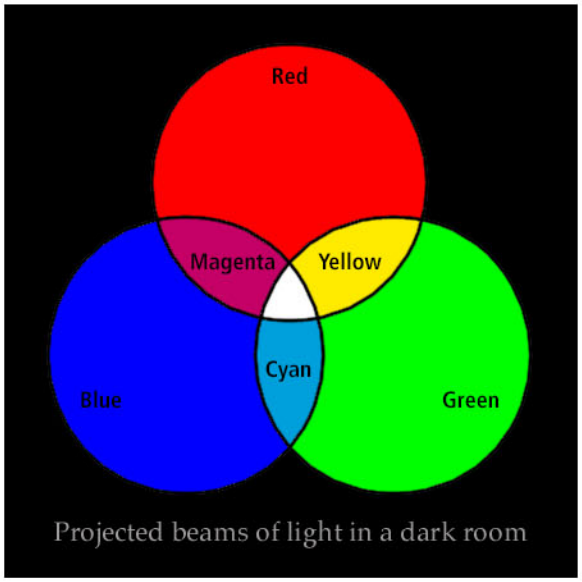
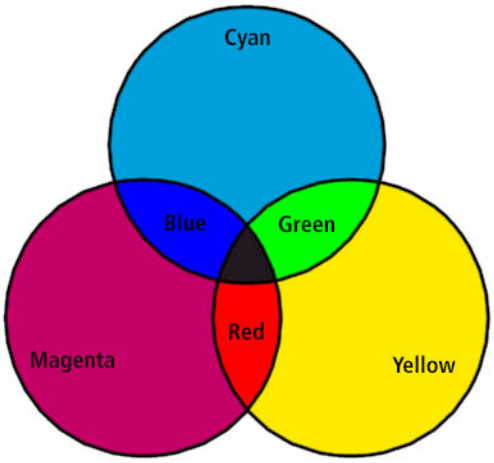


Projected beams of light in a dark room

The Additive Color Principle

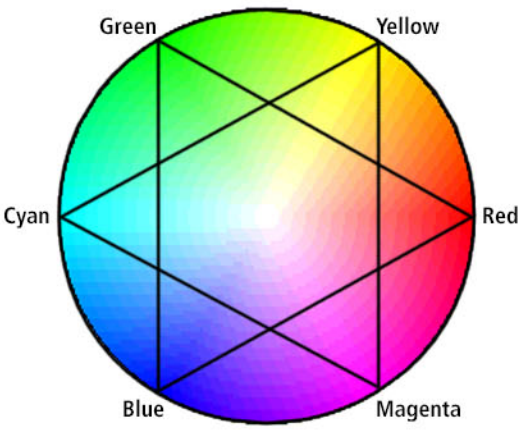
In the additive color process, separate colored beams of red, green, and blue light are mixed to form any color in the visible spectrum. When the three additive primaries are mixed in equal proportions, they appear as white light to the human eye. Red, green, and blue are the primary components of light. Called additive primaries because they introduce color where none exists (black), each of these colors transmits about one-third of the spectrum's wavelengths; the addition of any one of these colors to the other, when projected in separate beams, can produce other colors, called subtractive primaries or secondary colors.



Colored filters overlapped on a 5000°K light source

The Subtractive Color Principle

The subtractive color method starts with white light and subtracts from it the wavelengths of the three additive primaries. This process makes use of the secondary colors, which are the complements of the additive primaries. The subtractive primaries are cyan, magenta, and yellow. These colors, in combination, absorb or subtract the wavelengths of the additive primaries. Black is formed when equal amounts of all three overlap. Each subtractive primary absorbs the wavelengths of its compliment; cyan absorbs red, magenta absorbs green, and yellow absorbs blue.



The Color Star

A primary and a secondary color whose light (in similar situations) combines to make white light are called complementary colors. On the color star, complements are opposite each other -- such as blue and its complementary color yellow.