

Grade 7 ELE-Informed Visioning Lesson Plan

This lesson may require multiple blocks to complete and can be divided up into multiple lessons.

Guiding Question	How can we help other organisms survive to reduce the loss of biodiversity?
Core Competencies	Communication: Students will orally provide contributions to the collaborative web/mind map of needs and food chain based on their observations. Students will be communicating their visions with words and/or a drawing. Thinking: Students will use critical thinking skills as they consider what plants and animals help other organisms survive on Howe Creek Trail. They'll also think creatively as they consider how those habitat elements can be added to backyards and the school grounds. Personal and Social: Personal and social awareness and responsibility will be required as students walk respectfully on the trail and are considerate of the space others need for thinking and drawing/writing. They'll also need to be considerate of other trail users. Social awareness will also be needed as they respectfully listen to the contributions of others for the web/mind map.
Curriculum Connections	Science 7 Big Ideas: • Evolution by natural selection provides an explanation for the diversity and survival of living things. (Why do things change over time? How do these changes affect biodiversity?) Curricular Competency: • Experience and interpret the local environment • Construct and use a range of methods to represent patterns or relationships in data, including tables, graphs, keys, models, and digital technologies as appropriate • Seek patterns and connections in data from their own investigations and secondary sources • Use scientific understandings to identify relationships and draw conclusions • Contribute to care for self, others, community, and world through personal or collaborative approaches Content: • Survival needs (all organisms need space, food, water, and access to resources in order to survive) • Natural selection (the natural process by which certain traits that have a greater fitness for their environment lead to a reproductive advantage; this process happens within a population over time because of genetic variation)

First Peoples Principles of Learning	• Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors. • Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place). • Learning involves recognizing the consequences of one's actions. • Learning is embedded in memory, history, and story. • Learning involves patience and time.
Resources and Supplies Needed	• Class set of clipboards or alternative such as large bull clips and mini whiteboards or chalkboards. • Paper and pens/pencils • TV or other screen to display maps of Howe Creek

Opening:

- Today will involve:
 - looking for resources that satisfy survival needs and the organisms utilizing them.
 - compiling our findings and creating a web of needs that has a food chain.
 - looking at a map of Terrace and how the area around Howe Creek has changed over the years and the amount of deforestation that has occurred.
 - visualizing how we can help organisms meet their survival needs in more places, such as our backyards and the school grounds and consider the importance of caring for the plants and animals around Howe Creek.
 - write or draw a vision for either their backyard or the school grounds that better addresses the survival needs of other organisms.
- Review background knowledge about survival needs. Every organism has basic needs in order to survive. This includes food, water, space, and access to resources in order to survive.
- Hand out clipboards to students. Students will need to pull out a sheet of paper and pen or pencil.

Body:

- While walking Howe Creek Trail from the school, students will sketch or write down things they see that help organisms meet their survival needs. Walk slowly to allow time for students to observe and record. Point out a few things, such as the creek and when you see a bug, ask students if any might eat the bugs. There are many different types of vegetation, insects, slugs, running water, trees, rotting logs that contribute to the habitat that many birds, squirrels, and other small animals rely on for survival.
- Back in the classroom, students will take turns providing one thing they observed and how it connects to the web/mind map that the teacher is compiling on the whiteboard.

As things are added, discuss how they connect to each other and how some insects or animals provide food for larger animals. Some vegetation may be both shelter and food.

- Go to this website: <https://www.terrace.ca/business-development/maps-zoning>. Launch the TerraMap. Find Howe Creek Trail on the map and make sure all the students can identify the area where the observing took place. Use the different time filters on the lefthand side of the screen to show how much deforestation has occurred in the area of the school and Howe Creek Trail as far back as the filters go. Discuss how the forest area has been reduced and how it affects the local animals and biodiversity.
- Discuss and visualize ways the forest and habitat provided by Howe Creek could be expanded even though there are homes and schools in the area. Discuss how native species could be planted in backyards and school grounds to provided organisms with the plants and animals they need to survive. What would happen if every school and backyard did this?
- Students can draw (and label their drawings) or write a paragraph visualizing how their backyard or the school grounds could be changed based on the above discussion. Each visualization needs to meet the survival needs (food, water, space, and access) of at least two different organisms (example: a frog and bird or a fish and a squirrel).

Closing

- Provide students with the opportunity to share their visualizations at the end. They will also be displayed on the bulletin board for viewing.

Elements of C.A.R.E. incorporated:

Complexity	Ecosystems and habitats are complex systems that meet the survival needs of a variety of organisms.
Aesthetics	Howe Creek Trail has lots of natural beauty that students will build an appreciation for as they consider how it helps organisms survive.
Responsibility	(minimal) Students will need to stay on the trail to prevent damaging the habitat. Humans are also responsible for the deforestation of the area and the restoration that it would benefit from.
Ethics	How to be respectful trail users.

Works Cited

City of Terrace. "Maps & Zoning." <https://www.terrace.ca/business-development/maps-zoning>

Environmental Educators' Provincial Specialist Association (EEPSA) and BC Hydro. *The Environmental Learning & Experience Curriculum Maps*. Ministry of Education, 2008/2009. https://www2.gov.bc.ca/assets/gov/education/kindergarten-to-grade-12/teach/teaching-tools/environmental-learning/ele_maps.pdf.