



Forest Preserve District of DuPage County

# Binocular Basics



## Parts of binoculars

1. Eyepieces are glass lenses that are looked through. Eye cups can be raised or lowered, depending on if the user wears glasses, to provide the proper distance between the eyes and lenses.
2. Objective lenses are front-facing and gather light.
3. Barrels are the two long tubes connecting the eyepieces to the objective lenses and where the binoculars are held.
4. Central focus wheel adjusts the focus for both eyepieces.
5. Diopter adjustment is a wheel on the right eyepiece that turns slightly, one way or the other, to compensate for differences in vision between the users eyes.
6. Strap is used for carrying the binoculars, hung over the head and around the neck.

## Overview

Become familiar with the use of binoculars. Learn how to use binoculars to observe wildlife.

## Skills

Observation

## Objective

- Identify the parts of a pair of binoculars
- Set up binoculars for personal use
- Practice focusing on objects in the field of view
- Practice observing wildlife through binoculars

## Materials

Binoculars

## Background

Binoculars are a tool for making optical observations of subjects from a distance. Binoculars work by reflecting light waves with a series of lenses into the user's eyes allowing the user to see details not visible with the naked eye. The objective lenses collect and focus light, while prisms invert and correct the image. The eyepiece lenses further magnify the image for clarity and detail. Overall, binoculars enhance our ability to observe and appreciate distant subjects.



### Adjust the Binoculars:

- **Adjust the Width:** Hold the binoculars up to your eyes and adjust the distance between the eyepieces until you see a single circle of light.
- **Set the Diopter:** Close your right eye and use the central focus wheel to focus on a distant object with your left eye. Then, close your left eye and open your right eye, using the diopter adjustment to focus the same object clearly.

### Hold the Binoculars Properly:

- **Grip:** Use both hands to hold the binoculars steady. Place your thumbs on the bottom and your fingers on the sides for a secure grip.
- **Stabilize:** Tuck your elbows into your body for added stability, especially when using higher magnifications.

### Finding Your Target:

- **Look Through the Binoculars:** Start with your eyes without the binoculars to locate your target.
- **Bring the Binoculars to Your Eyes:** Raise the binoculars to your eyes while keeping your focus on the target.
- **Use the Central Focus Wheel:** Slowly turn the wheel to bring your target into focus.

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### Practice:

Start by focusing on stationary objects like trees or buildings before moving on to moving subjects, like birds or wildlife. This will help you get used to adjusting the focus and finding your target.

Locate objects closer, then further away to practice focusing the binoculars. Try moving back and forth between a close object and a far object.

### Maintenance:

- **Keep Them Clean:** Use a soft lens cloth to clean the lenses. Avoid using your shirt or rough materials, as they can scratch the glass.
- **Storage:** Store binoculars in a case when not in use to protect them from dust and damage.

### Tips:

- **Magnification vs. Objective Size:** Understand the specifications of your binoculars (e.g., 8x42) where “8” is the magnification and “42” is the diameter of the objective lens in mm. Higher magnification gives you a closer view, but can make it harder to keep the image steady.
- **Field of View:** Wider fields of view make it easier to track moving objects, while narrower fields allow for more detailed observations.

With these steps, you should be well on your way to enjoying the sights around you through your binoculars! Happy observing!