

Maple Syrup Production on Grand Island by the Cleveland-Cliffs Iron (CCI) Company

Author(s): Miranda Revere & Christopher Kern

Project: Creation of a lesson plan utilizing materials digitized from the CCI collection at the Central Upper Michigan and Northern Michigan University Archives as part of a NHPRC Grant.

Grade Level: Fourth

Time Estimated: 50 minutes

Overview

In this lesson, students will learn about the underlying historical, economic and environmental concerns associated with maple syrup production on Grand Island. They will gain this knowledge through an introductory background discussion and group work at three different stations. Understanding will be achieved through written responses and classroom discussion.

Historical Background

Grand Island encompasses about 13,000 acres off of Lake Superior near Munising. Ojibwa inhabited the island seasonally since the eighteenth century, procuring maple syrup in the early spring. They drained sap into birch bark baskets, stored it in wooden barrels or hollowed logs, and kettle boiled the water away to obtain maple sugar.¹ The amount of sap needed for a usable portion of sugar and syrup made the process time-consuming. CCI production in the 1950s, for example, required the sap of three or four trees for one gallon of maple syrup.²

In 1840, the Williams family settled on the island year-round. They supported themselves through farming, lumbering and trading. Ojibwa still came in the spring and summer but chose to help the Williams gather maple syrup instead. The newest tool was large pans whose flat surface evaporated water evenly when heated and proved more efficient. However, obtaining sap remained the same through having buckets collect draining maple trees. An incision was cut into the tree to create a steady drip. Sap ran only in the few weeks of early spring after the first thaw.³

CCI collected sap the same way during their half-century of production. They bought almost half of Grand Island from the Munising Company in 1900 and purchased the rest from the Williams family soon afterward. The company turned the island into a game preserve and tourist resort while continuing maple syrup with a modernized approach. Teams now hauled sleighs of barrels to a sugarhouse containing an evaporator: a machine for quickly boiling large amounts of sap. At its height, CCI ran two sugarhouses and three evaporators. Production ceased in 1955 when CCI sent the money assigned to the task elsewhere because of recent hardships in selling stock.⁴

¹ Matthew, Thomas and Janet Silbernagel, "The Evolution of a Maple Sugaring Landscape on Lake Superior's Grand Island," *Michigan Academician* 35 (2003): 139-140.

² Thomas and Silbernagel, "The Evolution," 144.

³ *Ibid.*, 140-141.

⁴ *Ibid.*, 142-144.

Objectives

1. Understand the history of maple syrup production on Grand Island
2. Understand the reasoning behind CCI's decisions regarding production
3. Examine pertinent information on maps and charts

Standards of Learning

4 – G1.0.1 Identify questions geographers ask in examining the United States.

4 – G1.0.3 Identify and describe the characteristics and purposes of a variety of geographic tools and technologies.

4 – E1.0.1 Identify questions economists ask in examining the United States.

Strategies

1. Introduction about how maple syrup production, Grand Island and CCI. (10 – 15 minutes)

Explain the Historical Background in an engaging manner. Alternatively, talk about how everyone loves pancakes and if anybody has family or friends who make maple syrup. If students are familiar, ask what they know about making maple syrup then?

Talk about the Ojibwa, Abraham Williams and CCI. How did Grand Island transform from a Native American retreat to a corporate enterprise? Discuss terminology related to maple sugar production: sugar bush, sugarhouse and extractors as examples.

2. Break students into groups and rotate through the three stations. (20 – 30 minutes, 7 – 10 each)

Station 1 – Annual maple syrup production by CCI

Materials

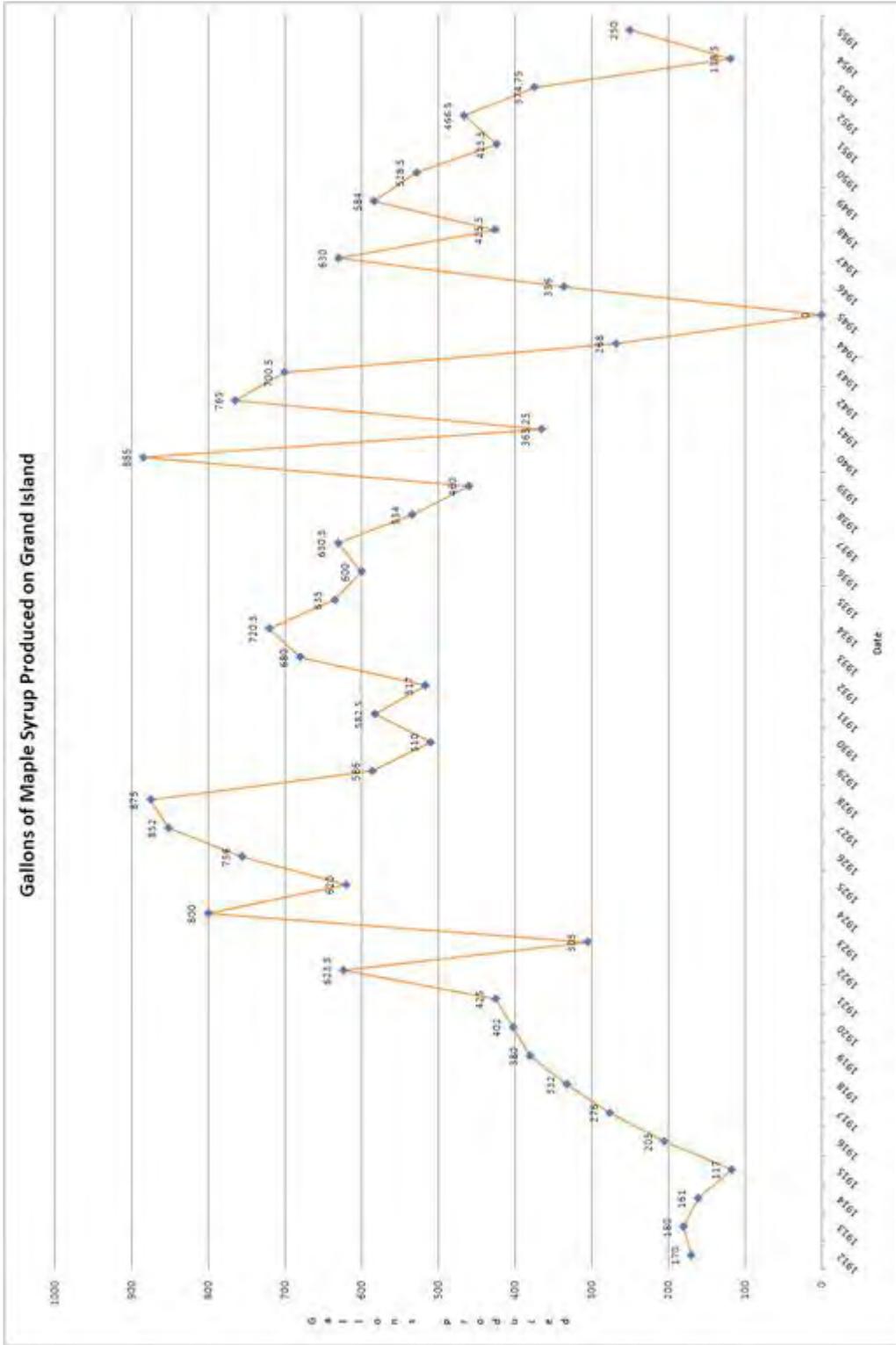
Graph, compiled from CCI Land Reports, showing annual gallonage of maple syrup.

Activity

The group will look at the graph to see the total production of maple syrup by CCI from 1912 to 1955. Examining the rise and fall of production, students will see relations in the date and relate the trends toward an economic understanding. No maple syrup was produced in 1945 because the company was unable to get laborers to the island in time.

Questions

1. Material Analysis
 - What year produced the most? The least?
 - When was the longest time of increase? Of decrease?
 - Where was the greatest gain between two years? Greatest loss?
2. Material Interpretation
 - Why does the graph show that maple syrup wasn't always profitable?
 - Why would CCI stop production in 1955 then?



Station 2 – 1930 insect attack on Grand Island maple trees

Materials

Pages 101 (text) and 143 (map) of the 1930 Land Report

Activity

Groups will read the short paragraph about the discovery and treatment of a 1930 insect infestation on Grand Island's maple trees. Accompanying the text is a map showing the affected area of the island. Students will relate the two materials together but primarily analyze the map. They will take measurements using the scale and locate other points of interest.

Questions

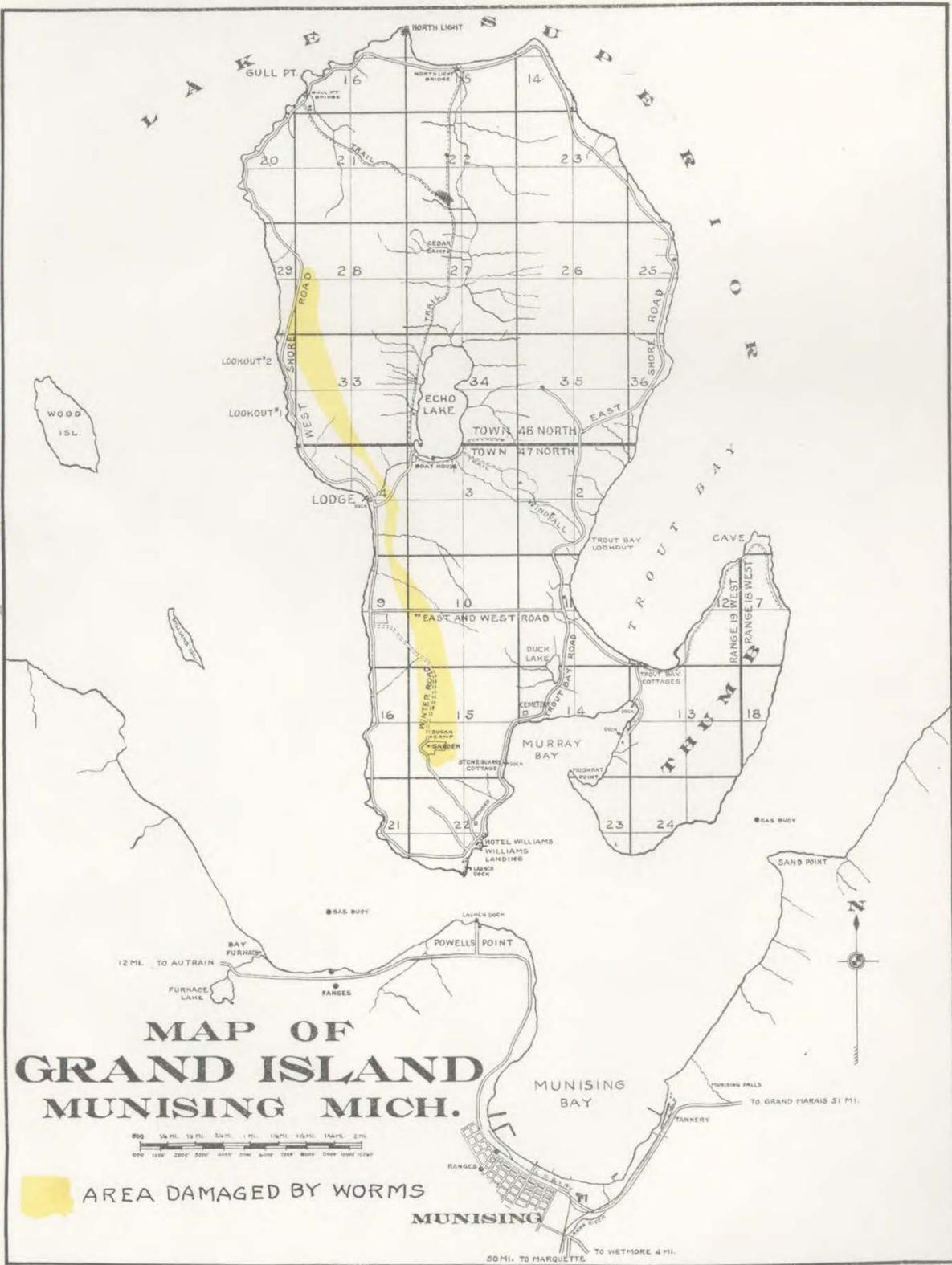
1. Material Analysis
 - Where is the sugar camp? Was it affected by the insects?
 - How long and wide is Grand Island? How long of an area was the infestation?
2. Material Interpretation
 - Was it right for CCI to wipe out all the insects? Would you do the same?
 - What other locations are listed on the map? What might their purpose(s) be?

INSECTS - GRAND ISLAND

During the first part of June it was noticed that Maple trees in the vicinity of the farm on Grand Island and running Northerly for several miles were attacked by a small green worm and the trees defoliated. Specimens of the worm were sent to Professor S. A. Graham, at the University of Michigan, Ann Arbor, and he called them black, marked yellow looper and says that insects of this group can be controlled by dusting with an arsenical material during the feeding period of the larvae. A map is attached showing the area damaged.

Insects – Grand Island

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**MAP OF
GRAND ISLAND
MUNISING MICH.**

AREA DAMAGED BY WORMS

Station 3 – Maple Syrup Economics

Materials

Chart showing the earnings, expenses and profits of maple syrup production on Grand Island

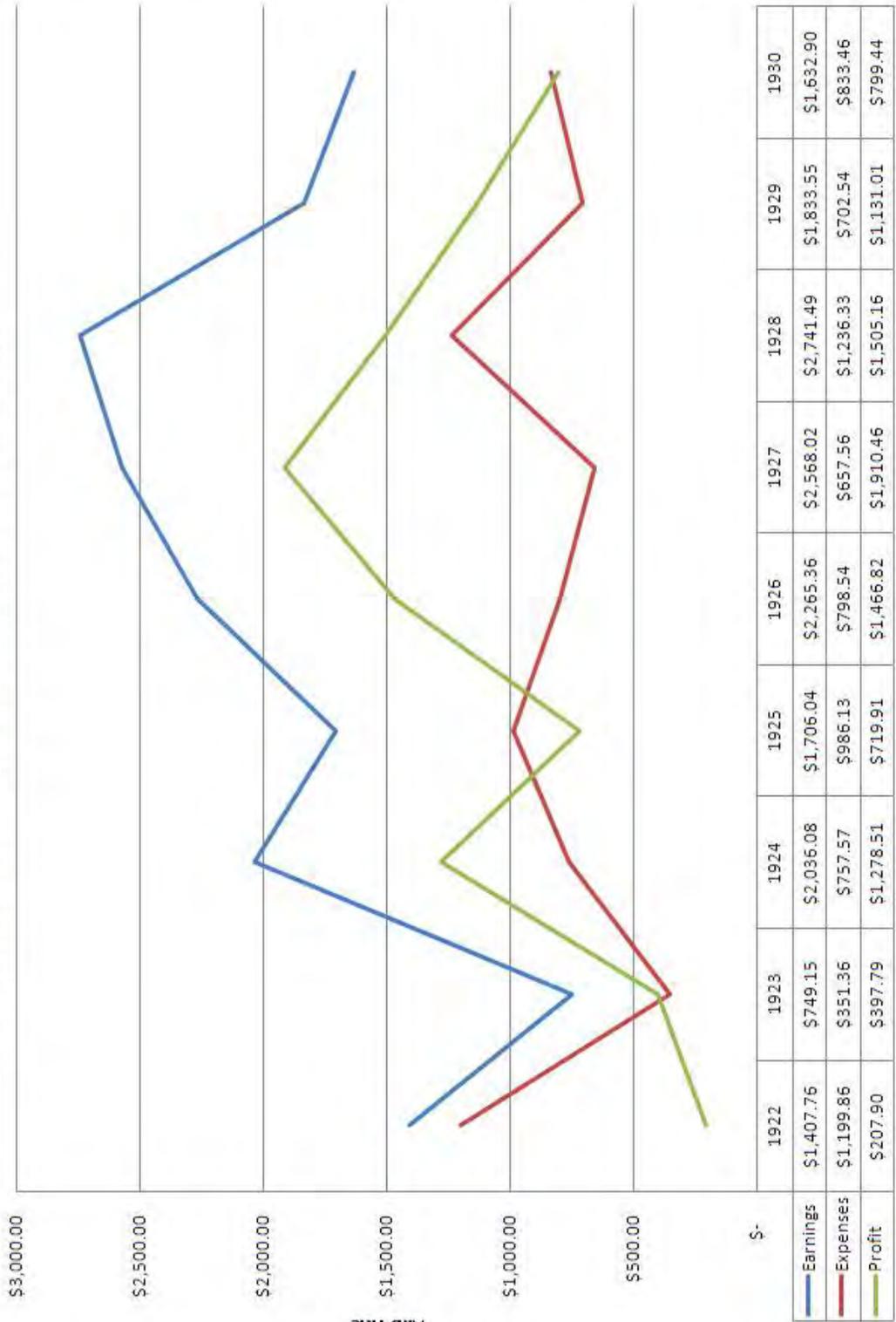
Activity

Groups will examine a chart showing finances concerned with CCI's maple syrup operations. The company earned profits each year from maple syrup but posted overall losses on Grand Island. Students will see the relationship between the three and understand the basic economic principle of expenses minus earnings for net profit.

Questions

1. Material Analysis
 - What is the relationship between the three lines? What makes up the Profit?
 - When did CCI earn the most? The least? What year cost the most? The least?
2. Material Interpretation
 - Did earnings or expenses affect the company's profit more? Why or why not?
 - What do you think were the amounts for the years in 1921 and 1931? Why?

Economics of Maple Syrup Production 1922-1930



3. Come together for discussion at end of class (10 – 15 minutes)

What is the general impression after looking at all the information? What stands out to everybody? What was most interesting information? How difficult do the students feel making maple syrup was? What do CCI's activities tell regarding how they may have felt regarding production? Is there anything they would like to know more about?

References

Cleveland-Cliffs Iron Company, Annual Reports of the Land Department 1912-1955, Central Upper Peninsula and Northern Michigan University Archives, Northern Michigan University, MS 86-100.

Thomas, Matthew M., and Janet M. Silbernagel. "The Evolution of a Maple Sugaring Landscape on Lake Superior's Grand Island." *Michigan Academician* 35, no. 1 (2003): 135-158.

Additional References

Castle, Beatrice. "The Grand Island story," James L. Carter, Marquette, MI.: John M. Longyear Research Library, 1974.

Rakestraw, Lawrence, Fred Stormer, and Christopher R. Eder. "A Second Yellowstone: William G. Mather and the Grand Island Game Preserve." *Journal of Forest History* 21, no. 3 (1977): 156-163. <http://www.jstor.org/stable/3983289>.

Marquette Regional Historical Center Archives. Marquette, MI.