# Community Science

Pollinators – Grade 3

## Lesson 6: Binocular ID

**Duration:** 70 minutes **Location:** Indoor/Outdoor



### Overview

In this lesson students will learn how to use binoculars while observing different animal characteristics.

### Learning objectives

By the end of the session, students will be able to:

- Identify animals based on observable features
- Use binoculars safely and effectively to sight animals far away.
- Understand appropriate behaviour when going out to observe animals.

### Curriculum links

Grade: 3

Subject and Unit:

- Classify a variety of animals, based on observable characteristics; e.g., limbs, teeth, body covering, overall shape, backbone.

### Equipment required

- ☐ Binoculars
- ☐ Pencil
- ☐ Paper
- ☐ Portable writing surface

# Lesson 6: Binocular ID



- ☐ Classroom supplies of your choice (e.g., stapler, ruler and marker)
- ☐ 6 Guess Who Sheets
- ☐ 6 clips
- ☐ 6 bean bags
- ☐ 6 Recording Sheets

## Lesson plan

| Time | Activity | Equipment Needed |
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| 10 minutes | Show classroom supplies (*stapler, ruler, marker)* and discuss their appropriate uses *(Staplers are for stapling paper, not your hand. Rulers are for measuring not for hitting others. Markers are to be used on paper, not your desk)* and what their advantages are to the user *(When we use staplers, our papers stay together and don't get lost or make a mess. When we use rulers our lines are straight and we can measure distance accurately. When we use markers it makes our images more beautiful.)*.<br><br>Display binoculars and discuss quality and respect. *(Binoculars are a high quality piece of equipment that we are fortunate to use. These binoculars have been loaned to us by a group of citizen scientists.)*<br><br>What are binoculars used for? *(Binoculars are used to see items far away.)*<br>Who uses binoculars? *(Many scientists, photographers, explorers and everyday people-citizens, like you and me, use binoculars).* | • Classroom supplies. E.g., Ruler, stapler and marker. |

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| | - How should we treat them? (*We need to treat them with the same respect and care that we show our things and people here. This means we will not swing them around, drop them, hit them against things, etc.)*<br><br>Discuss lens care. *(Try to keep dry and clean. Do not use your fingers to wipe dirt and sand away, blow off debris and use a soft cloth to wipe the rest away.)* Discuss keeping the strap around the user's neck. *(Do not swing it around or hit it against other items. If you are not using the binoculars, they should be in their protective case.)* Respect the tool and be its' caretakers. | |
| 3 minutes | Discuss parts of binocular: eye piece, magnifying lens, width adjustment, focus wheel, neck strap. *(Use image provided to help children identify different parts.)* | • Binocular diagram |
| 2 minutes | Demonstrate using binoculars.<br>• Find the object you want to see with your naked eye.<br>• Then bring the binoculars up to your eyes.<br>• Do you see black? Adjust the binocular width to your eyes until you see one circle and then use the focus wheel until you see the object clearly. | • Binoculars |
| 10 minutes | Indoor Binocular Activity<br><br>• Situate the students at the far end of your classroom or hallway. Students should be placed in teams of two. Pass out binoculars, one per group.<br>• Explain that teams need to practice wearing binoculars around their necks; adjusting them for their eye width and focusing using the focus wheel. After five minutes of practice, place typed Transition Instructions | • Binoculars<br>• Pencil<br>• Paper<br>• Portable writing surface<br>• Transition Instructions |

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| | on the far side of the room/hallway, have students use their binoculars to focus, read and follow the instructions.<br><br>Transition Instructions<br>1. Read these instructions SILENTLY to yourself.<br>2. When you have finished reading all the instructions, pass the binoculars to your partner if they have not read them.<br>3. With your partner, go get a piece of unused paper, a pencil, and something solid to write on (a clipboard or a book).<br>4. Sit together and wait silently for further instructions. | |
| 30 minutes | Schoolyard/Gym Binocular Activity<br><br>Each team will be collecting, guessing and recording their answers for the Guess Who sheets. Each Guess Who sheet has a picture of an animal to which the group needs to:<br>a) Answer questions about the animal on the recording sheets provided in the kit (one per group);<br>b) Guess what the animal is based on the observable characteristics<br><br>Each team will move from place-to-place (*point out locations where you have placed the Guess Who Sheets*), stand behind the line (*bean bag you have placed far in front of the Guess Who sheets*), use their binoculars to see the photo, answer the questions, guess what the animals is, then go to the next place, etc. When they have the 6 sheets, they report to the teacher. | • 6 Guess Who Sheets<br>• 6 clips<br>• 6 bean bags<br>• 6 recording sheets<br>• Pencil<br>• Paper<br>• Portable writing surface<br>• Binoculars |
| 15 minutes | Debrief by reviewing the answers as a group to the 6 different Guess Who sheets. Discuss why the students came to these answers. | |

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| | ○ What observations did we make about this animal?<br>○ Why do we think this is a _____?<br>○ What features can we see that make this animal unique?<br><br>Explain that scientists have to be 100% sure of the species they are documenting. Scientists cannot guess and assume what animal they saw. The same is true for citizen scientists. Citizen scientists need to be 100% sure of the animals or pollinators they are logging into their citizen science application, or else the data given to scientists may not be true. So, every person needs to pay attention to the observable features to make sure they are properly identifying the species they are recording and submitting. | |



## Extension

1. Prior to going outside, have the group brainstorm a list of appropriate field behaviours that will guide the group's actions outside. *(No running because this can scare off animals. Fast movements are not helpful because they can scare off animals. Whisper voices are best to not disturb animals nearby. Creating a signal to freeze without shouting will reduce the likelihood that animals you see will run away before everyone has a chance to see them… etc).* Have students make a commitment to abide by the guidelines and post it in the classroom as a reminder.