



Community Science

Urban Wildlife Grade 9

Lesson 4: How to take part in

Duration: 1 hour **Location:** Indoor/Outdoor – your choice!

Overview

In this lesson students will:

Find hidden QR codes (either indoors or outdoors) and scan the codes to reveal photos and videos of common species. Students will use the identification guides to identify the species to complete curriculum-linked questions. Students will then learn how to upload citizen science data to an app and discuss how this data can be used.

This session will prepare students for the upcoming practical citizen science sessions.

Learning objectives

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

- Identify commonly found species based on observable characteristics and identify the niche of this species.
- Discuss the ways in which a species is linked to others, classifying the relationship as mutualism, commensalism or parasitism.
- List ways that citizen science data can be used and discuss the role citizen science can play as a strategy for minimising loss of species diversity.

Curriculum links

Grade: 9

Science Unit A: Biological Diversity

- Identify examples of niches, and describe the role of variation in enabling closely related living things to survive in the same ecosystem.
- investigate and interpret dependencies among species that link the survival of one species to the survival of others – identify examples of symbiotic relationships and classify as mutualism, commensalism, parasitism.
- investigate and interpret dependencies among species that link the survival of one species to the survival of others – identify examples of symbiotic relationships (e.g.,



Community Science

Urban Wildlife Grade 9

Lesson 4: How to take part in

organisms that benefit other organisms by providing habitat, food, means of fertilization, or a source of oxygen) – classify symbiotic relationships as mutualism, commensalism, parasitism

Equipment required

- iPads/tablets (1 per group)
- QR codes to hide (either indoors or outdoors)
- Recording sheets and whiteboard pens (1 per group)
- Identification guides for common species

Additional information

The main portion of this session can be hosted indoors or outdoors. Before the class, hide the QR codes for students to find.



Community Science

Urban Wildlife Grade 9

Lesson 4: How to take part in

Lesson plan

Time	Activity	Equipment needed
Before lesson	Hide the 7 QR codes either indoors or outdoors.	<ul style="list-style-type: none">• QR codes
10 minutes	Explain to students that they will be practising citizen science skills today. Their task is to find the hidden QR codes and scan them to discover photos and videos of different species. They must look carefully at the animals and record what they see on their tracking sheet. Demonstrate how to scan the QR code and talk students through the example on the recording sheet.	<ul style="list-style-type: none">• Recording sheets for each group
30 minutes	<p>Split students into small groups, each group with an iPad/tablet, recording sheet and pen. Identification guides will need to be available and shared between the class. Each group must find a QR code and scan this to discover a photo or video of an animal. Looking closely at the markings on the species, students will use the identification guides to identify the species. They can then complete the other information on the recording sheet. Students will repeat this activity until they have found all 7 species.</p> <p>Species to find on QR codes:</p> <ol style="list-style-type: none">1. Mallard ducks2. Red winged blackbird3. Coyote4. White tailed deer5. Grey squirrel6. Prairie flower pasqueflower7. Tri-coloured bumblebee	<ul style="list-style-type: none">• iPads/tablets• Recording sheets and pens• Identification guides



Community Science

Urban Wildlife Grade 9

Lesson 4: How to take part in

	<p>Note: the QR codes contain a range of species for students to identify. Some will be harder to identify than others; preparing students for the practical citizen science sessions.</p>	
10 minutes	<p>Prepare the PowerPoint presentation back in the classroom.</p> <p>Slides 2-6: Now that we have collected our data, we need to share this with scientists. But how?</p> <p>We use citizen science apps to share our findings. There are many to choose from, but we are going to focus on iNaturalist. When we upload our photos, we have to add much of the same information that we collected in the session today. This tells scientists where the animal was and when!</p> <p>If you are unsure what species you have seen, you can still upload your sighting. All submissions are checked by others before the data is used by scientists!</p> <p>Your sightings may achieve 'research grade', meaning they are good enough to be used in scientific research. To achieve this you need to include a photo, date, location, ID a wild species, and at least 2/3 of people IDing your species should agree on the species.</p> <p>Slide 7: what is the data used for?</p> <p>The data we collect can be used for all sorts of things! Your data might be used by the public, by scientists, and the government!</p> <p>Citizen science:</p> <ul style="list-style-type: none">• Gives information to the government to make good decisions• Helps make rules and laws to protect animals• Helps make rules and laws to protect habitats <p>For example, we may find an endangered species in an area, which may be able to stop a building development in the area!</p>	<ul style="list-style-type: none">• PowerPoint presentation



Community Science

Urban Wildlife Grade 9

Lesson 4: How to take part in

10 minutes	Plenary Slide 8: discuss the following question: <i>What role can citizen science can play as a strategy for minimising loss of species diversity?</i>	• PowerPoint presentation
------------	--	---------------------------