

**Lesson Title: Local Sugar**

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| **Division Focus** ☐ Primary ☑ Junior ☑ Intermediate ☐Senior **Lesson Overview**This lesson is a follow-up to the maple syrup or farm program at Sheldon.Sheldon has made a conscious effort to produce a quantity of maple syrup to use in their kitchen as a substitute for white and brown sugar. The following lesson explores why Sheldon would use this local source of sugar instead of using sugar being transported from such places as South America or Asia. It also focuses on why during the farm program we advocate for the use of local food sources. |

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| **Related Expectations:** **Learning Goals:** * develop a deeper understanding of the environmental costs/benefits (eco-footprint) of transporting food
* use internet tools and maps to gather, organize, analyze and interpret information.

**Success Criteria: I can:*** apply the concept of local food and eco-footprint
* use internet tools and maps to gather, organize, interpret and analyze information
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| **Preparations/Resources****Preparation:** * A trip to Sheldon to explore the maple syrup production process and or local food production on the farm.

**Resources:** * <http://www.foodemissions.com/foodemissions/Calculator.aspx>
* <http://www.davidsuzuki.org/what-you-can-do/food-and-our-planet/food-and-climate-change/?gclid=CjwKEAjwjca5BRCAyaPGi6_h8m8SJADryPLhuZWoFL-GfASCJwF-l72k3k9zW8n31vdXpUGkoceaxhoCXuDw_wcB>
* http://www.foodmiles.com/
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| **Description of Activity****Minds-On:*** Using a food product such as canned pineapple map where the origin of the product and how far it travelled to get to Toronto.
* Brainstorm what energy inputs went into transporting the food (e.g. gas to power the tractor to transport the food from the field, gas for a transport truck to get the food from the farm to the airport/marine port, fuel for the boat to transport across the ocean, fuel to transport from the Canadian port to the food terminal in Toronto, fuel to bring the food from the food terminal to the grocery store and fuel to move the food from the store to the household).
* Brainstorm the environmental costs of using this energy and discuss the term eco-footprint.
* What would have a smaller eco-footprint, a carrot grown in a local garden or a carrot travelling from California?

**Action:*** Using maps or internet tools such as <http://www.foodmiles.com/>, have students research the distance travelled of different types of food. Hypothesize the comparative fuel consumption of items travelling greater distances (e.g. a carrot from the Holland Marsh in Ontario would require less fuel to transport to Toronto than one from Chile).
* Research where white and brown sugar comes from. What are the environmental costs of transporting sugar this distance?
* Why does Sheldon use maple syrup produced in their sugar shack? What are the advantages of using local food?

**Consolidate and Connect:*** Using websites such as <http://www.foodemissions.com/foodemissions/Calculator.aspx> compare the eco-footprint of different foods and the distance they travel.
* Create an individual plan as to ways that students can reduce their eco-footprint with food choices (e.g. using community gardens, buying local, using a balcony garden, vegetable gardens at school).
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| **Follow-Up (plus Adaptations and Extensions)*** Compare the process of producing sugar from sugar beets or sugar cane to producing maple syrup.
* Research the historical use of maple syrup as a sugar source and why it was used instead of that produced in faraway countries.
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