



Community Science

Pollinators Grade 3

Lesson 4: How to take part in community science

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:

- Pick out key information from an animal sighting such as life cycle stage, species, and habitat.
- Identify commonly found species based on observable characteristics.
- List ways that citizen science data can be used, and how individuals can use citizen science to contribute to positive change in the world.

Curriculum links

Grade: 3

Science Topic E: Animal Life Cycles

- Classify a variety of animals, based on observable characteristics; e.g., limbs, teeth, body covering, overall shape, backbone.
- Demonstrate awareness that animals require different habitats in order to meet their basic needs of food, water, shelter and space.

Social Studies 3.2 Global Citizenship

- In what ways can individuals and groups contribute to positive change in the world?



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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

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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.



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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 animal, 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>Note: students may need assistance to identify species, and to pick out the habitat shown.</p> <p>To help facilitate group work, each team member could be assigned a task such as:</p> <ul style="list-style-type: none">• record keeper (to write notes)• species specialist (to identify species)• habitat specialist (to pick out the habitat shown on the photo or video)• detective (to find QR codes)• technology specialist (to scan QR codes)	<ul style="list-style-type: none">• iPads/tablets• Recording sheets and pens• Identification guides



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	<p>Animals to find on QR codes:</p> <ol style="list-style-type: none">1. Caterpillar2. Red winged blackbird3. Butterfly eggs4. Black-capped chickadee5. Red winged blackbird6. Tri-coloured bumblebee7. Canadian Tiger Swallowtail butterfly <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 2-5: 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>Slide 6: 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>	• PowerPoint presentation



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	<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>	
10 minutes	<p>Plenary</p> <p>Slide 7: discuss the following question:</p> <p><i>In what ways can individuals and groups use citizen science to contribute to positive change in the world?</i></p>	<ul style="list-style-type: none">• PowerPoint presentation