



Community Science

Urban Wildlife

Lesson 1: What is community science?

Duration: 45 mins to 1 hour **Location:** Indoors

Overview

In this lesson students will:

Discover what community science AKA citizen science is, its purpose, and how they can become involved. They will be introduced to ecosystems, abiotic and biotic characteristics, and an activity to explore the food web roles. Students will learn about climate change and its impacts to food webs, and our urban wildlife, as well as climate actions to take to prevent climate change in the future.

1

Learning objectives

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

- Define citizen science and understand how to contribute to solve real world problems
- Define ecosystems and identify biotic and abiotic characteristics between an intact and urban area
- Understand and apply decomposer, producer, and consumer relationships between organisms in food webs
- Understand what climate change is, why it's happening and actions to take to prevent it
- Identify intended and unintended consequences of human activities on the environment

Curriculum links

Grade: 7

Subject and Unit: Science, Interactions and Ecosystems

- identify examples of human impacts on ecosystems, and investigate and analyze the link between these impacts and the human wants and needs that give rise to them;
- analyze personal and public decisions that involve consideration of environmental impacts, and identify needs for scientific knowledge that can inform those decisions;
- analyze an ecosystem to identify biotic and abiotic components, and describe interactions among these components;
- analyze ecosystems to identify producers, consumers and decomposers;
- identify intended and unintended consequences of human activities within local and global environments



Community Science

Urban Wildlife

Lesson 1: What is community science?

Equipment required

- PowerPoint called "Lesson 1 what is citizen science (grade 7 UW)"
- Climate jug activity supplies (two water bottles labelled "sink" and "source", and jug with spout labelled atmosphere)
- iPads/tablets
- Laminated climate action activity sheets
- Erasable markers
- Computer with Wi-Fi
- Projector

2

Additional information

The students will be doing an activity that will utilize the City of Calgary Climate Actions webpage during this lesson. Please briefly refer to this [webpage](#) and its contents before the session.



Community Science

Urban Wildlife

Lesson 1: Introduction to Community Science

Lesson plan

Time	Activity	Equipment needed
3 mins	Citizen science introduction (slide 2) <ul style="list-style-type: none">- Play video on slide 2- Go through the slide notes	<ul style="list-style-type: none">• Computer with Wi-Fi• Projector
5-10 mins	DIY Ecosystem Activity (slide 3) <ul style="list-style-type: none">- Students will virtually create 2 ecosystems: one intact, one as an urban ecosystem, they will identify both abiotic and biotic characteristics in the ecosystems and compare the two- Use the PowerPoint notes as guidance- Debrief the activity with the questions provided in the notes	<ul style="list-style-type: none">• Computer with Wi-Fi• Projector
5 mins	Food web frenzy virtual activity (slides 4-5) <ul style="list-style-type: none">- Virtual activity to explore decomposers, producers, and consumers- Use the PowerPoint notes as a guide through the activity	<ul style="list-style-type: none">• Computer with Wi-Fi• Projector
15 mins	Climate change introduction and climate change jug activity (slides 5-11) <ul style="list-style-type: none">- Play video on slide 7- Go through the slide notes- Play video on slide 9 as a guide for the Climate Change Jug Activity, then perform this activity with the class	<ul style="list-style-type: none">• Computer with Wi-Fi• Projector• Climate jug activity supplies (two water bottles labelled "sink" and "source", and jug with spout labelled atmosphere)
15-20 mins	Climate Resilience Strategy Activity Sheet and conclusion (slide 12-13) <ul style="list-style-type: none">- Hand out the laminated Climate Resilience Strategy Activity Sheet and iPads/tablets to groups (should we 7 groups of students, iPads/tablets should be connected to Wi-Fi)	<ul style="list-style-type: none">• iPads/tablets• Laminated climate action activity sheets• Erasable markers



Community Science

Urban Wildlife

Lesson 1: Introduction to Community Science

- | | | |
|--|---|--|
| | <ul style="list-style-type: none">- Show students the 'Actions you can take to help limit climate change' website (linked on slide)- Read through the questions on the sheet and instruct groups to work together to answer these questions- Debrief with the class, encourage students to share their findings- Review slide 13 to close the lesson | |
|--|---|--|