Color Printing: An Example of Subtractive Color Mixing



To Do and Notice:

Examine the flaps on the boxes provided. There you will see cyan, magenta, yellow and black (CMYK) "test dots" indicating the colors used to print the box. These same colors are clearly visible on the color inkjet printing cartridge.

Use a magnifying glass to view a color picture in a magazine or book or a colored image produced by a color inkjet printer. Adjust the distance between the magnifying glass and image until an underlying structure becomes visible. What do you observe?

What's Going On?

Both colored filters and pigments selectively absorb certain colors. Cyan, yellow, and magenta are referred to as the subtractive primaries because in the proper combinations they may be used to produce any color in the spectrum. For this reason, cyan, yellow, and magenta are used in color printing. Cyan, yellow and magenta should produce black when they overlap. They don't because they are not ideal filters. For this reason, black ink is used. Black ink is also used to introduce text.