



## COLOR IS A PROPERTY OF LIGHT

White light can be divided into its component parts by passing it through a prism. The light is separated by wavelength and a spectrum is formed. Sir Isaac Newton was the first to discover this phenomenon around 1671-72.

The traditional color name of a specific wavelength of light is a hue. All of the colors of the spectrum are hues. Red, Orange, Yellow, Green, Blue and Violet.

Every Hue has three distinct properties: **Value, Temperature and Intensity**. To understand color you must understand how these three properties relate to each other.

### VALUE

Value is concerned with the light and dark properties of color. All colors exhibit these properties.

The hues have a natural value where they look the purest. Some colors, like yellow, are naturally light, while others like violet, are darker.

All hues can be made in all values. Adding white pigment will make any pigment lighter. Adding black pigment will make most pigments darker, but will cause yellow pigment to shift in hue to green because black is essentially a very dull blue (Yellow + Blue = Green).

### INTENSITY

Intensity (sometimes referred to as Chroma or in some books and computer programs such as photoshop, Saturation) is concerned with the purity vs. dullness of color.

### TEMPERATURE

The temperature of a color is based on the degree of warmth or coolness measured when one color stands in relationship to another color creating a contrast. This perceived temperature is usually measured relative to something else or relative to the area around it. The colors: Red, Orange and Yellow are considered to be warm because they are associated with warm phenomena (Fire, the Sun etc.)

The colors: Blue, Green and Violet are considered cool because they are associated with the cool phenomena (Ice, Water etc.) However, color temperature relationships are relative. One red can be warmer or cooler than another for instance. Color temperatures effect us both psychologically and perceptually. They help determine how objects appear positioned in space. Warm colors are said to advance -- they appear closer to the observer. Cool colors are said to recede -- they appear farther from the observer, however this can change depending on how the other two properties of color are being used.