

Filter Explorations

Filters selectively absorb certain frequencies of light and transmit others.

To do and notice:

Hold up to the white light one of the filters cyan, magenta or yellow. What do you notice about the color of the light? White light contains all of the colors of the visible spectrum. What colors are absorbed? What colors are reflected?

Place 2 filters on top of each other and notice what happens when you hold them up to the white light.

Try other combinations of filters.

Did you notice anything about the colors that are created when 2 filters are combined?

What's going on?

When a yellow filter is placed in front of white light, the yellow filter will absorb as much blue light as possible and will allow both red and green light to be transmitted.

A cyan filter placed in front of a white light will absorb as much red light as possible and transmit green and blue light.

A magenta filter placed in front of white light will absorb as much green as possible and transmit red and blue light.

These filters are not perfect and do allow some of all the colors to be transmitted.

