Maple Syrup Inquiry

Additional Resources
Grade Level: 3-12

Aboriginal Maple Syrup Values Summary

This summary is drawn from a larger report that explores the values Aboriginal people associate with the production of maple syrup, and related maple syrup practices. The examination is based on interviews that were conducted by research assistant Melanie Smits throughout the summer of 2013.

https://www.tigurl.org/images/tiged/docs/activities/1719.pdf

Carey Institute of Ecosystem Studies "Maple syrup, moose, and the local impacts of climate change"

https://www.caryinstitute.org/newsroom/maple-syrup-moose-and-local-impacts-climate-change

CBC "Please, not the syrup. Climate change could extinguish sugar maple growth"

https://www.cbc.ca/life/food/please-not-the-syrup-climate-change-could-extinguish-sugar-maple-growth-1.4496072

Climate Central, "Climate Change is Coming for Your Maple Syrup"

https://www.climatecentral.org/news/climate-change-maple-syrup-20178

Developing an Ontario Maple Syrup Sector Profile: A Value Chain Analysis

This is an executive summary of the following research: From the document: "The research examined the Ontario maple syrup industry from an economic analysis perspective, utilizing the value chain approach. In general, a value system can be understood as a network of enterprises and inter-organizational relationships through which maple products move from preproduction to consumption/postproduction.

https://www.tigurl.org/images/tiged/docs/activities/1721.pdf

Economic Aspects of Maple Syrup Production

This PowerPoint presentation from Cornell University research looks at an overview of the current status of the maple industry, the costs and benefits of using maple trees for syrup or sawtimber production and the economics of leasing maple trees for syrup production.

http://rainalgoma.ca/wp-content/uploads/2017/04/ssm-ontario-MNR-january-2015.pdf

Exploring Maple Syrup Production and Climate Change in Near North Ontario

Abstract (from this academic paper) This paper reports on a pilot project exploring the impacts of climate change on maple syrup production in understudied near north, Ontario spaces. Maple syrup is produced by settler, Métis and First Nations communities for commercial distribution and as part of a mixed subsistence economy. The focus on maple syrup is opportune, since syrup production and sugar maple trees (Acer saccharum) are extremely susceptible to climate change and the biophysical and social impacts of climate change on maple syrup production in the near north of Ontario have yet to be understood.

https://www.tigurl.org/images/tiged/docs/activities/1727.pdf

Great Lakes Echo, "Climate Change Threatens Maple Trees - and Syrup"

https://greatlakesecho.org/2018/04/05/climate-change-threatens-maple-trees-and-syrup/

Maple Syrup Value Systems and Value Chains: Considering Aboriginal and Non- Aboriginal Perspectives

Abstract from this detailed, academic journal article: Harvested from both intensive sugar maple stands and diverse mixed forest ecosystems across Ontario, maple syrup is an important rural and Aboriginal non-timber forest product that contributes to social, economic and environmental sustainability. This paper presents our ongoing work to map Ontario's maple syrup value system from two different perspectives.

https://www.tigurl.org/images/tiged/docs/activities/1729.pdf

Aboriginal and non-Aboriginal. Non-Timber Forest Products, Maple Syrup and Climate Change

This article from the Journal of Rural and Community Development provides solid background for teachers researching background information. It also includes useful tables, maps and facts that can be shared with classes.

https://www.tigurl.org/images/tiged/docs/activities/1725.pdf

Not So Sweet: Climate Change Means Slow-Growing Sugar Maples, Study Finds

The paradox is that maple trees need lots of snow so they can keep warm and keep growing.

https://www.npr.org/sections/thesalt/2018/12/07/673713824/not-so-sweet-climate-change-means-slow-growing-sugar-maples-study-finds

Statistical Overview of the Canadian Maple Industry 2019

This website provides up-to-date statistics on the maple industry in Canada with easy to read charts and tables including production, revenue, trade and world data. Did you know, for example, that Quebec produces 91% of Canada's maple syrup?

http://publications.gc.ca/collections/collection_2021/aac-aafc/A71-40-2019-eng.pdf

Sugar Maple Sap Yields Using One or Two Tapholes per Tree

This accessible research article looks at research in Vermont to increase sap production in sugar maple trees by limiting tapholes to one or two per three. Early results are discussed.

https://www.tigurl.org/images/tiged/docs/activities/1731.pdf

"Sugaring" Video

This multimedia 4 minute video produced by the Wisconsin Educational Communications Board follows Kat Becker and Tony Shultz, third generation maple syrup producers in Athens, WI, through a day of sugaring. Kat and Tony describe the process of collecting and boiling down sap to produce maple syrup. They explore how specific weather conditions are necessary for the process and how those conditions may be impacted by climate change.

https://vimeo.com/17604920

Testing tapping depth versus sap yield

This newspaper-style article looks at research that investigates how the depth of tapping of maple trees affects the yield of sap to make maple syrup. Includes helpful data charts.

https://www.tigurl.org/images/tiged/docs/activities/1733.pdf

The Timing of Tapping for Maple Sap Collection

This 8 page article summarizes research done in Vermont to help maple syrup producers answer an important question: What tapping of maple trees time frame results in the highest maple sap yield?

https://www.tigurl.org/images/tiged/docs/activities/1735.pdf

Will Maple Syrup Disappear?

Canada produces about 85 percent of the world's maple syrup, a product valued at more than $354 million in 2009, with the vast majority coming from Quebec. The United States is both Canada's largest export market and the world's only other major producer. But these statistics and this rite of springtime are at risk as a changing climate impacts the health of sugar maples and our ability to efficiently harvest their sap.

https://www.canadiangeographic.ca/article/will-maple-syrup-disappear