

# Inner City Parks

*Ecosystems found in our inner city parks play an increasingly important role, particularly as more people continue to move into cities. The City of Calgary has over twenty parks that are located downtown. Some of these are small community and playground parks, while others are larger destination parks. The amenities at each park differs, but they all have a few important things in common. They provide habitat for wildlife, improve the quality of the air we breathe, and create a place for people to connect with nature. Many scientific studies show that being outside in parks improves our mental and physical well-being.*

## Coexisting with Wildlife

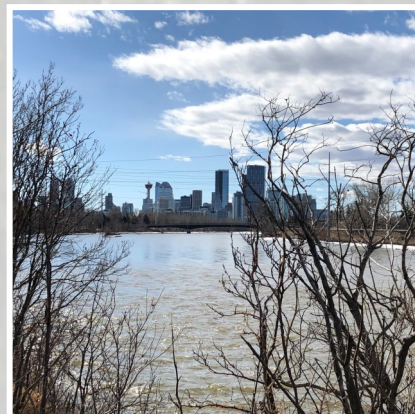
Many downtown parks are corridors for wildlife. It is not uncommon to see Canada Geese, Mallards, Black-billed Magpies, skunks, racoons, and squirrels. When walking through the park, remember to look up at the trees as you could see large magpie nests. Common tree species include Brandon elm, northwest poplar, Colorado blue spruce, green ash, and Schubert chokecherry. If you are lucky, you might also spot a White-tailed Deer passing through. It is important that we do not feed wildlife, or leave anything behind that wildlife could consume.

## What are Ecosystem Services?

Parks provide many critical ecosystem services that we rely on to survive. Examples of ecosystem services include: water and air purification, carbon sequestration, pollination, and climate regulation. Ecosystems also provide the oxygen plants produce and the soil that helps our food grow. All of these benefits have a huge monetary value. It is estimated that the total value of our global ecosystem services is 125 trillion dollars!<sup>1</sup>

## Did You Know?

Urban areas experience much warmer temperatures than nearby rural areas. This is known as the urban heat island effect. Urban areas have more buildings, streets, sidewalks, and less vegetation. Building materials are often dark in color and absorb more heat from the Sun. Increasing the amount of green space and parks in a city is one way to help combat the urban heat island effect, as plants provide a natural cooling effect on the environment. Plants absorb water through their roots, and then store that water in their stems and leaves. On hot days, water in the plant turns into vapor that is released into the atmosphere. This process is called transpiration, which is similar to evaporation, but where water vapor is released from plants. Plants also provide shade, which helps regulate the temperature of their surroundings.



<sup>1</sup>Costanza et al. (2014). Changes in the Global Value of Ecosystem Services. Global Environmental Change. Elsevier. <https://doi.org/10.1016/j.gloenvcha.2014.04.002>

# Inner City Parks Study

## Overview

These activities encourage critical thinking and environmental stewardship, which will enhance your students understanding of the importance of ecosystems. Students will learn that human health is linked to the environment. Lastly, students will learn that their actions can have a positive impact on the environment.

## Activity 1: If Trees Could Talk

Investigate trees in Calgary's downtown parks. Use The City of Calgary's Heritage or Urban Forest Tree Map to discover trees in the surrounding area. Have students write a short story from the tree's point of view: how has the city changed over the years? Discuss the positives and negatives of urbanization. In the winter, you can draw your story in the snow instead. [maps.calgary.ca/TreeSchedule](https://maps.calgary.ca/TreeSchedule)

## Activity 2: Park Study

Visit a downtown park and create detailed observations of the space. What do people use the park for? What animals and plants do you see? How do the animals interact with the plants? Use sketches and written notes to capture your observations. If possible, return to the space multiple times to gather more information. This activity can be done throughout the school year to allow students to observe seasonal changes in the park. Create a poster or bulletin board for students to add their observations, allowing for greater understanding of the outdoor space.

## Activity 3: Park Redesign

Based on your observations, how would you redesign the park? Would you create more habitat for wildlife or certain features for people to enjoy? Draw or paint your redesigned park in a journal. While designing your park, think about the ecosystem services the park provides or could provide.

## Activity 4: Ecosystem Services

Discuss different ecosystems with the students. Ask them to match an ecosystem with the correct ecosystem service. For example, discuss Calgary's urban forests. What ecosystem services do urban forests provide? Urban forests provide oxygen, habitat for animals, materials for humans, shade, they reduce the urban heat island effect, they provide relaxing environments for people, and their roots stabilize the ground to prevent erosion, to name a few. Why are healthy ecosystems important? How do humans benefit from ecosystems?

## Activity 5: Tragedy of the Commons

Introduce students to the concept of the "Tragedy of the Commons" (an economic theory about a shared resource system, where individual people act independently out of self-interest, resulting in the degradation of the shared resource). Some examples of this include the Grand Banks fisheries, greenhouse gases in the atmosphere, ocean garbage gyres, unregulated logging, and traffic congestion. Discuss with students how to overcome the tragedy of the commons. Are there ways people can collectively take care of our environment?





# Visiting a Downtown Park?

What you need to know.

## Park Etiquette — [Click here for bylaws related to parks and pathways](#)

- Stay on designated trails at all times, unless otherwise posted. This helps to protect the habitat of plants and animals that live in the park.
- Use quiet voices. Running and yelling will scare away wildlife and reduce the opportunities to view these species.
- Do not disturb or feed wildlife, including birds.
- Look but do not remove vegetation (including flowers and berries). These plants could be food, nesting material, or a rare native species.
- Do not litter. Place all garbage, recycling, and compost in appropriate bins or take them back to your school.

## Nature Kit Information

Calgary Parks would like to encourage you to explore the interesting features of downtown Calgary. To enhance your experience, we have a free learning kit available for you to use which includes:

- A map of the park or region
- Biofacts (bone clone mammal/bird skulls, track and scat molds, egg replicas)
- Bird plushes with audio of bird call or song
- A tree cookie (cross section from a known tree species)
- Alberta natural history field guides and booklets relevant to the topic of the kit
- Printed resources to supplement the park study activities
- Various laminated photographs and information on local plant and animal species
- Nature BINGO activity page

## Renting a Nature Kit

- Kit is available for a one-week duration FREE of charge.
- User is responsible for picking up and dropping off the kit at the designated location.
- If the kit is not returned, or materials are missing or damaged, the user will be charged a replacement fee.