> color theory

> objective(s):

Students will learn the fundamentals of color and how they are applied in graphic design.

> instruction:

STEP 1: FUNDAMENTALS OF COLOR VIDEO

• watch Fundamentals of Color
- go to https://youtu.be/Eask0Z_ofvE

STEP 2: MHSCG COLOR GUIDE

• review the official MHSCG Color Guide
- go to http://www.mhscomputergraphics.com/uploads/1/5/1/3/1513764/_mhscg_color_guide.pdf
  this is students' number one resource for color in Computer Graphics
- most important content
  - Color Schemes (page 4)
    - students must know:
      - Monochromatic, Analogous, Triadic (which includes Primary and Secondary), Complementary and Split Complementary
  - Color Mixing (page 5)
    - students must know:
      - Value is lightness and darkness
        - Tint is adding white; Shade is adding black
      - Intensity (or Saturation) is brightness and dullness
      - value and intensity are not the same thing
        - a color can simultaneously be too intense and too dark
  - Color Formats (page 6)
    - students must know:
      - CMYK stands for Cyan Magenta, Yellow and Key (Black) and is used in printing
      - RGB stands for Red, Green and Blue and is used for screens
  - Emotive Qualities (pages 7-14)
    - students must know: this is where they come to find emotive qualities of colors

STEP 3: EMOTIVE QUALITIES OF COLOR

• review the emotive qualities of color

NOTE: students will take notes (Google Docs, MSWord or notebook)
this list only includes the most basic/common emotive associations with the full intensities of the colors
for a comprehensive list of emorive qualities for variations of each color consult the MHSCG Color Guide

- red: anger, love, power, hot
- orange: energetic, cheerful, caution, warm
- yellow: happy, joy, fear
- green: life, nature, envy, sick
- blue: sad, peace, calm (light), dignity (darker), cold
- violet: royalty, mystery, spiritual
- brown: natural, reliable, conservative (tan), comforting (reddish)
- black: death, dark, formal, serious
- white: purity, light, innocent
- gray: basic, practical, impartial

continued on page 2

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STEP 4: ADOBE COLOR PALETTE GENERATOR

- go to https://color.adobe.com/create/color-wheel
- demonstrate Color Wheel
- have students explore Color Wheel

STEP 5: FUN COLOR FACTS

- why magenta is not a color
  - watch *Magenta is All in Your Head* (https://youtu.be/DRuPF6JtWdw)
  - any color that does not appear in the visible spectrum is 'non-spectral'
- what is the 'after image effect'?
  - the after image effect is a type of optical illusion in which an image continues to appear briefly after no longer looking at the image
    - when you stare at a color too long, it fatigues your eye's cones and 'burns' the image into them; when you look away (particularly at something white) you will briefly see the image in the opposite colors of the original image
  - after image effect example 1
    - go to the Color Tricks folder and open the After Image Effect folder
    - open After Image Effect.psd
      - Reverse, Grayscale Without Dot and Original layers should be showing
    - step 1: have students stare at the black dot without blinking for 15 seconds
      - students may need to reposition in the room to be more centered on the projector screen
    - step 2: while they continue staring, hide the Reverse layer
      - students should briefly see false colors
    - step 3: have students blink or move their eyes and the false colors should disappear
      - they will see the image is actually grayscale
    - ste 4: hide the Grayscale Without Dots layer to reveal the original image
  - after image effect example 2
    - go to the Color Tricks folder and open Pink Dots
    - step 1: have students stare at the cross in the middle
      - as the dots blink in sequence, they should see green
    - step 2: have students follow the blink and they should see no green

> assessment: Color Quiz

- open Color Quiz.pdf
- share and review the questions and answers
- assign assessment date and administer
- grading
  - refer to Color Quiz_key.pdf for answers
  - each question is worth two points
    - questions with two parts are worth one point for each part