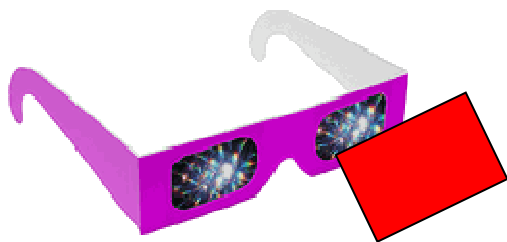


# What Do Color Filters Do?

## To Do and Notice:

1. You will need a pair of Lazer Amazer diffraction glasses, six color filters (red, green, blue, magenta, cyan and yellow) and a source of white light such as incandescent lamp or fluorescent source.
2. View the white light source through the diffraction glasses. You will see many spectra surrounding the source. What colors do you see in each of the spectra?
3. With the glasses on, close one eye and focus your attention on one of the many spectra. Now slowly slide the red filter over the diffraction lens covering the open eye. What do you observe? Which color or colors disappear when the filter is in place?



4. Repeat step 3 using the green, blue, magenta, yellow and cyan filters. Observe which color(s) seem to disappear for each filter.

## What's Going On:

A filter only allows only certain colors of light to pass through. That is, a filter subtracts (absorbs) certain colors from white light. A red filter transmits only red light – it absorbs blue and green. A green filter transmits only green light – it absorbs red and blue. And so on.