

Inquiry Design Model (IDM) Blueprint™

Compelling Question	What has been the impact of maple sugar production in New York State?		
Standards and Practices	<p><u>7.7 REFORM MOVEMENTS: Social, political, and economic inequalities sparked various reform movements and resistance efforts. Influenced by the Second Great Awakening, New York State played a key role in major reform efforts.</u></p> <p><u>7.7b Enslaved African Americans resisted slavery in various ways in the 19th century. The abolitionist movement also worked to raise awareness of and generate resistance to the institution of slavery.</u></p> <p><u>Gathering, Using, and Interpreting Evidence</u> <u>Chronological Reasoning and Causation</u> <u>Comparison and Contextualization</u> <u>Standards: 1, 5; Themes: SOC, CIV, GOV</u></p>		
Staging the Question	<p>Did maple production have an economic impact for early New York State settlers?</p> <p>Why did abolitionists and politicians support the production of maple sugar?</p> <p>What economic impact does maple sugar production have in New York State today?</p>		
Supporting Question 1	Supporting Question 2	Supporting Question 3	
Did maple sugar production have an economic impact for early New York State settlers?	Why did abolitionists and politicians support the production of maple sugar?	What economic impact does maple sugar production have in New York State today?	
Formative Performance Task	Formative Performance Task	Formative Performance Task	
Write a letter as if you were John Nicholls. Explaining your thoughts regarding maple production.	Create a list of stated or implied reasons for supporting maple production in the United States. Create a list of the problems or issues with supporting maple production in the United States.	Create a bar graph comparing maple production from different states to see where New York ranks. Create a graph to see where your county ranks in maple production in New York State. Do you think the production of maple products impacts New York state's economy?	
Featured Sources	Featured Sources	Featured Sources	
<ul style="list-style-type: none"> A. William Cooper's Town B. "To The Publick" C. Transcribed account book from Cooperstown General Store, 1790 	<ul style="list-style-type: none"> A. Benjamin Rush and Arthur Nobel letters B. "To the Publick" C. Subscribers List D. William Cooper's Town 	<ul style="list-style-type: none"> A. USDA Crop Production Maple Syrup production B. Table 37. Maple Syrup 2012 and 2007 New York State 	

Summative Performance Task	Argument	<u>What has been the impact of maple sugar production in New York State? Construct an argument (e.g., detailed outline, exhibit board, poster, essay, website, documentary) that discusses the impact of Maple Sugar Production on Slavery using specific claims and relevant evidence from historical sources, while acknowledging competing views.</u>
	Extension	<u>Create an educational video, website or exhibit board of the argument that responds to the compelling question; What has been the impact of maple sugar production in New York State?</u>
Taking Informed Action	UNDERSTAND	<u>Identify and describe a human rights issue that needs to be addressed (e.g., child labor, trafficking, or poverty).</u>
	ASSESS	<u>Create a list of possible actions that involve words. This may include letters, editorials, social media, videos, and protests.</u>
	ACT	<u>Choose one of the options and implement it as an individual, small group, or class project.</u>

Supporting Question 1

Supporting Question	Did maple production have an economic impact for early New York Settlers?
Formative Performance Task	Create a letter as if you were John Nicholls explaining what you believe his thoughts regarding maple production would have been.
Featured Sources	A. William Cooper’s Town B. “To The Publick” C. Transcribed account book from Cooperstown General Store 1790
Conceptual Understanding	(7.7b) Enslaved African Americans resisted slavery in various ways in the 19th century. The abolitionist movement also worked to raise awareness and generate resistance to the institution of slavery.
Content Specifications	Students will examine the impact of maple sugar production on New York State.
Social Studies Practices	Gathering, Using, and Interpreting Evidence

Supporting Question

Some early Americans had grand ideas for maple sugar production replacing white cane sugar in the United States. They hoped that this would provide an economic boost for new settlements in New York. Maple sugar could also become another export to European markets allowing the newly formed Nation to head in a direction of economic independence.

Formative Performance Task

The formative performance task calls on students to create a letter as if they were John Nicholls explaining what they believe his thoughts regarding maple production would have been. To fully understand the complex process students will analyze these featured sources; William Cooper’s Town, “To the Publik” and Transcribed account book from Cooperstown General Store 1790.

Teachers might read the excerpts aloud for students who require additional reading support while having other students read silently. Students can complete their letter individually, and the teacher might decide to have a discussion about their answers or collect the letter for feedback later. Students will practice Gathering, Using, and Interpreting Evidence as they complete the Comparing and Contrasting Chart to summarize the excerpts of William Cooper’s Town, To the Publik” and Transcribed account book from Cooperstown General Store 1790. The in depth analysis of these resources will allow students to identify the main idea and supporting details from text passages and illustrations.

Inquiry Description

This inquiry provides students with an opportunity to explore the role maple sugar production played in New York State settlers' lives and how it is still a part of the state's economy today. Students will examine sources related to development of the maple sugar industry in New York and explore the reasons behind its development, how New York State settlers' lives were affected, and how the maple sugar industry is still important to New York State's economy.

The inquiry opens with the question "What has been the impact of maple sugar production in New York State?" This question will allow students to delve into the history of maple production in the state and the reasons individuals supported maple production. Students will also discover the challenges to the maple industry's success and how those challenges changed overtime.

The first supporting question asks students to examine the impact of maple sugar production on early New York State settlers. Students will have an opportunity to focus on settlers in Cooperstown, New York to see how the push to make maple sugar "the sugar" of the United States affected their lives.

The second supporting question will have students learn the views of some politicians and businessmen toward maple sugar production. Students will learn about the hardships maple sugar supporters faced when trying to create a market for maple sugar.

The third supporting question looks at maple production in New York today. Students will use United States Department of Agriculture records to see where New York State ranks in production of maple syrup compared with the rest of the country. They will also compare how their county in New York State compares with other counties in maple syrup production.

Content Background

Maple syrup is a product produced from the sap of maple trees. Not all varieties of maple trees are used for creating maple syrup. In New York State maple producers predominantly use sugar maples, black maples and occasionally red maples to produce their syrup. Maple sap is collected predominantly in March and April when winter starts to turn into spring. Sap runs during a pattern of freezing during the night and thawing during the day. Maple syrup producers will “tap” trees by drilling a hole in the trunk of the tree. Depending on the sizes and health of the maple, tree it can sustain from 1 to 3 taps. The taps will allow the sap to flow out of the tree where it can be collected. The maple producers then boil the sap to remove the extra water, causing the sap to thicken and create syrup. Syrup with even less water crystallizes into maple sugar. It usually takes about 40 gallons of sap to make 1 gallon of maple syrup. Maple sugar requires even more gallons of sap. Maple syrup and sugar production is a renewable resource. Maple trees are not harmed during the process of collecting the sap, letting maple producers reuse the same maple trees year after year.

The exact origins of maple sugaring are unknown; we know that the Native Americans introduced Europeans to maple sap and showed settlers which trees to tap. We are unsure if Native Americans boiled down the sap to make maple syrup or maple sugar, or if French explorers and missionaries introduced the technique of turning the sap into sugar. The production of maple sugar was important to early settlers who produced it for their own consumption. It was often used as a substitute to white cane sugar. White cane sugar was expensive and could be hard to find as it had to be imported. Settlers could produce the maple sugar themselves. For most settlers, maple sugar was a staple part of their diet and was as common on tables as salt is today. Due to the cost and availability, white cane sugar would have been used for special celebrations or with visitors.

After the American Revolution, there was a push by some to produce enough maple sugar to supply the entire United States. This would keep the United States from relying on imported sugar from the West Indies (Caribbean). Abolitionist supported the idea of replacing white cane sugar with maple sugar as a way of boycotting the Caribbean sugar plantations that relied on slave labor. The large demands for slave labor for sugar plantations help establish the triangle trade system between Europe, Africa and the Colonies.

The supporters of domestic sugar production ran into several obstacles with their plan. First, they had to convince consumers that maple sugar could replace white cane sugar. White cane sugar was viewed as a purer sugar, making consumers view it as superior to maple sugar. The second obstacle was production volume. Producing maple sugar in large enough quantities with high quality that urban consumers would be willing to purchase was problematic. Most rural settlers made just enough to supply their own families. Maple production supporters had to convince farmers to invest the extra time and equipment in producing a surplus of maple sugar fit for sale. Rural settlers were clearing trees to make fields and pastures for their farms. Keeping sugar trees was not usually a priority. Next they had to transport the maple sugar to urban markets in a way that would maintain the quality. Transportation in early America could often be problematic without a solid infrastructure of roads. Roads leading to and from new settlements were often just rough dirt paths through the wilderness. Weather could greatly affect how passable the roads were and the amount of time it took to reach a travelers destination.

Supporters were able to set-up distributors who marketed maple sugar as a replacement for white cane sugar by reaching out to abolitionists who were interested in supporting economies that did not rely on slave labor. However, suppliers were unable to produce enough maple sugar to meet the demand. Suppliers also had issues during transportation. The quality of the maple sugar promised was not the quality delivered. The much of the product delivered was contaminated with rainwater and melting snow during transportation. The contamination was problematic for wholesale purchaser trying to sell what they claimed was a superior product to their consumers.

Almost all maple producers in the past were farmers who made maple products during the off season for their own consumption or a little extra income. Today, there are farms where maple production is the main source of income. According to the USDA the value of maple syrup production in the United States was \$132 million dollars in 2013.

Content, Practices, and Literacies

This inquiry has been designed to connect key curricular content with the social studies practices every student should master. Students will have the opportunity to practice Gathering, Using, and Interpreting Evidence from multiple sources including: William Cooper’s Town, “To the Publik”, Transcribed account book from Cooperstown General Store (1790), Benjamin Rush and Arthur Nobel Letters, Subscribers List, USDA Crop production Maple Syrup Production, and Table 37 Maple Syrup 2012 and 2007 New York State: and practice Comparison and Contextualization through the analysis of different reactions from people in New York State. Additionally, the Taking Informed Action activity emphasizes the power of Civic Participation.

Students’ content knowledge and skills are assessed in the inquiry through formative performance tasks, which increase in complexity during the inquiry. These tasks progress from writing a letter as if you were John Nicholls, creating a list of stated or implied reasons for supporting maple production in the United States, and creating a bar graph comparing maple production from different states to see where New York ranks. Creating a graph to see where your county ranks in maple production in New York State. Do you think the production of maple products impacts New York state’s economy? The final formative performance task allows students to initiate their arguments through a structured discussion. The summative performance task asks students to put all of this information together to craft an argument about the various documents impact on Maple Sugar and Slavery in New York State.

The New York State P–12 Common Core Learning Standards for English Language Arts & Literacy offer social studies teachers numerous opportunities to integrate literacy goals and skills into their social studies instruction. The Common Core supports the inquiry process through reading rich informational texts, writing evidence-based arguments, speaking and listening in public venues, and using academic vocabulary that complements the pedagogical directions advocated in the New York State K–12 Social Studies Framework. At the end of this inquiry is an explication of how teachers might integrate literacy skills into the content, instruction, and resource decisions they make. The Common Core connections are listed on the last page of this inquiry

Featured Sources

FEATURED SOURCE A is an excerpt from the book *William Cooper's Town* by Alan Taylor talking about the process of maple sugar and why William Cooper believed it would be economically beneficial to new settlers.

FEATURED SOURCE B is a document letting the public know William Cooper's thoughts about maple sugar production and the cultivation or preservation of the maple tree for the production of maple sugar. Students should get a glimpse of why some settlers were not supportive of the idea of keeping

Teachers might support student's analysis of these documents by having the students list what the perceived benefits to producing maple sugar were and what are some of the disadvantages were from looking at these two documents.

FEATURED SOURCE C is a transcribed account of three individuals who used the Cooperstown General store in 1790. Students should focus on John Nicholls and Stephen Smith to see what they purchased and sold to the general store. For John Nicholls they should look for the items that pertained particularly to maple sugar, did he make enough money with his maple sugar to cover his purchases for the year? How did Stephen Smith make his money, did he make enough to cover his purchases for the year?

12 pence in a shilling

20 shillings in a pound

The answers to these questions should form the foundation for students' letters as John Nicholls for either supporting or not supporting the production of maple sugar. They should explain the reason for their decision in the letter.

Supporting Question 1

Featured Source

Source A: William Cooper's Town (119-121)

MAPLE SUGAR

At the same time that Drinker recruited Cooper to sell and settle the Beech Woods, Cooper drew Drinker into the promotion of maple sugar production. In June 1789 Cooper assured Drinker that promoting maple sugar would accelerate the sale and settlement of the Beech Woods; settlers would flock to Drinker's lands if they could obtain cash or store goods by making maple sugar. As the owner of Atsion Ironworks, Drinker had yet another incentive for supporting an enterprise that would demand hundreds of iron kettles. It also pleased Drinker, a Quaker abolitionist, that he could profit from a promotion that promised to strike a blow against slavery. Appealing to a medley of motives that he shared, Cooper assured Drinker, "Land will Likewise Sell for Cash...and wee shall have the Satisfaction of Seeing that we have interrested ourselves in a Good Work." Doing good while earning cash pay was the sweetest promise of a maple sugar to William Cooper and Henry Drinker.¹²

Abundant in the hills of New England, New York, and northern Pennsylvania, the sugar maple (*Acer saccharum*) was a majestic hardwood tree that grew 120 feet tall and 3 feet thick. Yankee settlers had learned from the Indians how to tap each tree with a V-shaped cut of the ax: to insert a hollow spout made of the thin, supple bark of alder or sumac to drain the dripping sap into hardwood troughs; to collect the sap in pails; to boil the juice in iron kettles set over fires to produce a molasses; and to strain and dry the syrup in wooden molds to render a crude, brown sugar. The more thorough settlers built log houses to shelter their kettles from the wind and rain, and they cleared away the underbrush and rival trees in a surrounding grove of sugar maples to create "a Sugar Bush." Sugaring was the work of men and boys during a three- to six-week period at the end of winter and beginning of spring (March and April), when warm days alternate with frosty nights to keep the sap in circulation. A settler's son recalled: "The tapping of the trees, the regular rounds made to empty vessels, the filling of the kettles, the keeping up of the fire, the watching of the process as the transparent sap first changed into syrup, and then into sugar; and all this in the woods, fast budding into life and beauty, formed an annual festival scene whose coming we anticipated with joy."¹³

Initially, Otesgo's Yankee families produced maple sugar in modest quantities strictly for household consumption. It seemed that maple sugar could not compete in urban and foreign markets with the whiter, purer sugar produced from canes grown on slave plantations in the West Indies. But William Cooper became convinced that maple sugar could be refined and mass-produced to compete in both quality and quantity with cane sugar.¹⁴

Cooper considered maple sugar the ideal commodity for new settlers because its production required little labor and less capital. Simply by tapping existing trees, settlers could produce maple sugar immediately, without clearing the old forest to cultivate new plants. Properly done, tapping neither damaged nor killed a tree, permitting a sustained harvest year after year. Because March was a slack

season for farming, the increased production of maple sugar mobilized underemployed labor instead of sacrificing some other enterprise. Because the capital necessary was limited to a kettle, a ladle, a few pails, troughs, and molds, the production could be decentralized among families drawing upon their own labor working their own land. Boys “old enough to carry a pail...or to feed a fire with light fuel” could do most of the work.¹⁵

Cooper concluded that maple sugar was the key commodity that would unlock the full economic potential of the northern upcountry to the benefit of consumers, settlers, landlords-and even West Indian slaves. He set out to persuade his countrymen that, if properly promoted and produced, maple sugar could drive imported cane sugar from the American market, that New York and northern Pennsylvania had more than enough sugar maples to satisfy the entire national demand, and that American maple sugar could be exported profitably to Europe. By substituting for the most valuable agricultural commodity imported into the United States, maple sugar would alleviate the new nation’s balance of payments deficit, striking a blow for economic independence. Deprived of their markets for cane sugar, West Indian planters would have to shut down their plantations and liberate their slaves. Produced by free families “without exercising the lash of cruelty on our fellow creatures,” American sugar would advance the day “when the minds of men are become so liberal as to view liberty in its true light-when slavery shall be done away.” The money that was flowing into the coffers of importers and the West Indian planters would instead pass into the pockets of American Farmers, enhancing their standard of living. Become prosperous, farmers could readily pay their debts to landlords. Eager to share in the new prosperity, migrants would flock west to settle in the New York hills, paying increased prices for lands covered with sugar maples.”¹⁶

But there was no time to waste, for settlers were “wantonly and foolishly destroying” the sugar maples by the thousands as they cleared the forest. Because maple trees were especially valuable for firewood or potash, they quickly attracted the interest and the axes of new settlers. Cooper hoped “to rescue from destruction these trees; these diamonds of America; these gifts of Heaven, which never created anything in vain. Thousands of them are daily destroyed...I stand alone for their protection, and plainly perceive that our country will soon be deprived of them; but knowing their value, I now plead their cause.” In *The Pioneers* James Fenimore Cooper paraphrased his father’s rhetoric, placed in the mouth of Judge Marmaduke Temple, who condemns the “practice, which devotes these jewels of the forest, these precious gifts of nature, these mines of comfort and wealth, to the common use of a fireplace.” Temple calls the maple trees “jewels” as Cooper called them “diamonds”: both evocations of the longing to find hidden treasures lurking in their lands.¹⁷

Supporting Question 1

Featured Source

Source B: "To The Publick"

- "To The Publick" ; draft written by William Cooper
 - Regarding other uses for land during settlement era:

"And seeing that, whilst some are striving not only to save but also to propagate this invaluable tree, others are destroying them by thousands. (P.1; line 5)

"Some will say if we leave them what shall we so for farming land? I answer there is land enough where they stand thin for the purpose of plowing, sowing, mowing, and pasture" (P.3; line 21)
 - Cooper attempting to establish maple sugar production as valuable asset to US economy:

"Among these blessings that the United States of America are favored with the privilege of extracting sugar from the maple tree appears to be one worthy of reckoning among the choicest" (P. 1; line 1)

"... but should the People wisely determine to save and cultivate [the maple tree], an ample supply for the consumption of the United States could always be obtained within its boundaries, and at a cheaper rate than the sugar brought from the west indies." (P.1; line 22)
 - Cooper establishes previous successes with maple sugar production:

"it is a certain fact that Henry Drinker of Philadelphia has had made on his farm on the banks of the Delaware near half a ton, some of which has arrived in Philadelphia equals in grain color and taste to the very best Jamaican [sugar cane], and numerous samples have gone to France, England, and the West Indies." (P.2; Line 17)

To the Publick

Among other Blessings that the United States of America are favoured with that the Priviledge of Extracting Sugar from the Maple tree appears to be not of one worthy of Ranking among the Choicest

And Seeing that, whilst some are Striving not only to Save but also to Propagate this invaluable tree, Others are Destroying them by thousand I have taken ~~the liberty~~ ^{the liberty} it struck me as an Object not Unworthy any Man Exposing himself in a New Paper by way of Holding up a Side against a Practice so injurious.

more than fifty years back the People North of the Delaware forty One has been in the Practice of Manufacturing ^{their sugar} in small quantities for family Use. but none has yet appeared to shew by Tolded Recaps or Ocular Demonstration that it is an Object worthy the Publick Consideration. it is Expected that from the long habit of the farmers and other ~~Persons~~ in the Practice of Manufacturing the Juice of the Maple in a ~~Concise~~ ^{Concise} ~~Maner~~ ^{Maner} ~~Annually~~ small way making it only as a work done by the by will treat the Subject lightly and say that it may answer good Purposes for new settlers or at farthest must ~~be~~ ^{be} ~~after~~ ^{after} the Country is opened fit for farming, the latter is granted that if the means ^{are} Destroyed? the Cause cannot be produced but should the People wisely determine to Save and Cultivate this Species of timber an ample Supply for the Consumption of the United States could always be obtained within its Boundaries, at a cheaper rate than those Sugars brought from the west Indies for which we pay ready moneys or such Articles as will command it - no Doubt but had the natives of Mexico and Peru been told that those skins but of which they took such a trifling value would afford such an inexhaustible source of wealth to near halfe the globe but that they would have ^{thought} it an Extravagant

Apertion for they only made Use of it for Ornaments to their
Bodys of Course ~~supposed~~ ^{Carved} to the height of its Value
but have since ^{of late} all Antiously seeking what they thought so
trifling of not Exactly but in some measure so with the Sugar
trees of America they are now only work'd by ^{People} ~~them~~ ^{for} ~~the~~ ^{the} Use of their families and when they
are told that it may become an Article of importance to our own
As well as other Countries it generally Causes a Smile - but let us
inquire a little into the Ground on which this Business stands and
then if neither Reason nor facts Appear to Prove the Distraction of
this tree a Publick Loss then let the Deputyes Continue to ~~Disturb~~

we will first ~~begin~~ ^{enquire} whether it can be made Equal
in quality to those Sugars brought from the west indias. then what quantity
can be made - then the gross mistake in Destroying ~~the trees~~ ^{the trees}
and Conclude with a few remarks on the mode of making the Sugar
taking the trees, and their inherent Value

it is a Certain fact that Honey Brinker
of Philadelphia has had made on his farms on the Banks of the
Delaware Near half a ton Sem of which hath arriv'd in Philad^{phia}
Equal in ~~good~~ Grain Color and taste to the Very Best ^{Jamaica} ~~Whiskey~~
and Numerous Samples have gon to France England ^{the} west
indias ~~and~~ Edward Purinton of Philadelphia but
formerly a famous Sugar Boiler in the west indias gives it
as his Opinion that it has Every requisite necessary in good
Sugar and that it will refine well into Soft Sugar.

to show that the quantity that can be Collected is
Very grate the Curious will Please to calculate on the following
Statement - I have actually Collected this Unfavourable
Season from a tract of Country less than ten miles square
between forty and fifty th of ^{West of which is Equalled to the quantity} ~~of~~ ^{to the quantity} ~~of~~ ^{of Philadelphia} ~~and~~ ^{and} ~~not~~ ^{not} ~~one~~ ^{one}
tenth Part of the trees within that Space was made Use of
Now if such a quantity can be Procure'd on such a small tract

of Country what might ~~not~~ be Collected from five Millions of
Acres which is now Covered in a great measure with this timber

those who think it more Profit to Clear them from
of the ground to make way for wheat or Pasture will Near to attend
to following Receipt taken from a farmer who had Sav^d four Acres
Expos^d to the north west. and then Recollect what employment is more
Profitable

Rec^d Cooperstown April the 30th 1790 of William Cooper
fourteen Pound Eighth Shillings for five hundred and Seventy
Six Pound of Sugar at Six Pence per lb. made Every Pound with my
own hand without any other Assistance in 20th than four weeks
besides the other Business of my farme such as giving firewood
taking Care of Chestnuts &c

Evidence Richard A. Smith

John Nichols

it is written that Every tree that Boring the
not forth good fruits is felled down and Cast into the fire Matters
the 3rd and 10th ~~was~~ Altho this was Spoke by way of Parable
yet it Carries this Argument with it that, ~~that~~ the Common
sense of all men, was against Consuming those trees that
yielded good fruits but on the contrary to Save them for the
Purposes for which the founder of the Universe form^d them

Some will say if we leave them what shall
we do for farming Land I answer there is Land enough where
they stand this for the Purposes of Plowing and Sowing Mowing
and Pasture the last of which can be Produc^d among them
Altho they are apt to blow down when the other timber is taken
away having a heavy top with a root generally found in

Altho they
are apt to
blow down

a deep rich mould

246.40
2 10 3 20
10

Supporting Question 1

Featured Source

Source C: Partially transcribed account book form Cooperstown General Store 1790

Cooperstown, Lake Otsego 1790		Cooperstown, Lake Otsego 1790	
Jan. 28	Stephen Smith to G.S. 1/4 lb. tea 1/2 bush. salt 1 finished pen knife	" " " "	" 4 2 6
Feb. 8	Andrew Cannan to G.S. 1 sugar kettle	1	12
Feb. 13	Andrew Cannan to G.S. 1 gal. West Indian rum	"	8
Feb. 15	John Nicholls to G. S. 1 sugar kettle	1	12
Feb. 17	Andrew Cannan to G.S. 1 lrg black hand trunk 1 red leather trunk 1 pr sheep shears 1 1/2 yrd black satin ribbon 2 yrd white china ribbon	" " " " "	10 8 3 2 2
Feb. 24	Stephen Smith to G.S. 1/4 yard fabric 1/2 yard fabric 2 spools thread 1 pr shoe buckles	" " " "	11 1 " 2 4
Feb. 27	Stephen Smith to G.S. 1 lb. tea	"	3
Mar. 1	Stephen Smith to G.S. 3 lbs. sugar 2 gal. best rum 1 inch screw auger	" " " "	1 9 16 3
Mar. 3	Stephen Smith to G.S. 1 gal. rum		5
Mar. 5	Stephen Smith to G.S. 1 gal. rum		5
Mar. 15	Andrew Cannan to G.S. 2 lbs. chocolate 1/4 yard fabric 1/4 yard flannel 1 gal. best rum	" " " "	3 3 4 8
Mar. 20	Andrew Cannan to G.S. 1/2 doz. table spoons		19
Mar. 29	John Nicholls to G. S. 1/2 lb. tea		4
Apr. 3	G. S. to John Nicholls CREDIT - for 17 lbs sugar G.S. to Stephen Smith CREDIT - for 1,000 ft. of boards	" " " "	1 8 18
Apr. 6	Stephen Smith to G.S. 1 peck of salt 2 quarts rum	" "	4 2
Apr. 7	Stephen Smith to G.S. 1 gal. West Indian rum		6
Apr. 12	Stephen Smith to G.S. 1 quart rum		8
	Stephen Smith to G.S. 1 quart rum		2

Cooperstown, Lake Otsego 1790

Cooperstown, Lake Otsego 1790

Dec. 9	John Nicholls to G. S. 6 1/2 yds green fabric Thread 2 doz. buttons 2 yds red flannel 1 lb. tea 1 half-pint glass 1 comb 2 yds tape	1 " " " " " " "	1 " 1 7 3 " " "	2 7 6 " 6 10 9 4 8
Dec. 11	John Nicholls to G. S. 1 paper of pins	"	"	10
Dec. 21	Stephen Smith to G.S. 1 chintz shawl	"	"	12 6
Dec. 27	John Nicholls to G. S. 1 2/3 pack of paper 1 lb. tea 1 pen knife	" " "	3 3 1	8 4 6 6
	Stephen Smith to G.S. Cash	"	11	"
Dec. 29	John Nicholls to G. S. 1/2 set tea cups 2 1/2 yds linen 1 green cup 1 knife	" " " "	" 7 " "	9 6 6 8 5
Dec. 31	John Nicholls to G. S. 1 pack pins	"	"	10

Oct. 7	Andrew Cannan to G.S. 2 lbs. chocolate 3 lbs. nails	" "	3 3	4 6
Oct. 22	G. S. to John Nicholls CREDIT: pay on account with cash	"	4	6
Oct. 28	Andrew Cannan to G.S. 1 gal. rum	"	8	"
Oct. 28	G.S. to Andrew Cannan CREDIT: pay on account with cash	"	10	"
Oct. 30	Andrew Cannan to G.S. 1/2 lb. tea	"	1	9
Nov. 5	John Nicholls to G. S. 1 lb and 1 ounce of snuff	"	1	1
Nov. 13	Andrew Cannan to G.S. 3 lbs. of pepper 11 lbs. of tea	" 1 2	11 18 9	3 3 6
Nov. 16	John Nicholls to G. S. 1 lb. tea	"	3	6
Nov. 23	Stephen Smith to G.S. 3 beef heads	"	3	"
	John Nicholls to G. S. knives and forks	"	"	6
Dec. 8	John Nicholls to G. S. 1 lb. of tea 1/2 set of tea cups 1 qt rum	" " " "	3 2 2 7	6 " " 6

Supporting Question 2

Supporting Question	Why did abolitionists and politicians support the production of maple sugar?
Formative Performance Task	Create a list of stated or implied reasons for supporting maple production in the United States. Create a list of the problems or issues with supporting maple production in the United States.
Featured Sources	A. Benjamin Rush and Arthur Nobel letters B. “To the Publick” C. Subscribers List D. William Cooper’s Town
Conceptual Understanding	(7.7b) Enslaved African Americans resisted slavery in various ways in the 19th century. The abolitionist movement also worked to raise awareness and generate resistance to the institution of slavery.
Content Specifications	Students will examine the impact of maple sugar production on New York State.
Social Studies Practices	Gathering, Using, and Interpreting Evidence

Supporting Question

Some early Americans had grand ideas for maple sugar production replacing white cane sugar in the United States. They hoped that if the United States no longer needed to import white cane sugar and could export maple sugar to European markets that the sugar plantations would go out of business, releasing their slaves. It would also be a step towards economic independence for the new nation.

Formative Performance Task

The formative performance task calls on students to create a list of stated or implied reasons for supporting maple production in the United States (Pro) and to create a list of the problems or issues with supporting maple production in the United States (Con). To fully understand the complex process students will analyze these featured sources: Benjamin Rush and Arthur Nobel Letters, “To the Publick”, Subscribers List and William Cooper’s Town.

Teachers might read the excerpts aloud for students who require additional reading support while having other students read silently. Students can complete their lists individually or with a partner, and the teacher might decide to have a discussion about their answers or collect the lists for feedback later. Students will practice Gathering, Using, and Interpreting Evidence as they complete the lists to summarize the excerpts of Benjamin Rush and Arthur Nobel Letters, “To the Publick”, Subscribers List and William Cooper’s Town. The in depth analysis of these resources will allow students to identify the main idea and supporting details from text passages and illustrations.

Featured Sources

FEATURED SOURCE A is two letters written to William Cooper demonstrating politicians' enthusiasm for the production of maple sugar.

FEATURED SOURCE B is a document letting the public know William Cooper's thoughts about maple sugar production in his effort to gather support from the settlers to create the product. In it he talks about the economic value of the maple tree and maple sugar. Pointing out the success that Henry Drinker has had with his production of maple sugar.

FEATURED SOURCE C is a document signed by prominent gentleman who have committed to purchasing maple sugar. This document demonstrates the support for the production of maple sugar and that there was a market for the product.

FEATURED SOURCE D is an excerpt from the book William Cooper's Town by Alan Taylor. The document will introduce some of the key supporters of maple sugar production in the United States. It will explain how they worked to promote maple sugar in the United States and Europe.

Supporting Question 2

Featured Source

Source A: Benjamin Rush and Arthur Nobel letters

- **Letter 1:** Benjamin Rush to William Cooper March 16, 1791
“Maple sugar rises in credit daily, and many unbelievers have lately been converted to our opinions regarding the possibility of supplying the United States with Sugar from their own lands – we expect to hear of your having done great things in that way this spring.” *(P.3)*
- **Letter 2:** Arthur Nobel to WC May 7, 1791
“I left the sugar and spirits in charge with our Friend Doctor Rush to be delivered to the President George Washington] on his return from the southward, which they expect will be in the middle of June.” *(P.1)*
[in reference to Thomas Jefferson, then Secretary of State] “...he is as sanguine as you and I about the maple sugar, he thinks in a few years we shall be able to supply half the world” *(P.2)*

Arthur Nobel letter to William Cooper

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Arthur Nobel
to
Wm Cooper
May 7 1791

Complary May 7 1791

I left the Sugar & Spirits in
Charge with our Friend, Doctor Rush to be delivered
to the President on his return from the Southward, which
they expect will be in the middle of June, Dr. Rush thinks
the properest way to deliver him will be that
Mr. Cooper & Mr. Nobel present this respects to the
President of the United States, request his acceptance
of Samples of Sugar & Spirits produced from the South
Ire with their Observations, & I am sure he will
do it least to give you satisfaction, I am on my
Road to Fort Mifflin, where I shall expect to see you
I leave about the 20. Inst, & request you will
bring George Washington I spent his day very
agreeably in Albany once with the Doctor the other
with Ganey, wd did not forget you, Dauby I swear
like a Trooper if you forget to send him the Proclamation
The White Government you all the days of your life

The Honble
Wm Cooper
Coopers Town

Doctor Rush sent his Son to Demingston for the four
Laces of White refined Sugar, but he had not heard of being
Purveyed etc. I have been begging White Quarts etc. you
would bring to market this year, I hope you will not
be disappointed by your Quarrels, the Chancellor
has just paid the price in his Capriciousness
he says he will take \$100 for it, his Depl. Edition
it was a very bad year & the time should not turn
Rush thought he to Mr. Jefferson the Secretary
of State, as far as possible as you could about
the Proclamation, but think in a few years we shall
be able to supply half the World, he had recd a
Paragraph out of a letter from France, to tell him
there is a house in Amsterdam going to send to
this Country to set up Works for the Manufacture
of refined Sugar, Will best advise for your Family
& Mr. Smith believe me, Dear Cooper
Yours truly friend
Arthur Nobel

Benjamin Rush letter to William Cooper

P.S. I beg you would not forget to request the Settlers who purchased from me last year, to choose the most convenient spot for a Glee- Church School house in the settlement, and I will give that person on whose land the choice shall fall, a receipt for the value of 200 Acres which will be £100. - This is to be in lieu of the land allotted for the above purposes at the forks of the Creek which you say is not sufficiently central, nor otherwise fit for a Church &c. The land thus given must be conveyed by the ^{present} owner to the Society for whose benefit it is intended. -

I see further that you would not fail to make the interest in my land your own, that he might at his death, that I shall certainly give him. B. Rush

Dear Sir Philadelphia 16th 1791.

I enclose you herewith a power of attorney ^{near} to dispose of ~~2000~~ 3000 Acres of land on the loyal South ^{Civilian} Northumberland County, upon ~~the~~ same terms you sold the lands for me last year - only the interest on the bonds must commence on the day of sale. You have now I hope a number of blank bonds and mortgages with my name in them which will answer the purpose of the proposed sale. If you have not, I ~~hope~~ \$200 worth will be kind and to ward a few copies for me, & I will cheerfully pay them

for his trouble.

I enclose you likewise a draft of the land. The tracts to be disposed off are marked with a cross. The reserved tracts are marked with an R. -

These lands are all rich bottom, and as they are upon navigable water, I expect will command a ready sale. -

The improvements in the State of Pennsylvania by roads & canals it is generally thought will double the value of lands on the waters of Susquehanna in a few years.

Congress have voted 3000 men to defend the settlements on the Ohio. This force will keep the Indians at bay, and render the Settlers on loyal Soil as safe as if they were in the Centre of the States of New York or Connecticut.

It is generally expected the Indians will sue for peace as soon as they hear of so great a force coming against them. I hope our success will be from this unfortunate business, that the cheapest method of living in peace with the Indians ^{henceforth} is to purchase their friendship. At present they say ^{with thank} the war is indispensably necessary.

The people here are in credit daily & many Unbelievers have lately been converted to our Opinions respecting the possibility of supplying the ^{States} United with Sugar from their own lands. - we expect to hear of your having done great things in that way this Spring.

The same Commissions ^{which} paid last year on the sale of my lands, shall cheerfully be paid to your draft upon the sales which I have now proposed to you.

From D^r your sincere friend B. Rush

Supporting Question 2

Featured Source

Source B: "To The Publick"

- "To The Publick" ; draft written by William Cooper
 - Regarding other uses for land during settlement era:

"And seeing that, whilst some are striving not only to save but also to propagate this invaluable tree, others are destroying them by thousands. (P.1; line 5)

"Some will say if we leave them what shall we so for farming land? I answer there is land enough where they stand thin for the purpose of plowing, sowing, mowing, and pasture" (P.3; line 21)
 - Cooper attempting to establish maple sugar production as valuable asset to US economy:

"Among these blessings that the United States of America are favored with the privilege of extracting sugar from the maple tree appears to be one worthy of reckoning among the choicest" (P. 1; line 1)

"... but should the People wisely determine to save and cultivate [the maple tree], an ample supply for the consumption of the United States could always be obtained within its boundaries, and at a cheaper rate than the sugar brought from the west indies." (P.1; line 22)
 - Cooper establishes previous successes with maple sugar production:

"it is a certain fact that Henry Drinker of Philadelphia has had made on his farm on the banks of the Delaware near half a ton, some of which has arrived in Philadelphia equals in grain color and taste to the very best Jamaican [sugar cane], and numerous samples have gone to France, England, and the West Indies." (P.2; Line 17)

To the Publick

Among other Blessings that the United States of America are favoured with ~~that~~ the Priviledge of Extracting Sugar from the Maple tree appears to be not of One worthy of ^{being} Among the Choicest

And Seeing that, whilst Some are Striving not Only to Save but also to Propagate this invaluable tree, Others are Destroying them by thousands I have taken ~~the liberty~~ ^{the liberty} it struck me as an Object not Unworthy Any Man Exposing himself in a New Paper by way of Holding ^{up} a side Against a Practice so injurious.

more than fifty years back the People North of the Latitude forty One has been in the Practice of Manufacturing ^{the sugar} in small quantity for family Use. but none has yet appeared to shew by solid Reason or Ocular Demonstration that it is an Object Unworthy the Publick Consideration. it is Expected that from the long habit of the farmers and Other ~~Country~~ in the Practice of Manufacturing the Juice of the Maple in a ~~Convenient~~ ^{Convenient} ~~Manner~~ ^{small} way making it Only as a work Done by the by will treat the Subject lightly and say that it may answer good Purposes for new Settlers or at furthest must ~~be~~ ^{be} ~~of~~ ^{be} ~~use~~ ^{be} ~~after~~ ^{be} the Country is Opened fit for farming, the latter is granted that if the means ^{are} ~~are~~ Destroyed? the Cause can not be produc'd but should the People wisely Determine to Save and Cultivate this Species of timber an ample Supply for the Consumption of the United States could Always be Obtain'd within its Bounds, & at a Cheaper rate than those Sugars Brought from the west Indies for which we pay ready money or such Articles as will Command it - no Doubt but had the Nations of Mexico and Peru been told that those skins but of which they took such a trifling & Labour would afford such an inexhaustible source of wealth to near halfe the Globe but that they would have ^{thought} it an Extravagant

Apertion for they only made Use of it for Ornaments to their
Bodys of Course ~~supposed~~ ^{Carved} to the height of its Value
but have since ^{of late} all Antiously seeking what they thought so
trifling of not Exactly but in some measure so with the Sugar
trees of America they are now only work'd by ^{People} ~~them~~ ^{for} ~~the~~ ^{the} Use of their families and when they
are told that it may become an Article of importance to our own
As well as other Countries it generally Causes a Smile - but let us
inquire a little into the Ground on which this Business stands and
then if neither Reason nor facts Appear to Prove the Distraction of
this tree a Publick Loss then let the Deputyes Continue to ~~Disturb~~

we will first ~~begin~~ ^{enquire} whether it can be made Equal
in quality to those Sugars brought from the west indias. then what quantity
can be made - then the gross mistake in Destroying ~~the trees~~ ^{the trees}
and Conclude with a few remarks on the mode of making the Sugar
taking the trees, and their inhospick Value

it is a Certain fact that Honey Brinker
of Philadelphia has had made on his farms on the Banks of the
Delaware Near half a ton Sem of which hath arriv'd in Philad^{phia}
Equal in ~~good~~ Grain Color and taste to the Very Best ^{Jamaica} ~~Whiskey~~
and Numerous Samples have gon to France England ^{the} west
indias ~~and~~ Edward Purinton of Philadelphia but
formerly a famous Sugar Boiler in the west indias gives it
as his Opinion that it has Every requisite necessary in good
Sugar and that it will refine well into Soft Sugar.

to show that the quantity that can be Collected is
Very grate the Curious will Please to calculate on the following
Statement - I have actually Collected this Unfavourable
Season from a tract of Country less than ten miles square
between forty and fifty th of ^{West of which is Equalled to the quantity} ~~of~~ ^{to the Heights} ~~of~~ ^{of Philadelphia} ~~of~~ ^{and in} ~~of~~ ^{with} ~~of~~
tenth Part of the trees within that Space was made Use of
Now if such a quantity can be Procure'd on such a small tract

of Country what might ~~not~~ be Collected from five Millions of
Acres which is now Covered in a great measure with this timber

those who think it more Profit to Clear them from
of the ground to make way for wheat or Pasture will Near to attend
to following Receipt taken from a farmer who had Sav^d four Acres
Expos^d to the north west. and then Recollect what employment is more
Profitable

Rec^d Cooperstown April the 30th 1790 of William Cooper
fourteen Pound Eighth Shillings for five hundred and Seventy
Six Pound of Sugar at Six Pence per lb. made Every Pound with my
own hand without any other Assistance in 20th than four weeks
besides the other Business of any farme such as giting firewood
taking Care of Chestnuts &c

Evidence Richard A. Smith

John Nichols

it is written that Every tree that Boring the
not forth good fruits is felled down and Cast into the fire Matters
the 3rd and 10th ~~now~~ Altho this was Spoke by way of Parable
yet it Carries this Argument with it that, ~~that~~ the Common
sense of all men, was against Consuming those trees that
yielded good fruits but on the contrary to Save them for the
Purposes for which the founder of the Universe form^d them

Some will say if we leave them what shall
we do for farming Land I answer there is Land enough where
they stand this for the Purposes of Plowing and Sowing Mowing
and Pasture the last of which can be Produc^d among them
Altho they are apt to blow down when the other timber is taken
away having a heavy top with a root generally found in

Altho they
are apt to
blow down

a deep rich mould

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Maple Sugar
Publication

the People from long habit are ~~used~~ of making it out of the
~~most common~~ troughs wherein the Master has those thinning
Summers together with the want of the instructions of the west
in a sugar Boilers are led to believe they never can make it
a Sample of ~~Artificial~~ among those of a Delicate Taste B. Bush
M.D. gives it as his ^{Professor of Chemistry} opinion that ~~sugar is the same~~ ^{the sugar is the same}
in its nature as those of the west indias.

the frequent Disappointments that the
farmers meet with for want of a little Care such as having
their troughs fill in the time of Gathering Saps with rain
water, or the Saps destroyed by Cutlet might easily be prevented
by tacking a Broad Shingle over the trough with a small
hole not more than half an inch Diameter through which
the Sap would Drop with a continual Certainty. this method
altho a little more work would the Dirt and many other misfor-
tunes that hurts the Process of the Sugar as to tapping
the trees I have thought of introducing the Auger
or Saw but this dont appear the Object at Present - whilst
thousands of them are daily destroyed by the Saps I find they
have hatching with an axe for forty years successfullly
this is accounted for by the Saps rising up the
Whole Body of the tree Equally alike, and not
as most other timber show the Bark Only I have
seen troughs of the Illable and the Saps would run
out through the Joints of the timber as fast as it fell

in a good thrifty Sugar tree will produce 15 lbs of sugar annually
but by the common mode of conducting their works it is expected that
a sap instead of a greater quantity is to frequently Exposed? I think my self
Clear of Enormities when I see a good Sugar tree cut twenty
shillings Value if this is the case what must the annual loss be
when considering the great improvements now Making it may
in Reason be supposed that these Millions are destroyed in the
State of New York only

Supporting Question 1

Featured Source

Source C: Subscribers List

- Subscribers List, 1789 ; list of subscribers who have committed to purchasing maple sugar in the amount shown next to their name. Introduction is transcribed in full below:

We the subscribers, being desirous to promote and encourage the manufacture and consumption of maple sugar in the United States, do hereby agree and engage to purchase annually for the term of three years from the date hereof the quantity or number of pounds of maple sugar set against our names respectfully as the same shall be brought to this market, and that we will pay cash therefor at the rate of seven pence per pound inspected for that of the first quality and in proportion for that of an inferior quality. And in order that the business maybe be conveniently and impartially conducted we hereby appoint Pickering & Hadgdon, Israel Whelon, Leonard Dorsey, Nathan Field, and Jones V. Lounces to receive the sugar that may be brought to market to inspect the quality, determine the price, and distribute the same among the subscribers.

Witness our hands the third day of September 1789.

Important names on document: Henry Drinker (and his family), Benjamin Rush

1789

We the Subscribers, being desirous to promote & encourage the man-
 -ufacture & consumption of Maple Sugar in the United States, do hereby
 agree & engage to purchase annually for the Term of three years from the
 date hereof the quantity or number of pounds of Maple Sugar set against
 our names respectively as the same shall be brought to this market, and
 that we will pay Cash therefor at the rate of seven pence per pound in specie
 for that of the first quality & in proportion for that of an inferior Quality
 And in order that the business may be conveniently & impartially conducted
 We hereby appoint Pickering & Hodgden, Isaac Whelan, Leonard Torrey,
 Nathan Field & Jones & Leonard to receive the Sugar that may be brought
 to market, to inspect the quality, determine the price, & to distribute the
 same among the Subscribers. Witness our Hands the third - day of
 September 1789

Henry Drinkers	1000	One thousand pounds weight
Henry Drinkers for the Atten Company	1000	One thousand - ditto
Robert Wainwright	500	Five hundred ditto
Jos ^{ph} Warder	200	Two hundred d.
Henry Drinkers jun	100	One Hundred Pound
John Thomas	100	One Hundred Pound
John Drinkers	200	Two hundred Pounds
Benj ^m Hornor	200	Two hundred pounds
W ^m Smith	200	Two hundred Pounds
W ^m Wainwright	100	One hundred pounds
Miss Fisher	200	two hundred Pounds
John Field	300	five hundred Pounds
John James	200	two hundred Pounds
Jam ^s Pemberton	200	Two hundred pounds
Nicholas Wain	100	One hundred pounds
Fraugott Bagge	200	Two hundred pounds
Jacob Downing	200	Two hundred pounds
Richard Downing J ^r	100	One Hundred pounds
Richard Thomas	100	One Hundred Pounds.
	5400	

Amount of Sugar subscribed for	π	brought forward	Amount
Geo Logan	200	two hundred pounds	
Montgomery	500	Five hundred Pounds	
Samuel Adydon	200	Two hundred Pounds	
Wm Strick	200	Two hundred Pounds	
John & A. Montgomery	200	Two hundred Pounds	
Peter Thomson	200	Two hundred Pounds	
Nath. Haleoner	100	one hundred pounds	
Josiah Mc Gills	100	one hundred pounds	
Hubris	200	Two hundred Pounds	
Poulson, junr	100	One hundred Pounds.	
Benj ^r Rush	200	Two hundred pounds.	
Rebecca Day	100	One hundred pounds	
Isaac Metcher	100	one hundred pounds	
Saml Miles	1000	one thousand pounds	
Geokinger	100	One hundred Pounds	
Josiah Mearns	300	three hundred pounds	
Geo Robinson	200	Two hundred pounds	
Nath. Lewis	100	One hundred pounds.	
John David	100	One hundred pounds	
Clement Biddle	100	One hundred pounds	
Shel. Leaming Junr	100	One hundred Pounds	
Sarah Horner	100	One hundred Pounds	
Joseph Anthony Junr	100	One hundred Pounds	
Thomas Potts	100	One hundred Pounds	
Joseph Anthony	200	Two hundred Pounds	
Thomas Franklin	200	Two hundred Pounds	
George Williams for A. Williams	500		
	100	One hundred Pounds	

Amount of Sugar transferred	10,500	Ten thousand five hundred pounds weight
James Logan	100	One hundred pounds
Sam Clearants	400	Four hundred pounds weight
<hr/>		
Israel Clearants	100	One hundred Pounds -
Wm. C. C. junr	100	One hundred pounds
Sam. C. C. junr	200	Two Hundred Pounds
Rich. Davis	200	Two Hundred Pounds
Isaac Deacons	100	One hundred Pounds
Edw. Dickinson	200	provided it be good & really fit for family use
Henry W. Physick	150	provided as above
for himself		
& for his Father	150	
Edmund Physick Esq	150	
Leonard Dorsey	200	Two Hundred Pounds
W. M. W. W.	600	Five hundred pounds -
Thos. Johnston	300	Three hundred Pounds
<hr/>		
David Kennedy	200	Two hundred Pounds wt.
John Dumas	200	Two hundred Pounds
Jacob Stanbury	100	One hundred pounds wt.
William Wells	100	One hundred pounds wt
Asariah Horton	100	One hundred pounds wt.
George Guest	100	One hundred pounds wt.
Joshua & Sam. Coates	200	Two hundred pounds
Robert Smith	100	One hundred Pounds -
Joseph Wall	100	One hundred pounds
And. Epple	100	One hundred pounds
Leon Snowdon	100	One hundred pounds wt.
Hilary Baker	100	One hundred Pounds
Israel Wheeler	100	One hundred Pounds
<hr/>		
	15,000	Fifteen thousand Eight hundred weight
		Am bania Over -

Supporting Question 2

Featured Source

Source D: William Cooper's Town (120-123)

Cooper concluded that maple sugar was the key commodity that would unlock the full economic potential of the northern upcountry to the benefit of consumers, settlers, landlords-and even West Indian slaves. He set out to persuade his countrymen that, if properly promoted and produced, maple sugar could drive imported cane sugar from the American market, that New York and northern Pennsylvania had more than enough sugar maples to satisfy the entire national demand, and that American maple sugar could be exported profitably to Europe. By substituting for the most valuable agricultural commodity imported into the United States, maple sugar would alleviate the new nation's balance of payments deficit, striking a blow for economic independence. Deprived of their markets for cane sugar, West Indian planters would have to shut down their plantations and liberate their slaves. Produced by free families "without exercising the lash of cruelty on our fellow creatures," American sugar would advance the day "when the minds of men are become so liberal as to view liberty in its true light-when slavery shall be done away." The money that was flowing into the coffers of importers and the West Indian planters would instead pass into the pockets of American Farmers, enhancing their standard of living. Become prosperous, farmers could readily pay their debts to landlords. Eager to share in the new prosperity, migrants would flock west to settle in the New York hills, paying increased prices for lands covered with sugar maples."¹⁶

But there was no time to waste, for settlers were "wantonly and foolishly destroying" the sugar maples by the thousands as they cleared the forest. Because maple trees were especially valuable for firewood or potash, they quickly attracted the interest and the axes of new settlers. Cooper hoped "to rescue from destruction these trees; these diamonds of America; these gifts of Heaven, which never created anything in vain. Thousands of them are daily destroyed...I stand alone for their protection, and plainly perceive that our country will soon be deprived of them; but knowing their value, I now plead their cause." In *The Pioneers* James Fenimore Cooper paraphrased his father's rhetoric, placed in the mouth of Judge Marmaduke Temple, who condemns the "practice, which devotes these jewels of the forest, these precious gifts of nature, these mines of comfort and wealth, to the common use of a fireplace." Temple calls the maple trees "jewels" as Cooper called them "diamonds": both evocations of the longing to find hidden treasures lurking in their lands.¹⁷

Cooper sought to conserve the sugar maples not out of any romantic esthetic or any ecological sensibility but from a conviction that their long term value as sugar producers vastly outweighed their immediate value as potash or firewood. He did not mean to stop all deforestation, merely to preserve the groves where sugar maples were most numerous: "There is land enough where they stand thin, for the purpose of plowing, sowing, mowing, and pasture." Cooper was very much like Marmaduke Temple, who explains, "It is not as ornaments that I value the noble trees of this country; it is for their usefulness."¹⁸

Cooper faced a hard sell to change both consumers' tastes and producers' habits. First, he had to overcome consumers' entrenched preference for the whiter, purer cane sugar, widely considered a token of good and fashionable taste. Second, he had to persuade the common farmer to invest the additional time, effort, and equipment to make surplus sugar for the market. Third, he had to induce that farmer to produce a finer sugar that met the expectations of urban consumers. By taking greater pains to keep falling water, blowing dirt, and thirsty cattle out of their troughs, pails, kettles, and molds, the settlers could render their sugar "a Suitable Article among those of a Delicate Taste." Fourth, he had to establish a distribution network to link the sugar producers in the hills of New York to the seaport markets. "I know that the idea has an extravagant appearance, and will be thought by most people an enthusiastic, fanciful and visionary plan; but let reason usurp the throne of prejudice," Cooper pleaded.¹⁹

To prove maple sugar's commercial potential, Cooper proposed to run and publicize a pilot program on his patent. Otsego offered the perfect combination of industrious but needy Yankees and maple-abundant land. Cooper assured Henry Drinker, "I therefore find much Depends on my Exertions" on the Otsego Patent, "a New thick seteled County full of interprising People whose wants of Many articles of Life together with...my influence (Excuse me Henry for Saying it for I think I can speak to thee of facts without Blushing) will Procure a great quantity of well made Sugar wich I shall bring Every Pound to your City." Because men would only believe what they could see, Cooper meant to evangelize for maple sugar by "the repeated testimony of ocular demonstration...laid before the eye of the public."²⁰

In June of 1789 Cooper reached an understanding with Drinker to produce maple sugar in Otsego for the Philadelphia market. Drinker agreed to make, ship, and consign to Cooper on credit 300 iron sugar kettles, each with handles and a capacity of 15 gallons, at a price of 18 shillings apiece. Cooper went to work touring Otsego and the other Montgomery County settlements, proselytizing for men to take the kettles on credit and produce sugar in payment. He also constructed a store and a warehouse in Cooperstown to dole out the kettles and take in the sugar. That summer and fall he wrote numerous letters and newspaper blurbs "to Spread the flame and be Politically advantageous; and indeed too many truths cannot be Said on this Subject in order to make it more *Popular*" and thereby "set this Valluable Tree in that Conspicuous Point of View as to Prevent the Divestation that Dayly taking Place among them." In October, Cooper gleefully reported to Drinker that "the number of kettles talked of by us [is] far short of the Applications made to me by the inhabitants of the Country." In mid-November, Drinker shipped the kettles, and they reached Albany onboard the sloop *Nancy*. From Albany teamsters hauled the kettles on sleighs over the snow, westward up the Mohawk and across the hills to Otsego Lake and Cooperstown.²¹

While Cooper planned production in Otsego, Drinker drummed up support in Philadelphia. Tench Coxe and Benjamin Rush helped by publishing pamphlets and newspaper blurbs extolling the delights, benefits and prospects of maple sugar. Dr. Rush portrayed sugar, especially maple sugar as an elixir and dismissed critics: "It has been said, that sugar injures the teeth, but this opinion now has so few advocates, that it does not deserve a serious refutation." Drinker, Coxe, and Rush prepared a guaranteed market and price in Philadelphia for maple sugar by enlisting other leading Philadelphians into a subscription. They promised to pay 7 pence per pound for the maple sugar that Cooper would, they promised, deliver in the spring. Interest and idealism combined to draw in the subscribers,

described by Coxe as “the friends of the Slaves & of Manufactures Landholders and public spirit people.” A dozen were land speculators who had hired William Cooper as their agent for tracts in the Beech Woods. The subscribers also included the Quaker leaders of the Pennsylvania Society for the Abolition of Negro Slavery. But the promoters failed to move the unsentimental merchant Robert Morris, who replied to Drinker’s solicitation: “I wish the Plan of using maple Sugar in the City may take, but the success will depend upon the quality and Price. Agreements & subscriptions don’t hold long unless supported by convenience or interest.” His caveat prophesied the difficulties that would soon follow. As completed on September 3, 1789, the list named seventy-four men who subscribed for a total of 15,800 pounds. Henry Drinker led the way, promising to buy 2,000 pounds, but most subscribers pledged to take only 100 or 200 pounds.²²

In Cooperstown on January 21, 1790, Cooper began to sell sugar kettles on credit for 1.12.0 pounds each. The settlers could pay for their kettles with sugar in the spring. At the price of 6 pence per pound, 64 pounds of maple sugar would pay for a kettle. By mid-March he had sold all the kettles supplied by Drinker. The 166 individuals who bought kettles in 1790 represented over half of his store’s customers (166 of 315 = 53 percent). Matching names in the store book with the heads of household on the 1790 federal census reveals that at least a third of the settlers within Otsego Township—and over half of those dwelling on Cooper’s patent, nearest the store—obtained a sugar kettle. Cooper entrusted sugar kettles on credit to almost anyone who applied, no matter how poor. In the maple sugar promotion, as in his 1786 land sales, Cooper was the common settler’s friend.²³

In February the extraordinary demand for sugar kettles fed Cooper’s boundless optimism. Throughout Otsego he detected “a Spirit of Preparation for the Sugar Buisness—so much so that not a Doubt id Left with me of the amount being Prodigious.” He projected a harvest of 50 tons. Nothing, it seemed, could go wrong: “The Common invention of man Leaves many Crises that the Oposing winds Blow through, whereas the Present Plan (Let me Say it with thankfulness) Seems to Stand in the Clear Sunshine.”²⁴

However, the weather failed to cooperate with Cooper’s plans, as an unusually frigid March and early April delayed the season. By the end of the truncated season in early May, Cooper had received, weighed, and packed into hogshead barrels about 20,000 pounds of sugar—fifth of the amount that he had predicted in February. Only about two-fifths of the settlers (64 of 166) delivered enough sugar to pay for their kettles in full. Indeed, almost a third of the kettle buyers (49 of 166) produced no marketable sugar whatsoever. On average, each producer brought 80 pounds of sugar: far below the 500-pound target set by Cooper in October. In late May, Cooper informed Drinker: “The Season for Sugar hath ben the Poorest that hath ben known for this 20 yeares. People who made 1000 lb Last year, has not this with Double the exertions and Convenancys made 300.”²⁵

None of the sugar collected would benefit Cooper and his associates unless he could get it to Philadelphia over bad roads and rough rivers. In July he packed the sugar into hogshead casks, which, when filled, averaged 535 pounds. Teamsters loaded the hogsheads onto ox-drawn carts bound northward over the hills to the Mohawk and then eastward to Albany: “a great work attended with much Expence and Loss by raines” that clogged the roads with mud and drenched the hogsheads.

Ominously, Cooper informed Drinker that the rain had penetrated at least eight hogsheads, perhaps damaging the sugar within.²⁶

Prospects brightened once the hogsheads reached the Hudson and their progress became a triumphal procession well publicized in the newspapers. "The Sight makes Albany stare," Cooper boasted. He scored a public relations coup by persuading Albany's preeminent grandee, the manor lord Stephen Van Rensselaer, to host a maple sugar and tea party at his Manor House for "a large company of ladies and gentleman." Understanding the importance of creating an aura of celebrity and fashion, Cooper published their statement that his maple sugar was "superior in flavor to the best muscavado sugar." On August 14 a sloop laden with the maple sugar set sail down the Hudson for New York City and Philadelphia to the applause of newspaper editors primed by Cooper's letters.²⁷

Traveling overland from New York City via Burlington, Cooper became a celebrity among the gentlemen of the urban Northeast—who were fascinated with the commercial prospects and benevolent implications of maple sugar. In 1791 the New York Society for the Promotion of Agriculture, Arts, and Manufactures invited Cooper to deliver an address at City Hall in New York. Presided over by the great manor lord (and chancellor of New York's court of equity) Robert R. Livingston, Jr., the society was a concave of the state's leaders. After the speech Cooper boasted that he had addressed "a full meeting at the City Hall in [New] York," that the society had published his remarks, and that they had elected him a member—three reassuring proofs that he had been accepted by the gentility who governed the Republic. He assured Benjamin Rush that the speech had been "so Clear, yea had I not ben Preparing it my self I should not hesitate to say it must force Convince into every mind...and I have no Pride in inclosing it to thee but as their may be something worthy of attending to in it." Cooper basked in the attention of renowned men like Livingston and Rush. Because of maple sugar he could play to the audience whose approval he so earnestly wanted and needed to validate his recent ascent from poverty and obscurity. Whatever its failure as a marketable commodity, maple sugar opened important doors for William Cooper.²⁹

Through surrogates Cooper even reached the attention of the preeminent American gentleman: President George Washington. In the spring of 1791, Cooper sent his associate Arthur Noble to Philadelphia bearing samples of maple rum and maple sugar. Benjamin Rush arranged for Noble to meet his friend Thomas Jefferson, the secretary of state. The Anglophobic Jefferson took a keen interest in the experiment as potentially liberating the United States from its reliance on the British West Indies for sugar and molasses. "He is as Sanguine as you or I about Maple Sugar. He thinks in a few years we shall be able to supply half the World," Noble left his samples with Rush for formal delivery to the president in August. Washington accepted, wrote a gracious reply, and emulated his secretary of state by planting a few maple trees at Mount Vernon. Newspaper publication of Washington's reply served to promote maple sugar and to link Cooper's name with the president.³⁰

Cooper's fame even extended across the Atlantic as maple sugar became a sensation in the circles of enlightened gentlemen committed to linking scientific progress with social reform. Drinker sent promotional pamphlets and samples of Cooper's sugar to prominent English Quakers and abolition-minded members of Parliament, including William Wilberforce. Jacques Pierre Brissot de Warville,

president of the French society for emancipating slaves, also took an avid interest in the activities of Drinker and Cooper. Such was the European demand for samples that in May 1791, Drinker begged Cooper for 500 pounds “of the very best quality thy stock will afford. If any Man in America or indeed elsewhere, has a right to a preference in this matter, surely it is H[enry] D[rinker].” The best market for maple sugar was as samples sent to curious and benevolent foreigners; maple sugar was most valuable as a fashionable curio associated with enlightened reform. The samples served as so many calling cards, introducing William Cooper’s name to the gentlemen of London, Paris and Amsterdam.³¹

A highly personal crusade, the maple sugar promotion united and harmonized William Cooper’s diverse ambitions: to become at once rich, respected, and beloved. He sought to enjoy private wealth, the accepting approval of great men, and the loving gratitude of common folk. By creating the maple sugar market, Cooper hoped to complete his ascent, becoming the father of his settlers, the benefactor of the West Indian slaves, the peer of New York’s gentry, a favorite of the eminent Philadelphians and the champion of enlightened Europeans. In long, chatty letters Cooper took pains to impress and flatter his patrons. He informed Drinker that teaching the settlers to produce sugar of marketable quality “was a Difficulty that few besides W[illiam] C[ooper] whould have attempted. The People are now Passified with the alteration and bring it in Rapidly. Only think what a Pleasure it is to me to give thee this information.” Eager to please, he informed Drinker, “We never weigh off a Parcel of Sugar but we Speak of thee, Dr. Rush, T[ench] Coxe and other friends to our Experiment.” He plotted flamboyant promotions and dramatic presentations that would, in the service of maple sugar, bring and keep his name before the public eye. In particular, Cooper carefully planned his triumphal appearance in Philadelphia with a sloop load of maple sugar to receive the applause of his illustrious patrons. He intended “once more [to] see my friends in Philadelphia with Boldness, having the Evidence of my former Declarations with me to Produce.” Cooper envisioned the success of maple sugar as a personal triumph; those “who are now opposed to the business, will look around and reflect on the havock universally made, and say, I now join in opinion with WILLIAM COOPER.” However, that raw aggressive personalism—as well as the flamboyant misspellings, malapropisms, and mixed metaphors of his speech and his writing—only marked Cooper’s social awkwardness, for a polished gentleman more carefully masked his ego and his insecurities.³²

DISENCHANTMENT

However, in Philadelphia the public euphoria gave way to private disenchantment as Edward Pennington, sugar refiner engaged by Henry Drinker, opened the celebrated hogsheads and discovered the damage inflicted by the summer rains. Water had penetrated all the hogsheads, rendering most of the maple sugar too dark and moist to have any market value: “It may do to look at and afterwards be applied to some use in thy Family.” At great expense and trouble, Drinker had bought a very bulky novelty. None of the Philadelphia refiners would accept the maple sugar he had obtained from Cooper.³³

Supporting Question 3

Supporting Question	What economic impact does maple production have for New York today?
Formative Performance Task	Create a bar graph by looking at maple production from different states to see where New York ranks in maple production. Create a graph to see where your county ranks in maple production in New York. Do you think the production of maple products impacts New York state's economy?
Featured Sources	A. USDA Crop Production Maple Syrup production B. Table 37. Maple Syrup 2012 and 2007 New York State
Conceptual Understanding	(7.7b) Enslaved African Americans resisted slavery in various ways in the 19th century. The abolitionist movement also worked to raise awareness and generate resistance to the institution of slavery.
Content Specifications	Students will examine the impact of maple sugar production on New York State.
Social Studies Practices	Gathering, Using, and Interpreting Evidence

Supporting Question

Students can look at New York states maple production as it compares to other parts of the United States. By looking at maple production students can understand the revenue that it brings into New York? They should also look at how their county contributes to the economic impact of maple products to New York State.

Formative Performance Task

The formative performance task calls on students to create a bar graph by looking at maple production from different states to see where New York ranks in maple production. Students will also create a graph to see where your county ranks in maple production in New York. Finally the students will assess the question; "Do you think the production of maple products impacts New York state's economy?". To fully understand the complex process students will analyze these featured sources; USDA Crop Production Maple Syrup Production and Table 37. Maple Syrup 2012 and 2007 New York State.

Teachers might read the excerpts aloud for students who require additional reading support while having other students read silently. Students can complete the Comparing and Contrasting Charts individually or with a partner, and the teacher might decide to have a discussion about their answers or collect the charts for feedback later. Students will practice Gathering, Using, and Interpreting Evidence as they complete the Comparing and Contrasting Chart to summarize the excerpts of USDA Crop Production Maple Syrup Production and Table 37. Maple Syrup 2012 and 2007 New York State. The in depth analysis of these resources will allow students to identify the main idea and supporting details from text passages and illustrations.

Featured Sources

FEATURED SOURCE A is the statistics of maple production by state for 2013 – 2015. Students will be able to compare the number of taps, yields, production and value between the states that produce maple products

FEATURED SOURCE B shows the statistics for the counties in New York that participates in maple production. Students will be able to see the number of farms, taps and the number of gallons of syrup produced.

Additional Resources

Additional source can be used if you would like to see how the United States compares to Canada's maple production.

Statistical Overview of the Canadian Maple Industry 2012

http://www.novascotiamaplesyrup.com/wp-content/uploads/2014/01/MapleReport_2012_EN.pdf

Supporting Question 3

Featured Source

Source A: USDA Crop Production (pg. 13- 15)

<http://www.usda.gov/nass/PUBS/TODAYRPT/crop0615.pdf>

Maple Syrup Taps, Yield, and Production – States and United States: 2013-2015

State	Number of taps			Yield per tap			Production		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
	(1,000 taps)	(1,000 taps)	(1,000 taps)	(gallons)	(gallons)	(gallons)	(1,000 gallons)	(1,000 gallons)	(1,000 gallons)
Connecticut	78	83	85	0.256	0.193	0.224	20	16	19
Maine	1,880	1,850	1,850	0.298	0.295	0.299	560	545	553
Massachusetts	280	290	310	0.225	0.210	0.242	63	61	75
Michigan	490	430	470	0.302	0.244	0.270	148	105	127
New Hampshire	470	490	560	0.264	0.229	0.275	124	112	154
New York	2,200	2,200	2,310	0.261	0.248	0.260	574	546	601
Ohio	440	450	440	0.352	0.289	0.261	155	130	115
Pennsylvania	583	588	620	0.230	0.248	0.266	134	146	165
Vermont	4,200	4,350	4,490	0.352	0.310	0.310	1,480	1,350	1,390
Wisconsin	740	700	760	0.358	0.286	0.283	265	200	215
United States	11,361	11,431	11,895	0.310	0.281	0.287	3,523	3,211	3,414

Maple Syrup Price and Value – States and United States: 2013-2015

[Blank data cells indicate estimation period has not yet begun]

State	Average price per gallon			Value of production		
	2013	2014	2015 ¹	2013	2014	2015 ¹
	(dollars)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
Connecticut	71.00	70.90		1,420	1,134	
Maine	32.00	31.50		17,920	17,168	
Massachusetts	59.10	56.30		3,723	3,434	
Michigan	48.80	49.50		7,222	5,198	
New Hampshire	53.40	57.80		6,622	6,474	
New York	43.60	39.70		25,026	21,676	
Ohio	36.90	42.80		5,720	5,564	
Pennsylvania	35.60	35.10		4,770	5,125	
Vermont	33.40	33.00		49,432	44,550	
Wisconsin	37.40	33.40		9,911	6,680	
United States	37.40	36.40		131,766	117,003	

¹ Price and value for 2015 will be published in *Crop Production* released June 2016.

Maple Syrup Season – States and United States: 2013-2015

State	Date season opened ¹			Date season closed ²			Average season length ³		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
	(date)	(date)	(date)	(date)	(date)	(date)	(days)	(days)	(days)
Connecticut	Jan 2	Jan 14	Feb 1	Apr 28	Apr 22	Apr 20	41	35	27
Maine	Jan 13	Jan 14	Feb 9	Apr 30	May 11	May 8	39	29	27
Massachusetts	Jan 8	Feb 5	Mar 14	Apr 15	Apr 26	Apr 11	36	31	28
Michigan	Feb 8	Feb 19	Mar 1	Apr 29	May 6	Apr 27	32	24	26
New Hampshire	Jan 30	Jan 10	Mar 18	Apr 26	May 1	Apr 13	38	30	26
New York	Jan 1	Jan 10	Jan 12	May 1	May 3	May 16	40	32	26
Ohio	Jan 4	Jan 13	Jan 19	Apr 18	May 3	Apr 23	37	30	27
Pennsylvania	Jan 10	Feb 5	Jan 15	May 8	Apr 30	Apr 30	39	32	28
Vermont	Jan 8	Jan 10	Jan 1	May 1	May 23	May 5	41	28	26
Wisconsin	Feb 15	Mar 8	Feb 28	May 28	May 4	Apr 15	29	23	23
United States	(X)	(X)	(X)	(X)	(X)	(X)	37	29	26

(X) Not applicable.

¹ Approximately the first day that sap was collected.

² Approximately the last day that sap was collected.

³ The average number of days that sap was collected.

Maple Syrup Average Open and Close Season Dates – States and United States: 2013-2015

State	Season Opened ¹			Season Closed ²		
	2013	2014	2015	2013	2014	2015
	(date)	(date)	(date)	(date)	(date)	(date)
Connecticut	Feb 12	Feb 26	Mar 10	Mar 25	Apr 2	Apr 6
Maine	Mar 4	Mar 21	Mar 21	Apr 12	Apr 19	Apr 17
Massachusetts	Feb 26	Mar 9	Mar 14	Apr 3	Apr 9	Apr 11
Michigan	Mar 9	Mar 21	Mar 13	Apr 10	Apr 14	Apr 8
New Hampshire	Feb 28	Mar 14	Mar 18	Apr 7	Apr 13	Apr 13
New York	Feb 27	Mar 13	Mar 17	Apr 9	Apr 14	Apr 12
Ohio	Feb 20	Mar 4	Mar 7	Mar 29	Apr 2	Apr 3
Pennsylvania	Feb 26	Mar 6	Mar 10	Apr 5	Apr 8	Apr 6
Vermont	Mar 3	Mar 20	Mar 22	Apr 13	Apr 17	Apr 17
Wisconsin	Mar 25	Mar 28	Mar 14	Apr 23	Apr 19	Apr 6
United States	(X)	(X)	(X)	(X)	(X)	(X)

(X) Not applicable.

¹ Approximate average opened date based on reported data.

² Approximate average closed date based on reported data.

Maple Syrup Price by Type of Sale and Size of Container – States: 2013 and 2014

Type and State	Gallon		1/2 Gallon		Quart		Pint		1/2 Pint	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
	(dollars)	(dollars)	(dollars)	(dollars)	(dollars)	(dollars)	(dollars)	(dollars)	(dollars)	(dollars)
Retail										
Connecticut	68.00	63.50	36.10	35.00	20.10	19.70	12.80	11.90	7.00	6.95
Maine	55.10	56.60	30.30	30.90	16.40	16.90	10.00	10.00	5.90	6.40
Massachusetts	54.30	53.40	31.20	30.80	18.90	19.00	11.50	11.40	7.55	7.55
Michigan	45.00	50.00	25.70	28.00	15.20	15.30	9.00	9.50	6.60	6.90
New Hampshire	52.40	53.10	29.90	31.10	18.50	18.40	10.30	11.20	6.40	6.55
New York	45.30	45.30	26.70	25.70	16.30	16.50	9.80	10.50	6.50	7.45
Ohio	41.70	40.90	25.60	25.00	14.70	15.70	8.90	9.70	5.90	7.00
Pennsylvania	41.20	40.30	23.30	23.70	13.50	14.20	8.25	8.70	4.80	5.00
Vermont	45.30	47.00	26.40	27.00	16.20	16.00	10.50	9.80	6.60	6.10
Wisconsin	42.80	44.40	24.30	25.00	13.20	12.90	8.10	8.40	4.60	6.00
Wholesale										
Connecticut	53.80	49.40	(D)	26.60	15.80	14.40	9.00	7.75	5.10	5.40
Maine	(D)	46.40	(D)	23.90	14.20	13.20	7.90	7.20	4.90	4.90
Massachusetts	40.10	43.60	23.00	23.20	13.40	13.60	7.65	7.35	4.75	4.50
Michigan	44.00	37.40	25.60	24.50	13.30	12.80	7.80	7.60	5.00	4.80
New Hampshire	46.10	42.40	20.50	28.20	13.90	15.70	8.00	8.40	5.00	5.45
New York	40.40	41.50	24.00	23.30	14.30	12.00	8.15	7.16	5.45	4.05
Ohio	34.00	43.00	21.20	20.30	13.10	12.50	7.50	7.60	4.60	5.40
Pennsylvania	39.10	31.50	22.40	23.10	12.70	15.10	7.00	8.35	4.70	6.85
Vermont	38.50	39.30	23.30	24.30	13.70	13.90	8.40	8.20	5.10	5.20
Wisconsin	34.50	35.70	25.50	24.10	13.40	12.50	6.80	7.00	4.40	4.20

(D) Withheld to avoid disclosing data for individual operations.

Maple Syrup Bulk Price – States: 2013 and 2014

State	Bulk all grades		Bulk all grades	
	2013	2014	2013	2014
	(dollars per pound)	(dollars per pound)	(dollars per gallon)	(dollars per gallon)
Connecticut	(D)	2.65	(D)	29.40
Maine	2.80	2.72	30.90	30.00
Massachusetts	2.60	2.95	28.40	32.30
Michigan	2.55	2.40	28.10	26.30
New Hampshire	2.50	2.55	27.20	28.30
New York	2.60	2.54	28.60	28.00
Ohio	2.70	2.60	29.50	29.00
Pennsylvania	2.60	2.49	28.60	27.50
Vermont	2.75	2.59	30.30	28.50
Wisconsin	2.60	2.40	28.40	26.20

(D) Withheld to avoid disclosing data for individual operations.

Maple Syrup Percent of Sales by Type – States: 2013 and 2014

State	Retail		Wholesale		Bulk	
	2013	2014	2013	2014	2013	2014
	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
Connecticut	58	64	20	29	22	7
Maine	2	3	2	2	96	95
Massachusetts	62	40	21	28	17	32
Michigan	48	54	23	18	29	28
New Hampshire	50	57	25	17	25	26
New York	33	31	14	15	53	54
Ohio	29	38	22	16	49	46
Pennsylvania	31	35	4	9	65	56
Vermont	10	11	3	6	87	83
Wisconsin	21	18	17	19	62	63

Supporting Question 3

Featured Source

Source B: Table 37. Maple Syrup 2012 and 2007 New York State

http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1_Chapter_2_County_Level/New_York/st36_2_037_037.pdf

Table 37. Maple Syrup: 2012 and 2007
 [For meaning of abbreviations and symbols, see introductory text.]

Geographic area	2012		2007		Syrup produced (gallons)
	Farms	Number of taps	Farms	Number of taps	
State Total	1,460	2,064,864	1,313	1,342,165	229,486
New York					
Counties					
Albany.....	20	7,980	11	5,547	787
Allegany.....	59	42,668	55	53,275	8,886
Broome.....	28	25,650	16	16,154	1,880
Cattaraugus.....	40	101,780	65	59,915	8,508
Cayuga.....	13	38,450	9	2,375	529
Chautauqua.....	53	52,836	52	39,899	6,254
Chemung.....	12	1,323	7	1,700	194
Chenango.....	23	44,170	39	35,394	7,629
Clinton.....	67	343,464	55	136,472	19,281
Columbia.....	10	3,238	22	4,607	913
Cortland.....	24	22,429	28	22,386	3,535
Delaware.....	45	49,111	53	57,926	9,895
Dutchess.....	20	53,536	10	8,215	1,083
Erie.....	25	19,257	25	21,580	3,005
Essex.....	27	41,768	22	21,135	4,639
Franklin.....	47	70,610	36	40,709	7,041
Fulton.....	9	29,622	6	7,350	978
Genesee.....	12	5,356	13	6,380	1,018
Greene.....	19	22,780	12	11,584	1,704
Hamilton.....	8	8,200	4	4,150	(D)
Herkimer.....	24	8,120	20	5,786	1,209
Jefferson.....	41	45,666	26	16,375	3,855
Lewis.....	108	229,876	112	17,643	28,786
Livingston.....	12	10,837	10	7,416	1,270
Madison.....	21	22,528	19	15,515	2,945
Monroe.....	2	(D)	4	192	26
Montgomery.....	13	41,063	11	(D)	(D)
Niagara.....	7	3,386	4	1,250	318
Niagara Falls.....	35	16,738	19	10,895	2,304
Oneida.....	15	11,145	8	4,606	921
Onondaga.....					
Ontario.....	29	17,429	23	10,285	1,758
Orange.....	3	1,703	4	275	104
Orleans.....	3	1,024	5	8,450	1,920
Oswego.....	17	12,786	25	13,162	2,103
Otsego.....	50	146,104	41	69,208	11,428
Putnam.....	8	688	6	5,696	468
Rensselaer.....	35	7,791	17	5,825	740
St. Lawrence.....	92	94,361	96	116,350	20,575
Saratoga.....	20	17,160	15	7,733	831
Schenectady.....	4	(D)	2	(D)	(D)
Schoharie.....	25	15,061	25	33,760	4,625
Schuyler.....	5	3,510	24	6,260	934
Seneca.....	9	2,894	6	504	106
Steuben.....	72	54,514	39	19,234	2,540
Suffolk.....	-	-	2	(D)	(D)
Sullivan.....	9	4,230	13	4,280	680
Tioga.....	23	8,545	20	7,210	838
Tongaue.....	11	2,300	10	7,210	(D)
Tompkins.....	16	9,692	17	9,539	(D)
Ulster.....	15	15,070	7	5,300	1,789
Warren.....					530
Washington.....	47	57,118	48	69,255	13,057
Wayne.....	7	4,470	9	3,360	647
Westchester.....	4	2,470	3	(D)	(D)
Wyoming.....	83	206,638	52	113,262	26,016
Yates.....	34	4,989	31	5,409	697