

Biohoops Biodiversity Survey

A **biohoop** gives us a window into the rich biodiversity of a **watershed**, especially along the **riparian zone** — the area where land and water meet. By focusing on just one cubic foot of space near a stream, creek, or wetland, you can discover how different organisms interact and how healthy or stressed the ecosystem might be.

This hands-on field study connects directly to **biodiversity, ecosystems, and human impacts** in urban watersheds, helping us answer: ***What can a small area of riparian habitat tell us about the health of the whole watershed?***

By looking closely and documenting life in a small area, you can get a better understanding of how different ecosystems are structured and how they function. Studying the species that make up an ecosystem is the first step in understanding how biological systems function and predicting impacts of change. Most of the world's biodiversity occurs at small scales: organisms hidden in leaf litter, soil, and the nooks and crannies of environments. By focusing on a cubic foot of space, anyone can be a scientist and characterize representative communities and begin to understand distributions, interactions, and relationships. **Include all of the information below in your science notebook:**

Date and time: _____

Step 1 - Biohoop: Gather the materials you will need for your biodiversity survey.

Step 2 - Biohoop location: Name of stream or area with details (e.g., rocky yard, edge of vegetable garden, grass next to parking lot, stream, along sidewalk, etc.)

Step 3 - Temperature and Weather conditions: Use a thermometer or weather app; sunny, partly cloudy, rainy, windy, etc.

Step 4 - Initial Observations: What plants and animals do I see? What are they doing?





This resource is part of the BC Urban Streams & Watersheds lesson plans, assembled in 2025. Learn more and download additional resources at www.engagewithnbs.ca/for-schools

This material is available to reuse and adapt in your classroom.



Step 5 - Make a table showing what you found in the biohoop (see example below):

Organism classification	Common name <i>Scientific name</i>	# of specimens	Make a sketch and take a photo	Identified with iNaturalist, Seek or a guide? (yes/no)	Notes
Insect	Western conifer seed bug <i>Leptoglossus occidentalis</i>	1		yes	Brownish with reddish tones, antennae, wings folded flat over the abdomen; faint white zigzag marking across the middle of the wings, slowly walking over soil
Plant	White fawn lily <i>Erythronium oregonum</i>	4			Single flower per stem, pointing downward like a bell, soft white coloured petals, two leaves at the base of the stem with brown or fawn-coloured spots

Step 6 - Make a sketch of the view of the biohoop noting key plants and animals that you found. Be sure to include labels.

Step 7 - Summary questions: Select at least **three (3)** of the prompts below and **write** a response:

- What surprised you about what you discovered?
- How do you think the life that you found compares to what you would find in a different location or at a different time of year?
- What were some of the relationships and interactions that you observed? Why do you think that these happen?
- What types of life do you think was in your biohoop that you did not observe?
- What do you want to know about some of the plants and animals that you found? What are some questions that you are interested in and explain how you go about investigating them?
- Where would you want to look next? Why?
- Are there possible sources of error? Suggest improvements in your biohoop investigation method.