Brightwater Experience

Administrative Details:	School: **John Lake**	Teacher Name(s): **Mitch Lowe**	Date of Experience: **May 22**
	Course Name: **Grade 7/8**	Number of Learners: **22**	Number of Learning Sessions: **one day**

Areas of Curricular Emphasis (Based on Number of Learning Sessions)

Curricular Connection(s): Ecology

Unit(s): **ecology**

Outcome(s):
IE 7.2; EC7.3

Level of Inquiry:
- ❒ 1: Confirmation
- ❒ 2: Structured
- ❒ 3: Guided
- ❒ 4: Open

Facilitator Requested:
- ❒ Liz: Science
- ❒ Sandra: Social Studies
- ❒ Kevin: Art
- ❒ Faye: Traditional Knowledge
- ❒ Classroom Teacher
- ❒ Other

Inquiry Question:

Collaboration Notes:
Students will be working with their teacher to map an area for invasive species. The area should be large enough to show growth over time – 20m x 10m or so. Groups will have a large piece of paper, and will map out areas of plant species. We will write the utm coordinates on the maps to ensure we can find the same area other years. This would be the start of a collection of long term data.
Students conduct a mini soil study in the surveyed area – composition and description of soil, observations of ground cover, etc.
Lunch
Walk the land looking for evidence of plant adaptations (behind the ecocentre) and to discuss the geography & geography of the region as well as past, present and future land uses.

Curricular Connection(s): Water systems on Earth

Unit(s): **Water systems**

Outcome(s):
W.S. 8.3 – analyze natural factors and human practices that affect productivity and species distribution in marine and freshwater environments

Level of Inquiry:
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- ❒ Other

Inquiry Question:
How do we know Brightwater is a healthy watershed?

Collaboration Notes:

Students will spend the morning making fish traps with a science facilitator. They should also walk the creek, and discuss where the best place to place the traps might be. (deep pools, shady areas, current, etc.) The rest of the morning will be dedicated to setting the fish traps in the creek, using rope.
Lunch
Students will conduct a water quality testing for pH and turbidity (an estimate) after lunch, then do a creek dipping exercise. During this exercise they will need to fill in a data gathering sheet on iPads. The data needs to include species, number of species caught, a picture of the species, and their location on a map.

<table>
<tr><td colspan="2"></td><td colspan="2">If there is time Students need to attempt to design a way to measure stream flow. The will have a beach ball, measuring tape and a timer to work with. (time how long it takes a ball to travel a set distance)

Last but not least students need to check the fish traps, see if they caught anything, and clean up</td></tr>
<tr><td>Pre-teaching: What do students need to know or be able to do before going to Brightwater?
Students need to know how to identify species, map, read maps as well as what the terms geography & geology mean. Students should have some idea of plant adaptations as well.</td><td>Post-teaching: What follow up will happen after the Brightwater experience? What opportunities will students have to explore new questions from their Brightwater Experience?
We will keep our data to compare with future classes,</td><td>Pre-teaching: What do students need to know or be able to do before going to Brightwater?

What is a watershed? What is evidence of a healthy watershed? How do humans affect the environment, what to look for when looking for evidence of humans affecting the environment</td><td>Post-teaching: What follow up will happen after the Brightwater experience? What opportunities will students have to explore new questions from their Brightwater Experience?
Compile data from the experience and decide if the watershed is a healthy one. Save the data for comparisons over a number of years and seasons</td></tr>
<tr><td colspan="2">Assessment: What evidence will students show of their learning? Student maps, and write ups as to what plants were found where, what adaptations were made
❒ Observation
❒ Conversation
❒ Product
Description:
Final product will be map with species listed, and characteristics listed
Soil type and how the students think the ecosystem works together</td><td colspan="2">Assessment: What evidence will students show of their learning? Class discussions, decision as to healthy watershed or not,
❒ Observation
❒ Conversation
❒ Product
Description:
Final product will be data sheet and write up to answer the inquiry question</td></tr>
</table>

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Unit(s):	Unit(s):
Outcome(s):	Outcome(s):
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