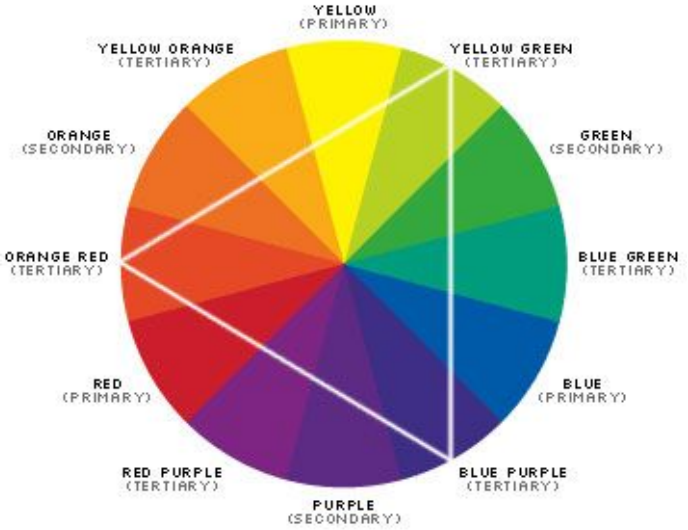
COLOR GRADING & THEORY

Explorations– CJ Hoo


01
COLOR THEORY

THE COLOR WHEEL

Shows the relationship between colors.



TRIADIC COLOR SCHEME

- three colors evenly spaced on the color wheel (equilateral triangle)
- the first color in triadic color palettes is the dominant color while the colors that follow are accent colors

ANALOGOUS COLOR SCHEME

- next to each other on the color wheel
- usually a primary with a secondary and tertiary color

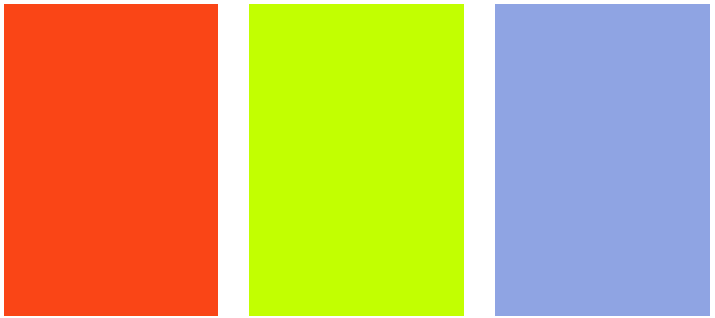
COLOR SCHEMES

TRIADIC COLOR SCHEME

Yellow-green (renewal)

Blue-violet (tranquility)

Red-orange (energy)



ANALOGOUS COLOR SCHEME

Violet (mystery)

Red-violet (intoxication)

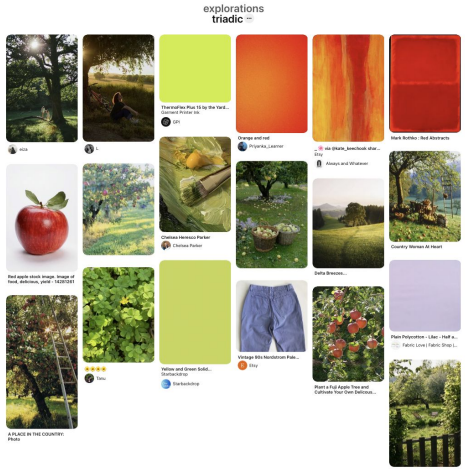
Red (danger)

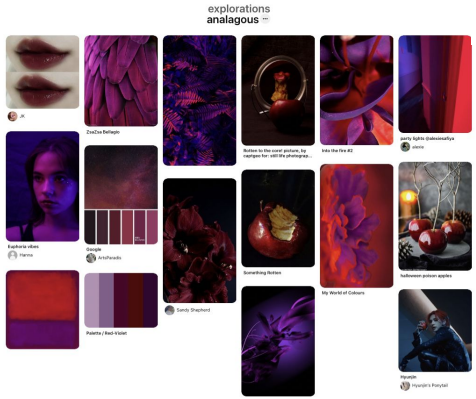

02
PRE-PRODUCTION

INSPIRATION & PLANNING

BRAINSTORM: THE APPLE

- *westwind (under tree)*
  - *triadic color scheme*
    - *yellow-green, red-orange, blue-violet*
    - *red-orange is accent*
  - *tree and grass (yellow-green, saturated)*
  - *apple (red-orange, saturated, small)*
  - *light wash denim (blue-violet, desaturated, tinted)*
  - *temperature: warm*
- *bedroom/studio*
  - *analogous color scheme*
    - *red, red-violet, violet*
    - *red is dominant*
  - *apple (red)*
  - *lighting (half red, half violet)*
  - *temperature: cool*
- *graphic match cut to combine into one scene eating poison apple*
- *end with death at westwind (change meaning of colors)*





03 | PRODUCTION

LIGHTING & WHITE BALANCE

SPLIT LIGHTING

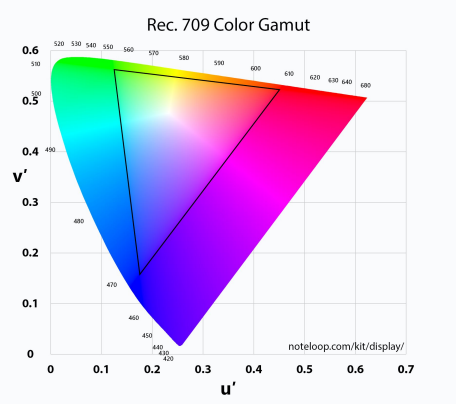
WHITE BALANCE

04 | POST-PRODUCTION

COLOR SPACES

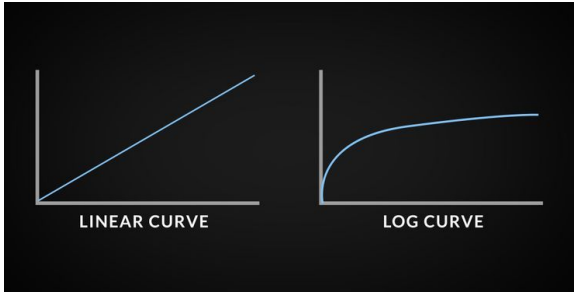
COLOR SPACE

- range of colors on a spectrum that can be interpreted and displayed on a visual plane
- most common color space is Rec.709



LOG

- uses optimized gamma curve to record an image containing as much info as possible in highlights and shadows
- uses a logarithmic curve rather than a linear curve to record highlights and shadows
- pushes lowlights up to bring out more detail, pulls highlights down to avoid overexposure in camera sensor



CAMERA → DISPLAY

MANUAL

- for a very specific look
- can't trust your eyes
- basically just guessing what your final video looks like

LUTS

- look up table
- a file containing instructions for replacing one RGB value with another- based on hue, luminance, or saturation
- used to speed up color grading process
- just a fixed table of values; the user can't adjust the results based on the type of image being input.
- (So if a LUT is designed to increase overall brightness by 10 percent, but an image is already overexposed, the LUT will just make it worse)

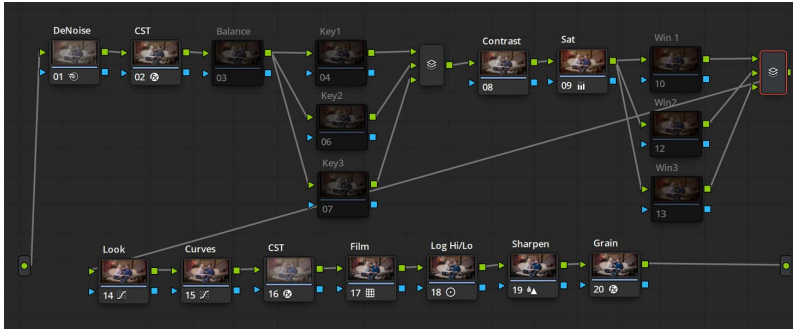
COLOR MANAGEMENT

- complex mathematical functions that manipulate an image based on the values being input by the image, rather than being based on fixed values in a table
- more precise than LUTS
- better than trying to adjust contrast and saturation manually/guessing

DAVINCI RESOLVE

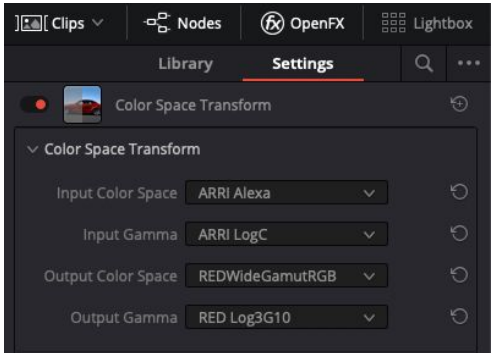
NODES

- like layers in photoshop; each node is a graphical representation of each correction to color
- allow user to add adjustments and effects in an organized and non destructive way (easy to go backward or forward in steps)



COLOR SPACE TRANSFORM

- color management on a node-based level
- input color space and gamma: Blackmagic Design Pocket 4k Film
- output: Extended Video 5 (looks better, but still meets Rec.709 requirements)
- put CST node at end to preserve information (do color grade first)

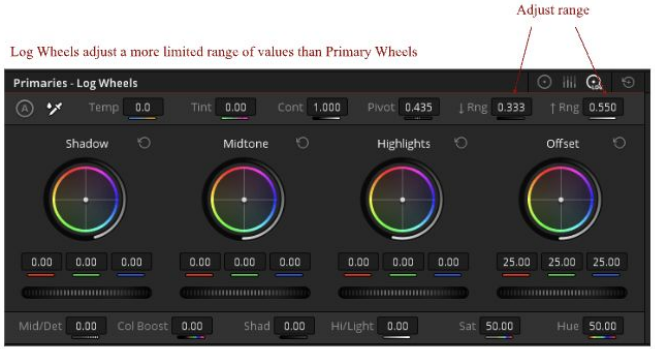


DAVINCI RESOLVE

PRIMARY WHEELS

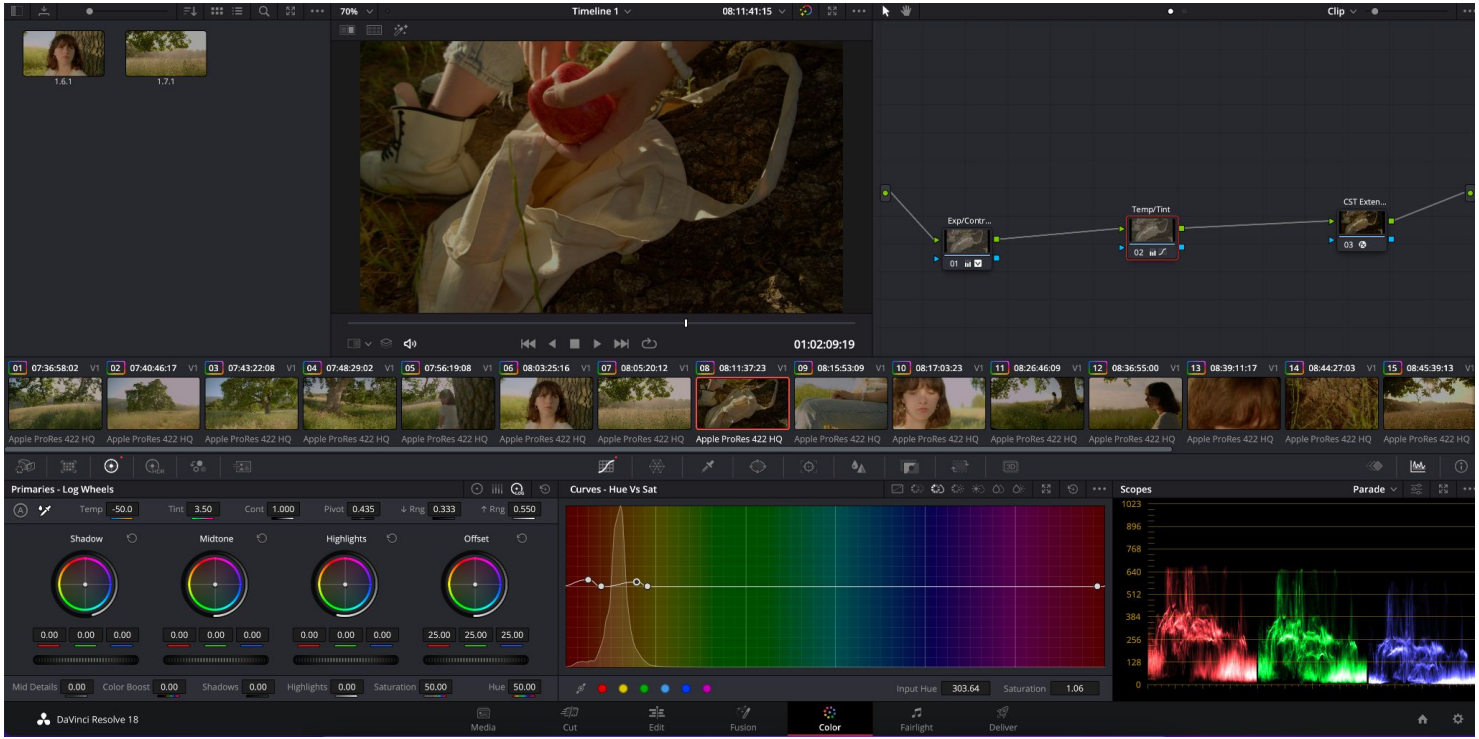
CURVES

LOG WHEELS



DAVINCI RESOLVE

HUE VS. SATURATION CURVE



LOG → CST → GRADE