Science 8 Water Systems on Earth Unit

Big Idea: **We can’t live without water**

Outcome:

WS8.2 Examine how wind, water, and ice have shaped and continue to shape the Canadian landscape.

Understandings:

* Weathering, erosion and deposition result from water movement.
* First Nations and Métis explain the shaping of the landscape in their own way.
* Interactions of ocean currents, winds and regional climates shape the environment.
* Technology can try to minimize damage due to waves and tides.
* Many process lead to the formation of rivers, lakes, and glacial landforms.
* Simulations and representations help us understand things that are too big or too far away to
* study/ manipulate first hand.

Essential questions:

1. How do weathering, erosion and deposition result from water movement?
2. How do First Nations and Métis explain the shaping of the landscape?
3. How do ocean currents, winds and regional climates shape the environment?
4. How can technology minimize damage due to waves and tides?
5. What processes lead to the formation of rivers, lakes and glacial landforms?
6. How can I study science that I can’t experience firsthand (too big/ small or too far away)?

Students need to know: (essential questions they are related to are in brackets)

* Vocabulary – weathering, erosion, deposition, wave, tide, simulation, water current, ice cap, climate, regional, national, local, global, environment, continental drainage system, ocean basin, glaciations, continental drift, erosion, drumlin, moraine, esker, kettle lake
* How First Nations and Métis explain the shaping of the landscape. (2)
* How ocean currents, winds and regional climates shape the environment. (3)
* How technology minimizes damage due to waves and tides. (4)
* The processes that lead to the formation of rivers, lakes and glacial landforms. (5)
* Ways to represent processes
* Technologies to minimize wave/tide damage: pier, breakwater, dune vegetation, coastline reconfiguration

And be able to: (essential questions they are related to are in brackets)

* Explain the processes of weathering, erosion and deposition. (1)
* Explain First Nations and Métis perspectives regarding the shaping of the landscape. (2)
* Describe how ocean currents, winds and regional climates shape the environment. (3)
* Critique the design and function of technologies that minimize damage due to waves. (4)
* Creative written, visual, or dramatic representations of the formation of landforms. (4)
* Identify factors that affect glacier formation and changes to ocean currents and climate. (4)
* Plan and conduct a simulation.
* Propose new questions and problems for future study