



✓ Pre-Visit

✓ Field Site

Activity: Using Binoculars

Appropriate Grade: All grades

Oregon Content Standard: Scientific Inquiry: COLLECTING AND PRESENTING DATA

Conduct procedures to collect, organize, and display scientific data.

National Science Standard: Content Standard A - Abilities necessary to do scientific inquiry: use appropriate tools and techniques to gather, analyze, and interpret data.

Background Information: The ability to observe birds through binoculars is critical to observing and studying birds. Binoculars magnify objects through the use of lenses and a prism which bends the light as it enters the binocular.

Learner Objective: The student will demonstrate appropriate use of binoculars by properly handling and using binoculars to sight and observe stationary and moving objects.

Materials Needed:

- one pair of binoculars per student (binoculars available for check out from XXX)
- laminated bird pictures with clues (in kit)
- Bird field guides

Procedure

1. Go over binocular safety tips, page 2.
2. Go over the parts of the binoculars with students using the diagram given on page 2.
3. Give each student a pair of binoculars, have them place the strap around their necks demonstrating the proper way to handle binoculars. Explain that dropping binoculars will permanently break them.
4. Have students with eyeglasses fold the rubber eye cups back.
5. Have students look at a stationary object without the binoculars. As they are looking at the object, have them raise the binoculars to their eyes **without** taking their eyes off the object. This helps the student find the object in the binoculars and is useful when observing moving animals.
6. Use the focus knob to make the object clear.
7. Next, have students work in teams to identify the bird pictures hung in trees or on buildings around your school yard or site (you will need to post them ahead of time).
8. Have students observe the bird pictures from a distance and use the binoculars to observe, read the clues, and identify the bird. Groups should try to identify as many as possible.

Further study

Once students have mastered the use of binoculars, observe birds in the field making notes in field journals and/or conducting the “Observing Bird Behavior” activity X or the “Student Bird Study” activity X.



✓ Pre-Visit

✓ Field Site

Activity: Using Binoculars

Safe Use of Binoculars

1. Always wear binoculars around your neck to avoid dropping them. Dropping them can permanently break them by knocking the lenses or prisms out of alignment.
2. Never look at the sun with binoculars, the sun's rays are powerful through binoculars and may permanently damage your eyes.
3. Walking while looking through binoculars can be dangerous because you may not see objects in front of you.
4. Keep your fingers off the lenses as fingerprints may smudge the glass making it difficult to see things clearly.
5. Clean binoculars with the soft cloths provided or a cotton cloth or t-shirt. Be sure to blow the dust off first to avoid scratching the glass.
6. Have fun!

Diagram of Binocular Design

