

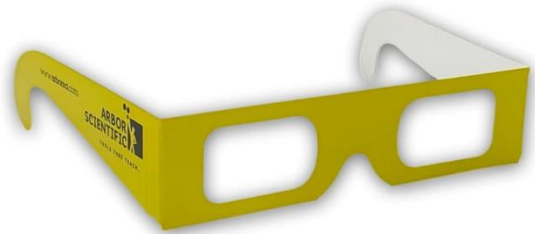
## INSTRUCTIONAL GUIDE

### Contents

- Pair of 3D Glasses
- Instructional Guide

#### Recommended for activities:

- [Color Mixing Projector \(P2-9555\)](#)



### Background

The 3-D glasses contain two diffraction gratings. These gratings act like prisms and shift light waves at different angles depending on their frequency (or color.) They are more heavily weighted for certain colors than for others. If you are looking at a colorful image on a 2-D surface, then your eyes have to focus in on each color at different angles. The glasses trick your eyes into focusing in on red as if it were closer and blue as if it were further away. All other colors are staggered in between.

### Activities

1. View any brightly colored material with the glasses on. Also, try viewing computer graphics and even television shows. Discuss the difference between colors and frequency. Introduce the notion that different colors shift at different angles.
2. You and your students can produce your own artwork to view. Use colored markers and a black marker for outlines. Remember that red is always closest and violet is always farthest away. The rest of the spectrum is staggered between. Experiment with different techniques, such as color blending, black and white out lining, and surrounding colors with other colors. Computer graphics with animation can capture the essence of the 3-D glasses.

### Related Products

**Giant Prism (33-0230)** This is the biggest solid prism you'll find anywhere! 3" equilateral prism, 4" long.

**Rainbow Glasses (P3-6300)** These popular glasses will delight your students while offering you a cost effective, organized way to utilize diffraction gratings in class.

**HoloSpex Glasses (P3-6200)** If you think Rainbow Glasses are cool, you've got to see this. Turn a string of ordinary white lights into a string of rainbow snowflakes!