

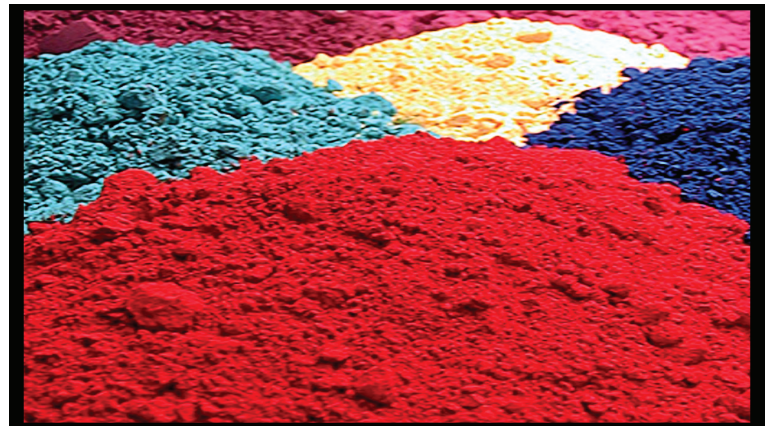
The use of color from light starts with black -- the absence of light. When all of the frequencies of visible light are radiated together the result is white (sun) light. The color interaction is diagramed using a color wheel with red, green and blue as primary colors. Primary here means starting colors. These are the three colors that the cones in the eye sense. This is the RGB color system (Red, Green and Blue) used in Video and Computers.

The primary colors mix to make secondary colors: red and green make yellow, red and blue make magenta and green and blue make cyan. All three together add up to make white light. That is why the theory is called additive.

You can see an example of light theory in action almost every day on a computer monitor or a color television. The same three primary colors are used and mixed by the eye to produce the range of colors you see on the screen. This theory is also used for dramatic lighting effects on stage in a theater.

COLORS FROM THE USE OF PIGMENTS

Pigments behave almost the opposite of light. In pigments a black surface absorbs most of the light, making it look black. A white surface reflects most of the (white) light making it look white. A colored pigment, green for instance, absorbs most of the frequencies of light that are not green, reflecting only the green light frequency. Because all colors other than the pigment colors are absorbed, this is also called the subtractive color theory.



If most of the green light (and only the green light) is reflected the green will be intense. If only a little is reflected along with some of the other colors the green will be dull. A light color results from lots of white light with only a small amount of color reflected. A dark color is the result of very little light and color reflected.

The primary colors when using pigments are generally some variation of Yellow, Red and Blue, (the specifics vary depending on whether you are using inks, paint, pastels etc.)

It is hard to use color effectively. The ability to use colors is difficult to learn and comes with lots of experience and a trained eye. Color has such strong psychological, and even physiological, effect on us that any formula about its use would be doomed to failure.

The best advice is simple: keep in mind what you are trying to communicate and think of color as a series of relationships. Look carefully and critically at how color works in nature and how other artists have applied it. Learn first by observation.