

Sample Grade 6 Biodiversity Unit Overview

Day 1: Have students brainstorm a list of plants and animals they know live around their part of the world (ie city). If your city is near a lake or river, get them to mention the plants and animals that live in that habitat also. Then go out into the schoolyard (or a nearby natural habitat if available). Have students record every type of plant and animal they observe. Make use of cameras, sketches, word descriptions. Consider teaching students different ways they can organize their notebook to make their records. Upon return to the classroom, make use of ID guides online or in book form to identify as many organisms as possible. Discuss as a class or in smaller groups how the different organisms can be grouped or categorized. [Specific Expectation Science 2.1, 2.2] Compare the list made by the students before they went outside to the list they generated by their outdoor activity. Are the lists different or similar? Why?

TIP Consider giving or making field notebooks for each student to use throughout the unit and beyond. Teach them the habit of writing date, time, weather, location each time they go out with their notebook, the way professional field-naturalists do.

Day 2: Start to introduce vocabulary, especially as it relates to the previous day's findings: biodiversity, flora, fauna, invertebrates, vertebrates, natural community, interrelationships, organism, habitats, coniferous, deciduous. [Specific Expectation Grade 6 Science 2.3, 3.1]

Start a discussion with students: Is the schoolyard (or natural area visited) biodiverse? Why or why not? What makes a habitat biodiverse? Is biodiversity a good thing? Why or why not?

Read "[Cootes Paradise as it was](#)" excerpt with students. What kind of habitat does this sound like? Create a word map to describe Cootes Paradise prior to 1930s.

Day 3: Show students the [maps of the emergent vegetation in Cootes](#) over the years leading up to 1990. What do the maps show? Why might the emergent vegetation (wetland plants that are rooted underwater and grow up and out of the water) have decreased during this time? Have students give hypotheses. How can they research their ideas to find out? Give them opportunity to explore some of their ideas. [Specific Expectations Grade 6 Science 1.1]

TIP Bring students to RBG! This unit can be done in conjunction with school programs Project Paradise, Fishway Demonstration, and/or Biodiversity. When booking your program, include a note in the comments section that you're using these resources.

Looking for cross-curricular? Book *Creative Writing in Nature* or *Wild Watercolour* to approach the topics for Language Arts or Visual Arts.

Day 4: CARP!! Read the [Common Carp Background](#) with students. Use the article to help them learn to highlight and/or take notes while reading. What are the key characteristics of carp that allow them to survive in Cootes Paradise Marsh? How do they influence the environment? Why were they able to "take over" the marsh? What else do we need to know about carp? Research. [Specific Expectation Grade 6 Science 1.2, 3.7]

Day 5: How could RBG decrease the number of carp in Cootes Paradise Marsh? Divide students into groups based on their interest in the possible solutions and invite them to consider the advantages and disadvantages to their idea?

Day 6: RBG came up with some ideas of their own. See "[A Strange Project](#)" article by [John Lamoureux](#). Look at the photos of Carp removal. How did RBG try to prevent carp from destroying the marsh? What are the advantages and disadvantages of RBG's ideas?

Day 7: Read article [Fishway \(Theysmeyer\)](#). Compare [factsheets from 1998 and 2016](#) -- is the Fishway working? Use [Fishway data](#) to compare the fish coming through the Fishway. Incorporate the data into a math lesson about graphing.

Day 8-10: Why is biodiversity important? Connect students with biodiversity within a species, between species, and between communities. See also resources from [Toronto Zoo](#) [Specific Expectations Grade 6 Science 3.2,3.3, 3.4, 3.5]

Day 10+: What can students do to help promote biodiversity in Cootes Paradise Marsh (or your school yard)? Have students form groups and come up with, and execute, their own "campaign" to promote biodiversity (eg information posters, growing/planting aquatic plants for the Marsh [[see BARC mini-marsh program](#) http://hamiltonharbour.ca/classroom_mini_marsh], brochures about invasive species, educational webpage, children's storybook, etc)

Final Day: End with an opportunity for students to share their learning or projects with the public (other students in the school, parents, community, or other venue)