

# COLOR

3/8

2nd Grade ART = Color wheel

Physics

Neuroscience

Perception

Design

What is Color (559 review) physics (distributions)

Cones, metamers, ...  $\equiv$  TRICHROMATICITY

non-spectral colors: white, black, gray, purple

Measuring Color

RGB (non-linear)

XYZ (imaginary primaries)  $x$   $y$   $Y$   $x = \frac{X}{X+Y+Z}$

Perceptual Color spaces

Luminance Factoring

LAB

DISPLAY COLOR SPACES

ARTIST FRIENDLY COLOR SPACES

HSV HLS

hexcone / angle

3/8 -2

What is color good for:

unordered / categorical

how many categories?

how distinctive?

← perceptual distance  
←

color as landmarks on a scale

color for continuous scales

Connotations of Color ← culture, mood, aesthetics (emotional response)

Contrast ← what colors work

WORKING w/ Luminance

Iso Luminance

Contrast Needs vs. Size

Color Interaction effects