ADDITIVE COLOR THEORY deals with light, as that on a television monitor. There are only three colors of light which are present on your television or computer monitor; RED, BLUE and GREEN. These colors are called PRIMARY COLORS because their mixture can be used to make all colors but they cannot be made by the mixture of any other colors. The mixture of two of these Primary colors produces a SECONDARY COLOR. The ADDITIVE SECONDARY COLORS are as follows: the mixture of blue and red makes MAGENTA; the mixture of blue and green makes CYAN; the mixture of red and green makes YELLOW.

SUBTRACTIVE COLOR THEORY deals with surfaces, including paint. Our perception of a colored surface is determined by SELECTIVE ABSORPTION. The three SUBTRACTIVE PRIMARY COLORS are YELLOW, MAGENTA and CYAN. The SUBTRACTIVE SECONDARY COLORS are GREEN (a mixture of cyan and yellow); RED-ORANGE (a mixture of yellow and magenta) and BLUE-VIOLET (a mixture of magenta and cyan).

COMPLEMENTARY COLORS are those colors which are located opposite one another on the color wheel. These color pairs have unique properties, in that, they produce maximum contrast when viewed as adjacent fields but, when mixed together, create a gray hue.

SELECTIVE ABSORPTION is a phenomenon which determines why a surface appears a specific color. White light is made up of all the colors of the spectrum. The chemical composition of a surface causes some of the wavelengths of light to be absorbed and others to be reflected (the ones we see).

OPTICAL COLOR MIXTURE is a phenomenon in which small areas of color are mixed in the brain to create the illusion of many continuous colors. This phenomenon can be seen in a television monitor, a mosaic and in the Pointillist paintings of George Seurat.

SIMULTANEOUS CONTRAST is a phenomenon which explains how the same colored surface appears different depending upon the context of the surrounding or adjacent color or colors.

The THREE PHYSICAL PROPERTIES of COLOR are HUE, VALUE and INTENSITY. HUE is determined by the wavelength of light and describes a color’s position on the COLOR WHEEL. VALUE refers to the relative lightness or darkness of a given color. INTENSITY refers to the purity of a color; where it falls on a continuum from the pure spectral hue through gray.