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# NEWTON COLOUR DISC

CAT NO. PH0582A

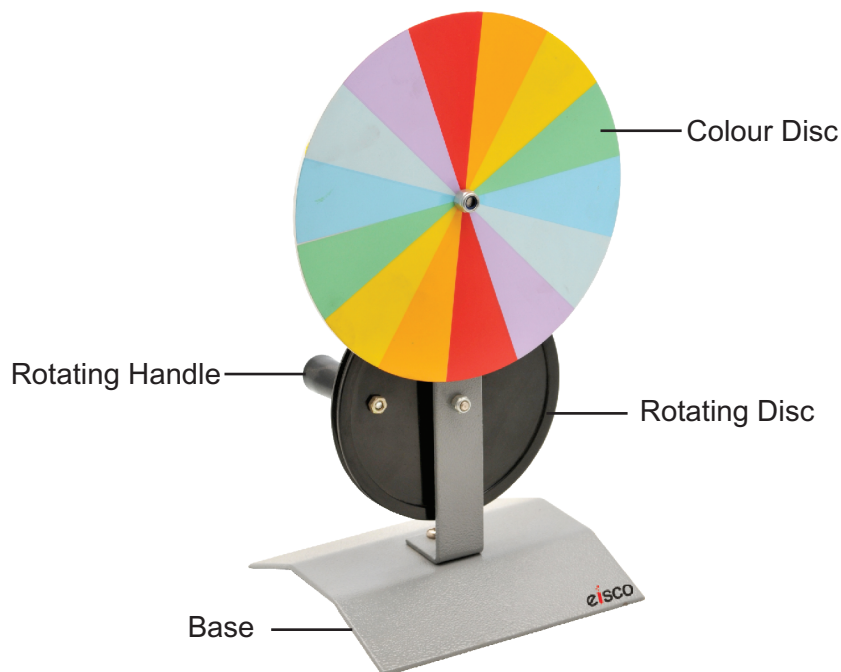


## Experiment Guide

## GENERAL BACKGROUND:

This clever apparatus is an excellent introduction to rainbows and the dispersion of light. White light is not colorless, but is made up of the entire spectrum of visible light. When white light is sent through a prism, the colors of the visible spectrum are separated due to each color having a slightly different index of refraction. Refraction is the change in speed of a wave due to a change in medium (the material the wave travels in). This change in speed brings about a change in wavelength, which alters the direction of the wave. In other words, as white light moves from the air into the prism, each color of visible light takes its own path as it travel through the prism and then back out into the air. This exact thing happens during the formation of a rainbow. Instead of a prism being the cause of refraction, it is water droplets in the air. Not only can white light be separated into the full spectrum of visible light, but if a second prism is used, the full spectrum of light can be recombined to form white light.

## DIAGRAM LABELING ALL PARTS:



## OPERATING INSTRUCTIONS:

Place one hand on the base to secure the apparatus and use the other hand to rotate the handle located at the back of the apparatus. Rotation can be clockwise or counterclockwise. A continuous smooth rotation is best suited to see the effects of the Newton colour disk. When the disk rotates fast enough, the full spectrum of color appears almost white (cream).

Manufactured by :

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