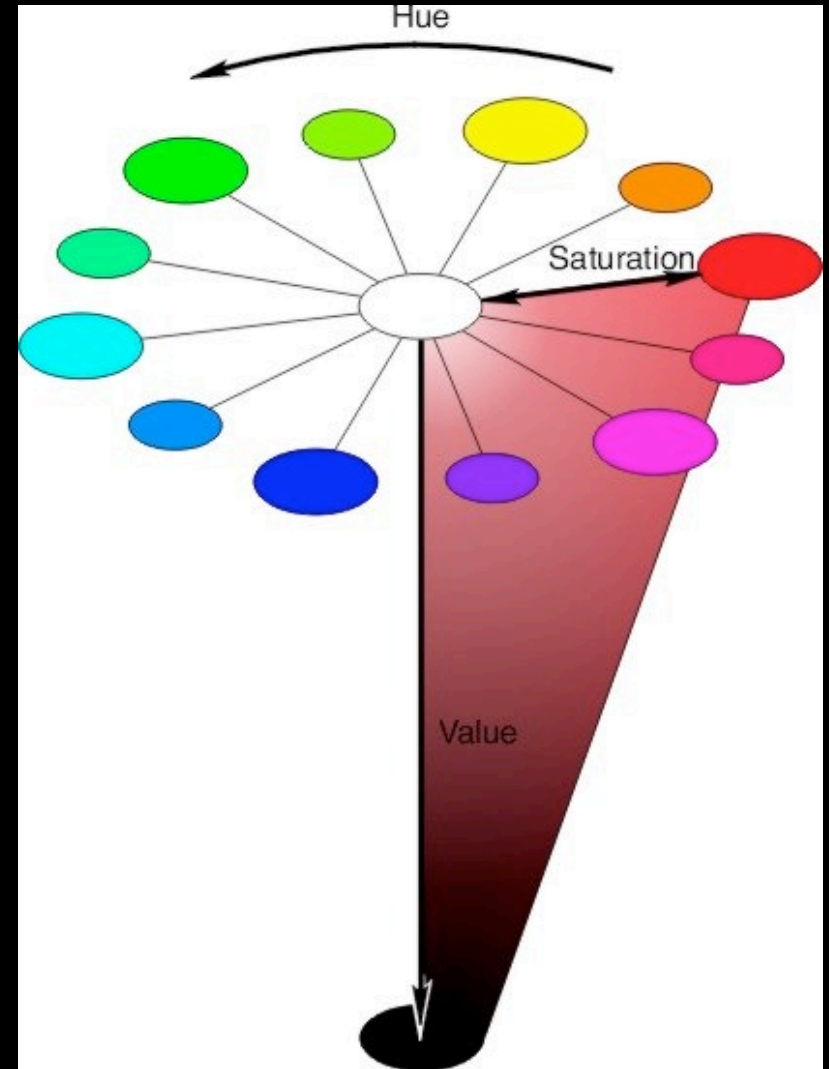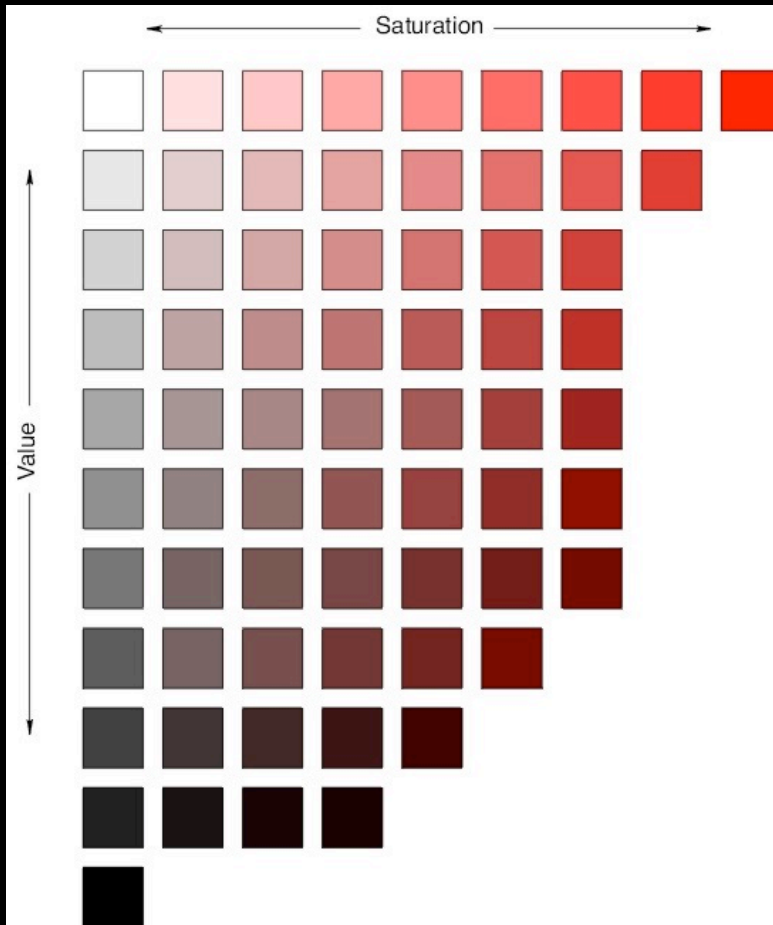# Chroma [Saturation]

Prismatic = highest Chroma intensity. Highest saturation.

Muted Colors = low Chroma intensity / low saturation.
Dull but not quite chromatic gray.
Combining color + its complementary

Chromatic Grays = very low Chroma intensity/ very low saturation.
Very dull but not quite achromatic.
Combining color + its complementary

Achromatic = without color (just black, white and gray values)

Hues

Muted

Chromatic Gray

Achromatic Gray

©The Land of Color
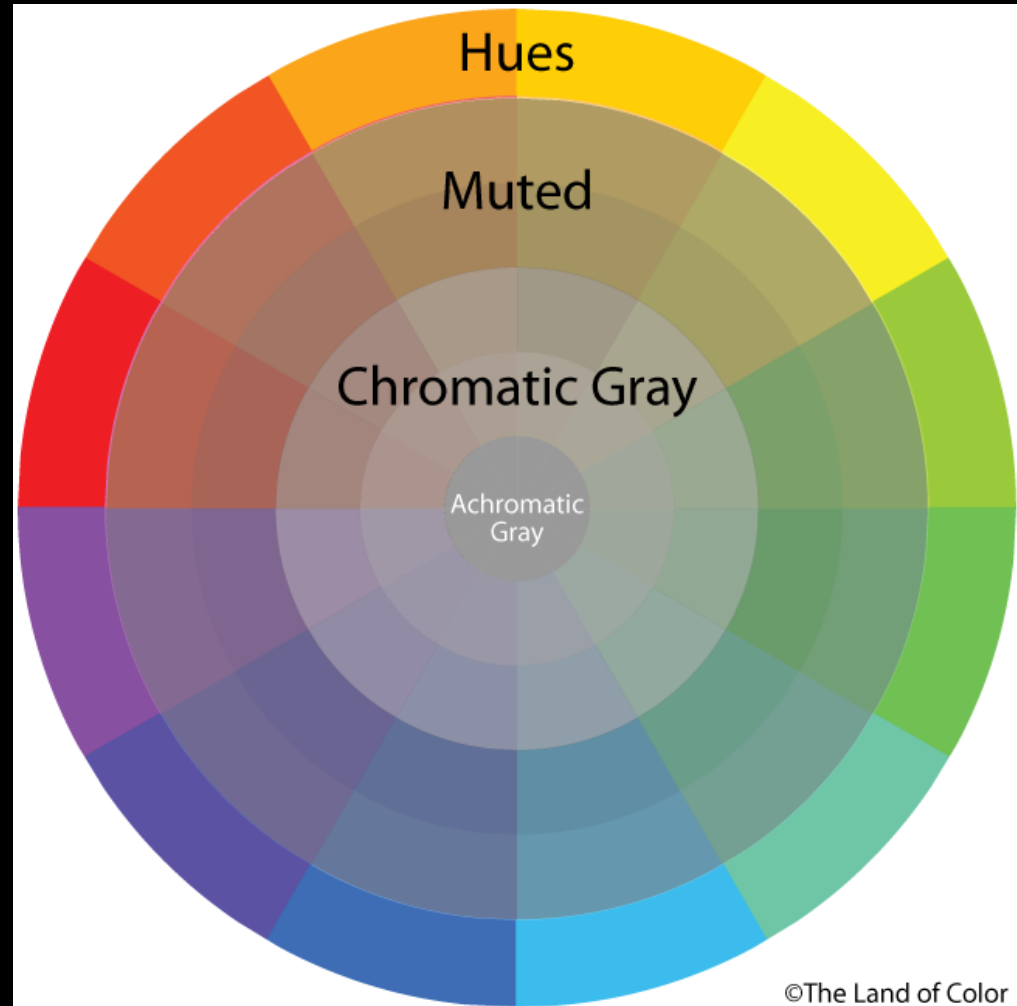
Color Interaction

One color against another influences how we perceive them:

The center bar experiences a hue shift.

The center bar seems to changes in value.

The center bar appears to change in chroma/saturation.

Color & Illusion of Depth

Atmospheric Perspective:

Value Range
Hue Range
Chroma/Saturation
Temperature
Transparency/Overlapping

http://char.txa.cornell.edu/language/element/form/landscap.gif

Value Range

Broad Value Range: uses colors from a wide area of a gray scale, from very dark to very light.

Narrow Value Range: uses colors from a small or compressed area of a gray scale.

Nicora Gangi, *Lemon Light*, 2003, pastel, 9 3/4 x 9 3/4"

David Hockney, Mist, 1973. From The Weather Series. Lithograph, 37 X 32 in.

Reference: "Color – a workshop approach" by David Hornung p 50 & Matt Ferranto
http://www.utdallas.edu/~melacy/pages/color.html

Hue Range

Broad Hue Range: uses colors from a wide area of the spectrum.
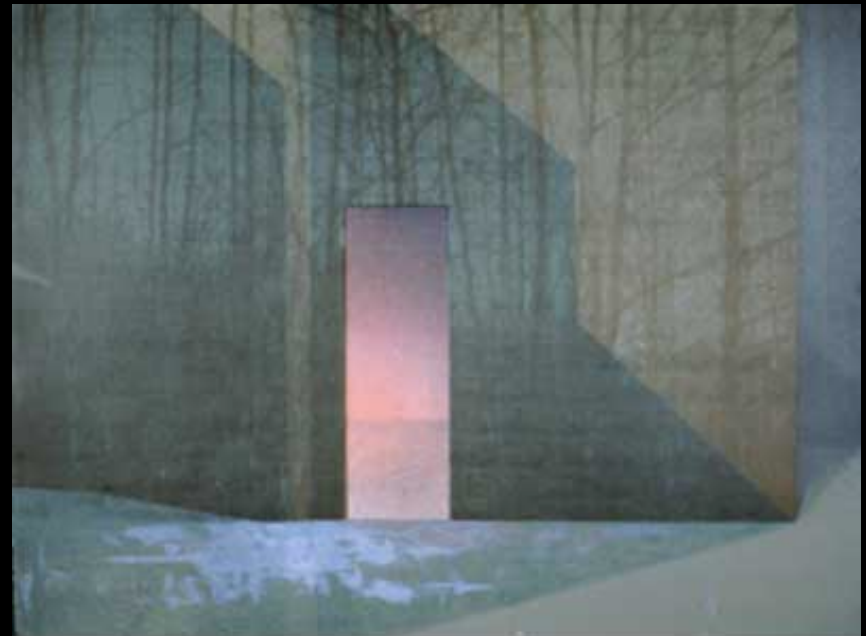
Narrow Hue Range: uses colors from a small or compressed area of the spectrum.

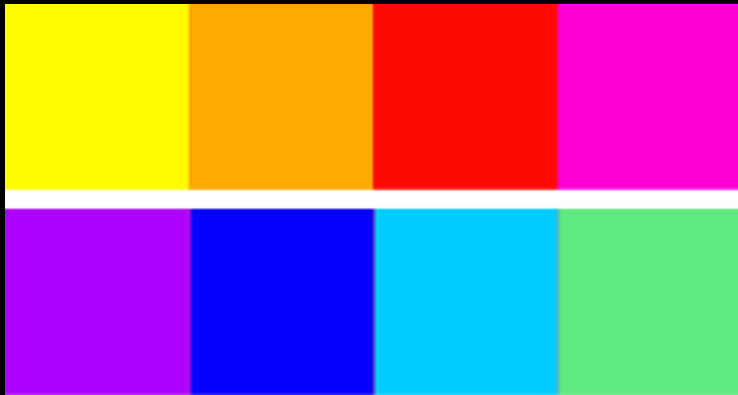Audrey Flack, Wheel of Fortune, 1977-78. Oil over acrylic on canvas, 8 X 8 ft.

Robert Lazuka
Inside Outside (1995)
19" x 25"

Chroma
[Saturation]

SATURATED COLOURS

MUTED COLOURS

Color Temperature

Refers to the heat a color generates, both physically and psychologically.

The color wheel can be divided into warm and cool colors.

Warm colors are vivid and energetic, and tend to advance in space.

Cool colors give an impression of calm, and create a soothing impression.

White, black and gray are considered to be neutral.

Color Temperature

Plays a critical role in creating the illusion of space.

By combining warm and cool colors, we can cause various areas in an image to expand or contract.

This effect, described by Hans Hofmann as "push/pull" can play an even more important role in nonobjective image relying so heavily on basic visual forces for their impact.

In Hofmann's Magnum Opus, this push/pull effect is heightened by variations in definition, from the loosely painted reds to the sharply defined yellow rectangle.
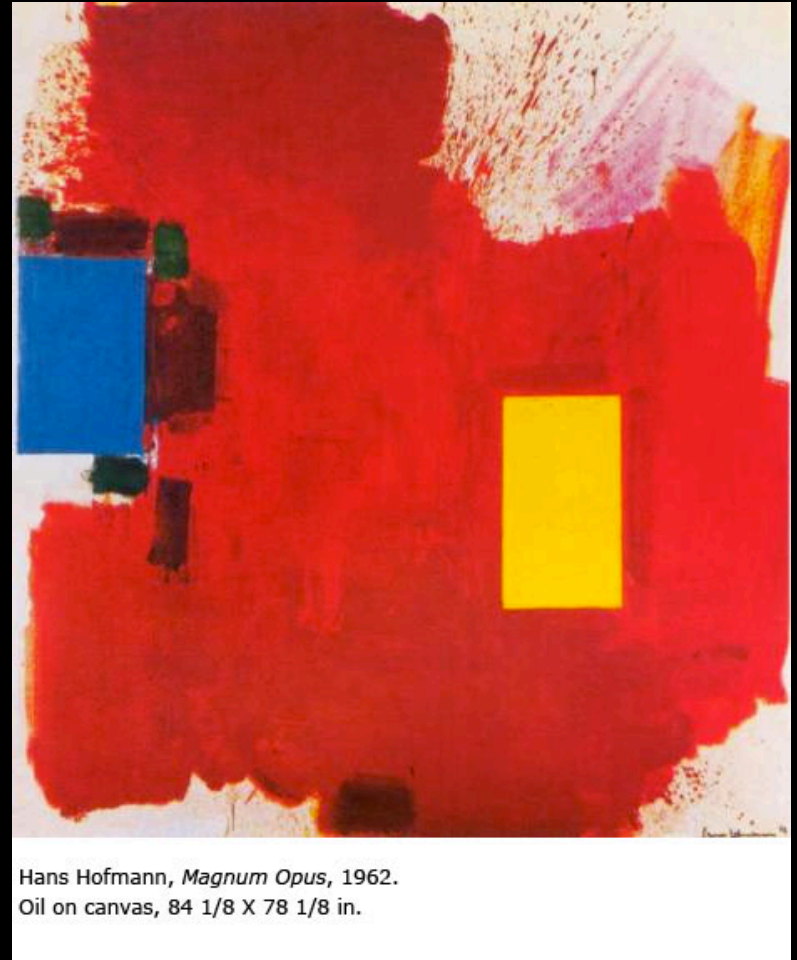
Hans Hofmann, *Magnum Opus*, 1962.
Oil on canvas, 84 1/8 X 78 1/8 in.

Launching the Imagination, Mary Stewart

Review

Hue = Color – Broad or Narrow Range

Chroma/Saturation = Color Intensity = How pure (bright) a color is.

Value = How light or dark a color is. Broad or Narrow Range.

Color Intensity:

Prismatic Color: pure hues at their highest intensity/chroma/saturation levels.

Muted Color: rich but softened color created by mixing prismatic color with a small amount of its complement.

Chromatic Gray: very subtle color created by mixing prismatic color with a lot of its complement.

Achromatic Gray: created by mixing black and white (no hue.)

Color Temperature:

Warm: red = advance

Cool: blue = recede