The Link to the Online and Constantly Updated Version of this Document HERE

As mentioned in the Color Kit [READ ME], we want to have the ability to create a Color Space based on how we think colors should mix.

Alternative Mixing Methods

We can construct an Alternative Color Space (and therefore a mixing method) by…

(1) Defining a Color Cube's Key Points. By defining the...
- **(1)** Center and Corners (and imply the rest)
- **(2)** (1) and Face centers (and imply the rest)
- **(3)** (2) and edge centers

(2) Defining how Key Colors should mix directly [with a matrix]. By defining how…
- **(1)** Primary Colors Should Mix (and implying the rest) [3x3=9]
- **(2)** (1) and Secondary Colors Mix (and implying the rest) [6x6=26]
- **(3)** (2) and Tertiary Colors Mix (and implying the rest) [12x12=144]

(3) Choosing to use a particular Color Mixing Algorithm depending on the 2 colors you are mixing
- EX: if you are mixing Red and Yellow.. use RGB mixing… if you are mixing Yellow and Blue use RYB mixing
- We Will Have Multiple Tables Depending on the (1) Color Spaces and (2) Mixing Methods
  - Right Now We Have 3 Color Spaces and 3 Mixing Methods… so we will have 9 Tables for Each Mixing Type (additive and Subtractive)
- Each Cell in the Table Contains (1) The Color That Mixture Yields Given The Algorithm (2) Its Ranking Within its Mixing Type [additive or subtractive]
  - The Lower The Ranking The Better (1 is first place… there we prefer to use this mixture)

Other Mixing Methods

- mix 2 colors at a time with (known algos below)... gets their average or the midpoint (assuming equal proportions)... based on that line (made from 3 points) lerp between them depending on the ratio of those 2 colors
  - colorAveraging
  - colorComponentAveraging
- mix 2 colors at a time with (known algos below)... both algos were originially created with integer porportions in mind.... so convert their quantities into integers… mix… and then convert back to actual quantities
  - colorAveraging
  - colorComponentAveraging

- Other Mixing Methods Described in Color Kit [LINKS]