

# WORKSHOP EXTENSION ACTIVITY

Built by The Home Depot Kids Workshop

## March Binoculars Workshop

Ages 5-12

### CONNECT.

Every day, people use a variety of tools to help make their vision even stronger. What are some tools you have used (or have seen others use) to see better?

### INVESTIGATE.

Different lenses are designed to improve vision in specific ways. Let's test a few common lenses to see where they work best!

#### You'll need:

- Your Binoculars
- A newspaper
- Two pieces of paper and a marker
- Masking tape
- Magnifying glass
- Plastic stretch wrap
- Small acrylic or plastic sheet
- Cup of water
- Optional lenses (if you already own one): Smart phone with a camera, telescope, etc.
- Lens Chart, included here

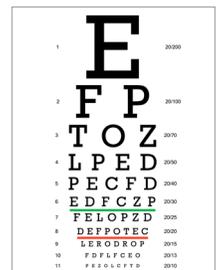


1. Get ready for your experiment by preparing two ways to test your lenses:

- First, open up your newspaper on a table. You will use this for your close-up vision testing.
- Next, use the marker and a piece of paper to create an eye chart that you can tape to a wall in your home. You will use this chart for your far-away vision testing!

2. Now let's experiment:

- Begin with your binoculars, and test how they affect your close-up vision by standing over the table and trying to read the newspaper. What do the letters look like? Do the binoculars help



your close-up vision or make it worse? How? Jot your observations in the Lens Chart below.

- Next, test how the binoculars affect your far-away vision by standing as far as possible from the vision chart. Do they help your far-away vision, or do they make it worse? How? Continue to record your observations.

3. Repeat Step 2 with the magnifying glass, water droplet\*, and any of the other optional lenses that you have in your home.

\*Note: To create a water droplet lens, place the acrylic/plastic sheet on top of the newspaper. Dip one finger into a cup of water and let two or three droplets fall onto the sheet and merge into one bigger drop. Then look through the water droplet and see if it affects how you can read the newspaper.

### Lens Chart

Lens Type	Does this help you see close up?	Does this help you see far away?
Binoculars		
Magnifying Glass		
Water Droplet		You won't use the water droplet to test your far-away vision!
Other:		

### INNOVATE.

Grab your second piece of paper and use the results of your lens testing to create a quick guide to accompany your new binoculars. The guide's goal will be to help others select which lens to use in different situations. Begin with your binoculars but be sure to also include tips about the other lenses that you tested.

The idea starter below may be a good starting point for your guide (but be creative too!):

*Guide Idea Starter:* [Lens Type] can help you see better [close up or far away]. When you look through this lens, [what happens?]. Using this type of lens may be especially helpful when you are trying to see \_\_\_\_\_.

Once your guide is written, fold it up and store it with your binoculars so it's ready the next time someone needs help with their vision!

## MAKE. CREATE. EXPLORE.

