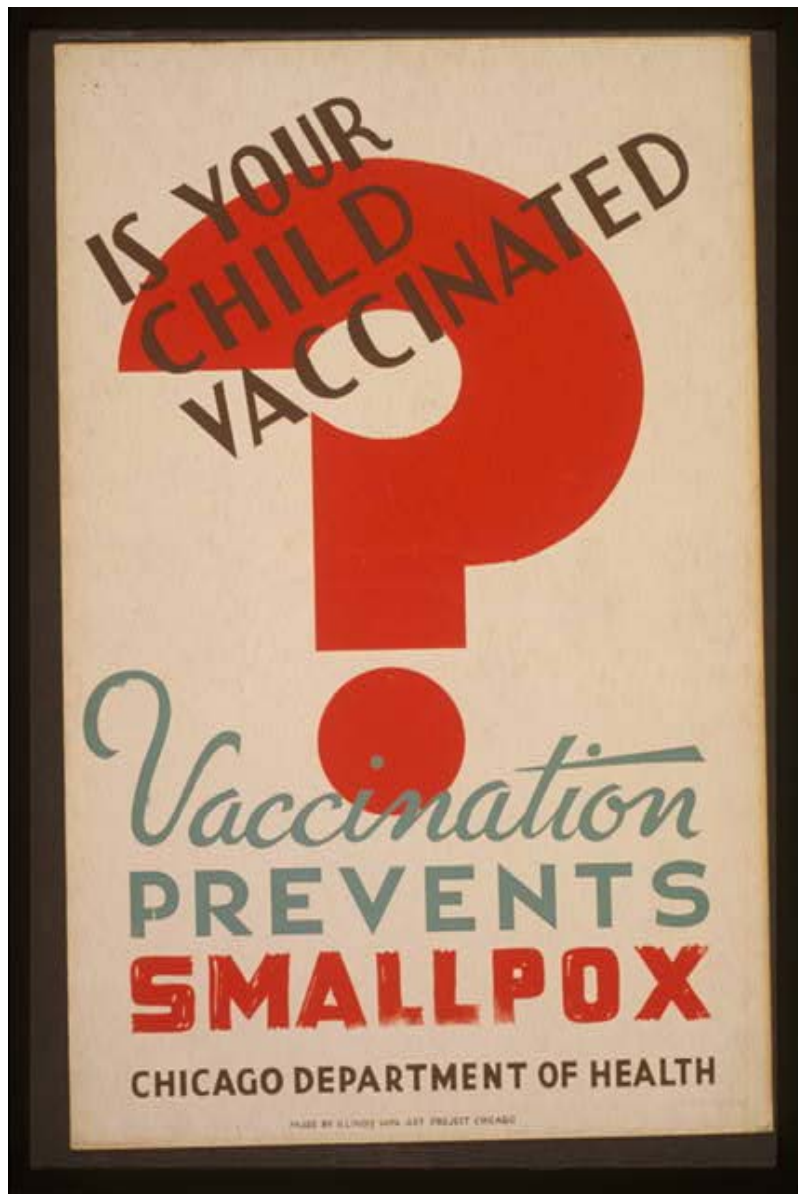


## Smallpox



Betsy Lambert  
Miscoe Hill School  
Grades 6-8

## **Unit Overview**

As students work through the activities in this unit they will develop their skills as history detectives and learn about the history of Small Pox disease prevention and control, as they answer the question, “Why was the broadside, ‘Is Your Child Vaccinated...’ created?” They will study the image along with a selection of primary and secondary sources to develop a document based, informed response to the question. Students will gain insight into some of the ways people have tried to prevent the spread of Smallpox.

The varied learning experiences are designed to activate and utilize many of the students’ multiple intelligences, while providing intellectual challenges at multiple levels of cognitive complexity.

Modifications for English language learners and/or special education students include, but are not limited to providing:

1. Glossary of unfamiliar words found in the texts
2. Handwriting chart(s) to help transcribe script
3. Print out of completed transcription
4. Highlighted print out of longer sections of reading
5. Simplified or restructured Activities assigned
6. Bi-lingual dictionary or phrase book
7. Graphic organizer for use as a pre-writing tool for the final project

## **Standards addressed**

Rhode Island Grade Span Expectations for Civics & Government and Historical Perspectives GLE/GSE 5 (5-8)– 1, 2

Rhode Island Grade Span Expectations for Reading  
GLE/GSE (5-8)- 7, 8, 15

Rhode Island Grade Span Expectations for Written and Oral Communication GLE/GSE (5-8)- 6,7,8

Massachusetts History and Social Science Curriculum Framework US History I, 1 and 2  
World History I, 1

Massachusetts Comprehensive Health Frameworks 8

Massachusetts Curriculum Frameworks, The Arts Disciplines: Visual Arts 2

**Objectives**

- Students will be able to demonstrate understanding of the smallpox, the course of the illness, how it spreads, health care procedures implemented, historic attempts to halt the spread, inoculation and immunization. The documents and activities contained in this unit are intended to help students better understand the history of disease management.
- Students will be able to demonstrate an understanding of how the movement of earth's people fosters interconnection and has consequences, including the impact on the spread of disease. Students will act as historians by answering historical questions, evaluating sources of information and making inferences based on documents from Rhode Island and world history.

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## Step-by-Step Instructions

Materials Needed: Large index cards, Broadside, 'Is Your Child Vaccinated?'  
<http://www.loc.gov/pictures/resource/cph.3f05173/>,

Length of lesson: 180 minutes minimum

1. Hand out large index card to the class. Before projecting the broadside, tell the class that they will observe the image silently then sketch it onto the blank side of the card (silently) for three minutes. Artistic skill is not important, the goal is to observe the image closely and note the use of color, shapes, text and fonts.
2. After the three minutes of observation, ask the students to stop and discuss the image as graphic communication. What is the visual center of interest and what design elements did the artist use to create that emphasis? Why is one word italicized and no other? Why is the question mark unusually large? Why is only one word red? Why are some words placed on an angle while everything else is on a horizontal plane? What is the artist communicating about the message through these visual choices?
3. After the discussion, instruct the students to turn their index cards over and take three minutes to write their reflections and observations about the broadside on the back.
4. Tell the students that their job is to individually, or with partners, develop a hypothesis in response to the question, "Why was this image created?" They will use teacher-provided external evidence in the form of primary documents to refine their hypothesis.
5. Tell students that the instructor will assess their work on this project using the guide below.

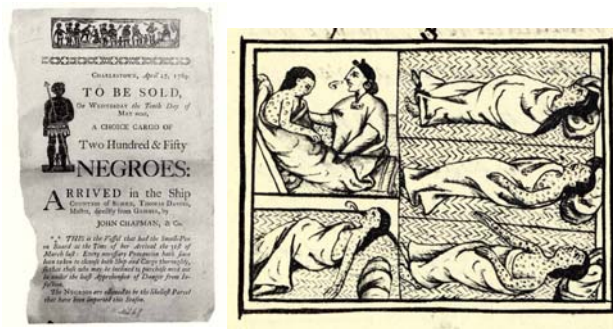
**Student** – follows directions, seeks clarification when needed

**Master** – follows directions, seeks clarification when needed, presents findings and/or tackles problem with interest in the larger goal

**Scholar** – follows directions, asks questions when something is not clear, presents findings and/or tackles problems with interest in the larger goal; passes along his/her skill and knowledge

6. Set up centers with the materials needed for activities #1-5. At each, include a copy of the Smallpox Fact Sheet provided by the Centers for Disease Control and Prevention. <http://emergency.cdc.gov/agent/smallpox/overview/disease-facts.asp>
7. Students move through each center, completing activities #1-5 and saving their work.
8. Students work independently on their final project, Activity #6.

## Activity #1: Smallpox is brought to the Americas



Materials needed: writing paper, print out document, ‘CHARLESTOWN, April 27, 1769’ at <http://www.pbs.org/wgbh/aia/part1/1h304.html> and the image of smallpox and translation of the text found on the Florentine Codex and reproduced at: <http://www.globalrem.umn.edu/teachingmodules/disciplines/history.php?entry=136928>

Instruct students to read the Codex translation and the broadside of the slave transaction, then follow the instructions detailed below:

The ‘Florentine Codex image and text, and the Broadside advertising the sale of African slaves both relate ways in which smallpox was inadvertently introduced to the Americas. Read the text associated with both documents, then answer this set of questions for each document:

1. Who produced this document?
2. What was occasion – what was going on that led to the production of this broadside? When and where was it produced?
3. Who was the audience to whom this piece was directed? What were there concerns?
4. What was the purpose of this broadside? What did they hope to achieve?
5. What is the subject of this document? What is the main point?

Reflection: What were some of the benefits and costs of mixing cultures? Site specific examples from these documents to relate costs or benefits to the Spanish, Colonists, Native Americans and Africans.

Translation of the text connected with the smallpox image found in the Florentine Codex, University of Minnesota, Columbian Exchange, Accessed August 15, 2010.  
<http://www.globalrem.umn.edu/teachingmodules/disciplines/history.php?entry=136928>

“Before the Spaniards appeared to us, first an epidemic broke out, a sickness of pustules. It began in Tepeilhuitl. Large bumps spread on people; some were entirely covered. They spread everywhere, on the face, the head, the chest, etc. [The disease] brought great desolation; a great many died of it. They could no longer walk about, but lay in their dwellings and sleeping places, no longer able to move or stir. They were unable to change position, to stretch out on their sides or face down, or raise their heads. And when they made a motion, that called out loudly. The pustules that covered people caused great desolation; very many people died of them, and many just starved to death; starvation reigned, and no one took care of others any longer.

On some people, the pustules appeared only far apart, and they did not suffer greatly, nor did many of them die of it. But many people’s faces were spoiled by it, their faces and noses were made rough. Some lost an eye or were blinded.

The disease of pustules lasted a full sixty days; after sixty days it abated and ended. When people were convalescing and reviving, the pustules disease began to move in the direction of Chalco. And many were disabled or paralyzed by it, but they were not disabled forever. It broke out in Teotleco, and it abated in Panquetzalitzli. The Mexica warriors were greatly weakened by it.

And when things were in this state, the Spaniards came, moving towards us from Tetzaco. They appeared from the direction of Quauhtitlan and made a halt at Tlacopan. There they gave one another assignments and divided themselves. Pedro de Alvarado was made responsible for the road coming to Tlatelolco. The Marqués considered the Tenochca great and valiant warriors.”

Note: The website above credits: Fray Bernardino de Sahagún. *Florentine Codex*. From James Lockhart, *We People Here: Nahuatl Accounts of the Conquest of Mexico*, Repertorium Columbianum, UCLA Center for Medieval and Renaissance Studies (Los Angeles: University of California Press, 1993).

## Activity #2: John Brown's Inoculation

Materials needed: writing paper, chart to fill in, print outs of the following manuscripts, found in the Rhode Island Historical Society, Henry R Chace Papers  
MSS 338 box 3 folder 16 Notes Smallpox 156-64

### Document A (two images)

May 31, 1764 letter from John Brown to his brothers.

Page 1 Innoculation at Boston Neck, himself and 65 others under care of dr.

Page 2 Dr Branet(sp?) inoculated 770 people, lost 7, pill regimen, well cared for

### Document B (two images)

June 10, 1764 letter John Brown to brothers

Page 1 describes symptoms

Page 3 almost ready to come home, will be careful not to carry smallpox

### Document C

Loose papers:

John Brown on his way home from inoculation hospital at Point Shirley, writes letter to his wife on June 18, 1764. Washed self from top to bottom with rum to avoid carrying small pox home (Gertrude Kimball copy)

### Document D

Inside of folded page dated 1763 David Wilkerson at top, inside: David Wilkerson sheriff 1751 or 1757 small pox warrant to parade street to warn all and read smallpox law signed by gov and judges and justice of the peace 185 acts of gen assembly relation to smallpox published in street

Students may share the work of transcribing each document with others, but must create their own final copy of the transcription of each document.



Document A  
(RHi X17 485)

(John Brown to his brothers)

Point Shearley May 31 1764 Thurs [SMALL POX]  
1756-64

Dear This is to advise you that I am Very Well. I was  
Innoculated at the George Tavern on Boston Neck at 1/2 after 10  
o'clock in the forenoon Tuesday by Dr Jos Gardner, who is concerned  
with Dr Barnet ... here is now on the point 65 persons under  
Innoculation & all attended by Dr Barnet Some of them was Innoculated  
by Mr Farmer before they came here, but they principally came right here  
from Marble Head Salem &c & were Innoculated here There is  
not one Man in the whole Number but ~~what~~ that is so well as to go  
out of Doors Every day ... they only complain once in a while of the  
Head ache ... Billy Russell has by Spels a considerable of a Fever  
upon him but is very hardy and for the most part very well " " " "

Here is one Capt Brown of Salem that tells me that he ~~came~~ lately came  
from the Bite of Logan in a large Sloop with about 150 kds of Sugar & Molle  
the Sloop and Cargo belonged to Salem & was bound there, but slept at  
Nantucket & told the Collector that he wanted to enter his Vessel and Molle  
and clear her out for Salem which the Collector could not do, but that  
he Brown had her entered by sd Collector with Salt from Turks Island  
and cleared her out for Casko Bay, then he proceeded home to Salem  
hoisted out his cargo in the Bite & then sent the Vessel immediately to  
Casko Bay with the aforesaid Clearance. Now I verie whether we  
could not have a sloop come from Holland in to Nantucket & then enter  
her from any place we please with salt or other Arlacol & Clear her  
out to go for a Load of Boards not taking the holland goods in to a nother  
Vessel, then filling the same Vessel up with Head Matter in the Fall  
and Clear the same as a whole Load of Head Matter for Rhode Island, and

(RHi X17 486)

2 John Brown Point Shirley Letter 1764  
 Lett the Sloop from Holland go after her boards or other thing, which  
 when got, clear for Rhode Island.

I think it may Easily be done, If you Should have a mind to  
 Send the Sloop Four Brothers Any Voyage I Desire that the Summe  
 may not be Retarded on Acct of my Absence for I do assure  
 you that Whatever Voyage you please to fit her shall give me the  
 greatest satisfaction & shall be Extremely obliged to you for your  
 Trouble in fitting out my part & will lay me under an Obligation of  
 Serving you in some future Business " " " " I have wrote to  
 brother Job Smith & advised him to Inlarge his Distill House as I  
 think it probable we shall want more Rum then Can git without  
 if our vessells come in " " " "

Dr Barnet has told me that he has Innochorated 7700 persons  
 in all and that he has lost only 7 persons out of the whole number

June 1<sup>st</sup> 6 o'clock in the morning I have taken 5 Pills and  
 2 powders Viz one pill Tuesday Nite 1 powder Wednesday Morning  
 and at nite one pill Thursday Morning 2 pills and at nite one pill  
 this morning 1 powder & shall have 2 pills more to nite I have as yet  
 taken the powders & pills much better then I Expected the later I  
 Mash & put It into a little Crambary or apple The pills to be taken  
 to work off the Mercury is the worst they are to be taken  
 after the pox is Turned

The Point is a very Deliteful place  
 the house we are in is Very Good & have good Attendance &  
 Indeed Nature Could not have formed a much better place  
 for the Business

John Brown

This letter is to long to Copy



**Document B**  
**(RHi X17 487)**

John Brown  
to

Dear Brother:-

" " " I continued Very Well without Any  
pain or Thrombosis till last Tuesday " " " "

I began to feel the Head Ache which Increased fast  
 " " " I flung myself on the Bed & lay Three or four  
 Hours then " " " found my self very Weak " " " On the  
 whole I had the Thim tons on me about 48 hours & then they  
 left me well I may Eat Butter Beef Drink Punch Wine  
 &c but you may Assure yourself that I shall take Care to do  
 none of these to excess Indeed I have no Occasion for it  
 for I do Assure you with pleasure " " " that I am  
 Quite as Fatt & as well as I was when I left home x x x  
 Mr W<sup>m</sup> Russell hath kept his bed these three days x x x  
 hath all along been very well Exclusive of his Soreness x x x  
 As to the Season of the year for Innoctulation so much talked  
 of at Providence, the summer is as Good or Better than any other  
 time Aspecially for this place for I believe there Cant be a  
 Cooler place found in N E when there is the least Breath of air  
 stirring on the water we have a fresh Breeze thro' the Entry of  
 the House we are at and on a hill there is Near by, and its  
 as pleasant Walk'g Round about the point as any man Can  
 desire I think I wrote you that Dr Barnet was Concerned  
 with four other Doctors but I never knew in what proportion  
 till yesterday & I believe no other patient knows it at all

(Rhi X17 488)

5 John Brown Post Shirley letter 1764  
 of the Post as no doubt by that time I shall be near  
 about going to Boston & if I should not be there till  
 Tuesday which will be 3 weeks from when I first  
 come here I had rather have ~~there~~ the horse there than  
 not as there is good keeping & not deer, you need not  
 fear of my hurrying home to fast but may assure your-  
 selves I shall take all the precautions I am Master of  
 so as not to carry the small pox home I will send  
 word before I come home so as Brother Moses may  
 meet me with a Shift of Cloth, tho I have a Coat Jackett  
 & Arches & the most of my Linnen Now in Boston at a  
 house where the Infection has not bin " " " " You'll  
 write wair I had better go Pawlucket Bridge or the  
 Upper Ferry " " " " "

Messrs Balch & Wm Russell & Mr Bowen hands  
 their Complements to you all Balch and Bowen  
 goes to Boston in a few days J. B

I have Smoked this and all the Inclosed well  
 Since which it hath bin a near no Infection

J B



Document C  
(RHi X17 489)

John Brown, on his way home from the inoculation hospital at Point Shirley, writes to his wife as follows:—

"Boston, June 18, 1764.

"Sally, I desire you'll have Redy by Fryday next, my Lite Col-lard Coat, up.<sup>2</sup> Briches, Jackett, wigg Hat, Shoes Stockens, Drawes, Shirt—&c. to Send to me at the Ferry, as I am Determined not to Wair Anything home that I Carry from Boston, alltho I think ther is but little or no Danger, the Consequenses would be Such if I should Carry the Small pox home, that I am De-termined to take all precautions that Lays in my power, I have this day Washed my Self from top to Bottom with Rum & pro-pose to do it again before I

(RHi X17 490)

2.

Came home

John Brown

I hope James & Benjamin  
is Well."

Dear Mr. Chace,

Here is a copy of  
the only letter I made a  
note of. I will see if I  
can rediscover John's letter  
to Nicholas giving an account  
of the treatment. I fear,  
however, that it is now  
snowed under, as it is  
all of three months since  
it was last visible to the  
naked eye.

Here's hoping, nevertheless  
Gertrude S. Kimball.

June 16.



Document D  
(RHi X17 491)

181 182 185 224.90 314 23,344  
397 439. 688. 711. 803. 1246-47  
3085 3588 3814 4044 4834  
~~4848~~ 5767 5605 15058' 15089 15330

#181

David McKenson Sheriff 1757

Small Pox warrant

To parade street to warn all and  
~~under~~ read Smallpox how signed  
by Gov & Judges and members of the  
Peace

185 acts of Gen assembly relation  
to Small Pox published in Streets

1757 David McKenson Sheriff

David McKenson and John Apple  
witness to bond John Burton  
1753 to overseers of Poor Mary Abbot  
Single Woman dan of Samuel Abbot Jr  
delivered a female child

290 Execution pd David McKenson  
that John Hoge guard obtained 136.18.4.  
1756

Using only the four documents given, complete the chart (short answer).

	Document A	Document B	Document C	Document D
Type of document: personal letter, notes, manuscript, etc.				
Date of document				
Is this a copy or the original?				
Author of document (if signed)				
Person document is addressed to				
Location of author (if stated)				
Location of recipient (if stated)				

Answer the following questions (minimum of three sentences):

Why was each document produced? What was the author's purpose in creating it?

What is the main idea or subject of each document? What is the author's tone or attitude toward this topic?

List three or more ways the people in Rhode Island in the eighteenth century tried to stop the spread of smallpox.

Based on the dates of his letters, how long was John Brown away from home due to the smallpox inoculation?



### Activity #3: Letter to John from Abigail Adams

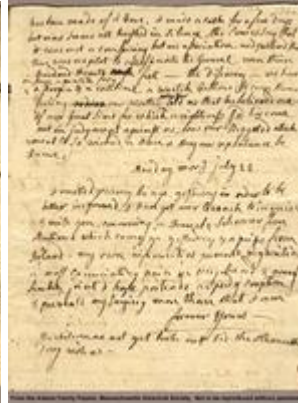
Page 1



Page 2



Page 3



Materials Needed: Writing paper, questions, printed copies of the original manuscript found at <http://www.masshist.org/digitaladams/aea/cfm/doc.cfm?id=L17760721aa> Letter from Abigail Adams to John Adams, 21 - 22 July 1776 [electronic edition]. *Adams Family Papers: An Electronic Archive*. Massachusetts Historical Society. <http://www.masshist.org/digitaladams/>

Students can divide up the task of transcription, then create their own complete copy of the text of the letter. When their transcriptions are complete, they are to respond to the questions which follow.

FYI: A transcription from the Massachusetts Historical Society:

July 21 1776 Boston

I have no doubt but that my dearest Friend is anxious to know how his Portia does, and his little flock of children under the operation of a disease once so formidable.

I have the pleasure to tell him that they are all comfortable tho some of them ~~of~~ complaining. Nabby has been very ill, but the Eruption begins to make its appearance upon her, and upon Johnny. Tommy is so well that the Dr. innoculated him again to day fearing it had not taken. Charlly has no complaints yet, tho his arm has been very soar.

I have been out to meeting this forenoon, but have so many disagreeable Sensations this afternoon that I thought it prudent to tarry at home. The Dr. says they are very good feelings. Mr. Cranch has passed thro the preparation and the Eruption is coming out cleverly upon him without any Sickness at all. Mrs. Cranch is cleverly and so are all her children. Those who are broke out are pretty full for the new method as tis call'd, the Suttonian they profess to practice upon. I hope to give you a good account when I write next, but our Eyes are very weak and the Dr. is not fond of either writing or reading for his patients. But I must transgress a little.

I received a Letter from you by wedensday Post 7 of July [John to Abigail, 07 July 1776] and tho I think it a choise one in the Litterary Way, containing many usefull hints and judicious observations which will greatly assist me in the future instruction of our Little ones, yet it Lacked some essential engrediants to make it compleat. Not one word respecting yourself, your Health or your present Situation. My anxiety for your welfare will never leave me but with my parting Breath, tis of more importance to me than all this World contains besides.

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Page 2

The cruel Seperation to which I am necessitated cuts of half the enjoyments of life, the other half are comprised in the hope I have that what I do and what I suffer may be serviceable to you, to our Little ones and our Country; I must beseech you therefore for the future never to omit what is so essential to my happiness.

Last Thursday after hearing a very Good Sermon I went with the Multitude into Kings Street to hear the proclamation for independence read and proclaimed. Some Field peices with the Train were brought there, the troops appeared under Arms and all the inhabitants assembled there (the small pox prevented many thousand from the Country). When Col. Crafts read from the Belcona of the State House the Proclamation, great attention was given to every word. As soon as he ended, the cry from the Belcona, was God Save our American States and then 3 cheers which rended the air, the Bells rang, the privateers fired, the forts and Batteries, the cannon were discharged, the platoons followed and every face appeared joyfull. Mr. Bowdoin then gave a ~~illegible~~ Sentiment, Stability and perpetuity to American independance. After dinner the kings arms were taken down from the State House and every vestage of him from every place in which it appeared and burnt in King Street. Thus ends royall Authority in this State, and all the people shall say Amen.

I have been a little surprized that we collect no better accounts with regard to the horrid conspiracy at New York, and that so little mention

---

Page 3

has been made of it here. It made a talk for a few days but now seems all hushed in Silence. The Tories say that it was not a conspiracy but an association, and pretend that there was no plot to assassinate the General. Even their hardned Hearts ~~Blush~~ feel -- the discovery. We have in Gorge a match for a Borgia and a Catiline, a Wretch Callous to every Humane feeling. ~~illegible~~ Our worthy preacher told us that he believed one of our Great Sins for which a righteous God has come out in judgment against us, was our Biggoted attachment to so wicked a Man. May our repentance be sincere.

Monday morg. july 22

I omitted many things yesterday in order to be better informed. I have got Mr. Cranch to inquire and write you, concerning a French Schooner from Martineco which came in yesterday and a prize from Ireland. My own infirmities prevents my writing. A most

Excruciating pain in my head and every Limb and joint I hope portends a speedy  
Eruption and prevents my saying more than that I am forever Yours.  
The children are not yet broke out. Tis the Eleventh Day with us.

Answer each question and cite evidence from the text to support your answer:

1. Who is the author of this letter?
2. What is the date of this letter? What historic event did she observe? Does she support the declaration and actions which followed? What important medical procedure has the author and her children participated in? What are their symptoms? Using the reference chart provided, what stage would you place them at?
3. Who is the author writing to? What is their relationship?
4. What is the purpose of this letter? What is the emotional state of the author?
5. What are the main subjects of this letter? What information is she asking for?

#### Activity #4: Edward Jenner and Cowpox

Sarah's Hand



Smallpox



Materials Needed: Writing paper, print out of two images:

<http://www.loc.gov/pictures/resource/matpc.00822/> Smallpox, between 1898 and 1946,  
<http://www.loc.gov/pictures/item/92517511/>

Hand of Gloucestershire milkmaid Sarah Nelmes showing cowpox blisters from which Edward Jenner developed smallpox vaccination technique published 1798, reprinted 1966. Accessed August 15, 2010.

Students are to peruse the website of the Edward Jenner Museum set at his country estate in Berkeley, Gloucestershire, England with particular note to the pages on Edward Jenner titled: What is Smallpox and Jenner and Smallpox, found at:

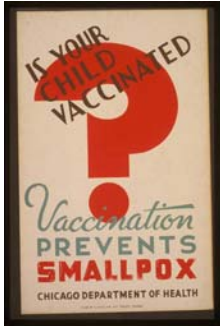
<http://www.jennermuseum.com/edwardjenner.html>

In addition, students may want to watch the video created by children at Berkeley Primary School and Rednock Secondary School.

Answer the following questions:

1. What virus causes Smallpox:
2. Define Variolation:
3. Describe the roles of Sarah, James, Jenner and the cow in the first vaccination:
4. Why did people opt to get cowpox rather than smallpox? Use the two images above to support your answer.

### Activity #5: Final Project



Materials needed: Writing Paper, question list, rubric and printed copy of broadside, **‘Is your child vaccinated Vaccination prevents smallpox - Chicago Department of Health’(1941)** found at: <http://www.loc.gov/pictures/resource/cph.3f05173/>

Students are to incorporate knowledge of the other documents studied in this unit to respond to the question “Why was the image, ‘Is Your Child Vaccinated..’ created?” Students are to answer the following questions in a well written, thoughtful response:

- Who produced this image?
- Where and when was it produced?
- Who was the intended audience for this work?
- What was the purpose for creating this image – why was the message important?
- What message was the image created to communicate?

Students must support their response by referring to specific information and/or direct quotes taken from the image itself and each of the nine additional documents explored in this lesson.

### Rubric for final project

Students respond individually to the question, “Why do you believe that the image, ‘Is Your Child Vaccinated?’ broadside was created?” In their well written, thoughtful response, they hypothesize:

Who produced this image

Where and when this was produced

Who the intended audience for this work was

What the purpose for creating this image was

What big idea(s) the image was created to communicate

Student support their response by referring to specific information and/or quotes taken from the image itself and the nine additional documents explored in this lesson.

Objectives	Low Performance 1 point	At/below average 2 points	At/above average 3 points	Exemplary Performance 4 points
Response to Question	A somewhat well written, thoughtful response that answers four of the five questions.	A somewhat well written, thoughtful response that answers all five questions.	A well written, thoughtful response that answers all five questions in a general way.	An articulate, well reasoned, thoughtful response that articulately answers all five questions.
Effectiveness of the documents chosen to support the Response	The specific information and/or direct quotes from the image and nine additional documents loosely support the student's response to the question.	The specific information and/or direct quotes from the image and nine additional documents somewhat support the student's response to the question.	The specific information and/or direct quotes from the image and nine additional documents generally support the student's response to the question.	The specific information and/or direct quotes from the image and nine additional documents effectively support and reinforce the student's response to the question.
Score:				

## Minimum Requirements

In order to receive a passing grade on this unit, students must approach their work at the 'student' level or beyond, thoughtfully and thoroughly complete activities 1-4 and hand in all of their work receive, and earn a total of 4 points or higher on the final project.

## Sources

Main image:

Activity #1: CHARLESTOWN, April 27, 1769' at  
<http://www.pbs.org/wgbh/aia/part1/1h304.html> Accessed on August 12, 2010

Activity #1: Image and translation of the Florentine Codex  
<http://www.globalrem.umn.edu/teachingmodules/disciplines/history.php?entry=136928>  
 Accessed on August 15, 2010

Activity #2: Rhode Island Historical Society, Henry R Chace Papers  
 MSS 338 box 3 folder 16 Notes Smallpox 156-64

Activity #3: <http://www.masshist.org/digitaladams/aea/cfm/doc.cfm?id=L17760721aa>  
 Letter from Abigail Adams to John Adams, 21 - 22 July 1776 [electronic edition]. *Adams Family Papers: An Electronic Archive*. Massachusetts Historical Society.  
<http://www.masshist.org/digitaladams/>

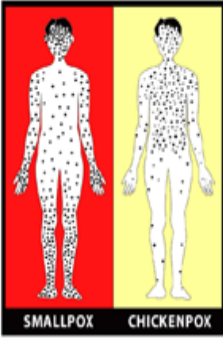
Activity #4 <http://www.loc.gov/pictures/resource/matpc.00822/> Smallpox, between 1898 and 1946, Accessed August 15, 2010. <http://www.loc.gov/pictures/item/92517511/>  
 Hand of Gloucestershire milkmaid Sarah Nelmes showing cowpox blisters from which Edward Jenner developed smallpox vaccination technique published 1798, reprinted 1966. Accessed August 15, 2010.

Activity #5: 'Is your child vaccinated Vaccination prevents smallpox - Chicago Department of Health'(1941) found at:  
<http://www.loc.gov/pictures/resource/cph.3f05173/> Accessed on August 15, 2010.

## Reference Materials

#1 Smallpox Fact Sheet Accessed August 15, 2010

<http://emergency.cdc.gov/agent/smallpox/overview/disease-facts.asp>

Smallpox Disease	
<b>Incubation Period</b> <b>(Duration: 7 to 17 days)</b> <i>Not contagious</i>	<b>Exposure to the virus</b> is followed by an incubation period during which people do not have any symptoms and may feel fine. This incubation period averages about 12 to 14 days but can range from 7 to 17 days. During this time, people are not contagious.
<b>Initial Symptoms(Prodrome)</b> <b>(Duration: 2 to 4 days)</b> <i>Sometimes contagious*</i>	The <b>first symptoms</b> of smallpox include fever, malaise, head and body aches, and sometimes vomiting. The fever is usually high, in the range of 101 to 104 degrees Fahrenheit. At this time, people are usually too sick to carry on their normal activities. This is called the <i>prodrome</i> phase and may last for 2 to 4 days.
<b>Early Rash</b> <b>(Duration: about 4 days)</b> <i>Most contagious</i> Rash distribution:  <a href="#">View enlarged image.</a>	A <b>rash emerges</b> first as small red spots on the tongue and in the mouth. These spots develop into sores that break open and spread large amounts of the virus into the mouth and throat. At this time, the person becomes <b>most contagious</b> . Around the time the sores in the mouth break down, a rash appears on the skin, starting on the face and spreading to the arms and legs and then to the hands and feet. Usually the rash spreads to all parts of the body within 24 hours. As the rash appears, the fever usually falls and the person may start to feel better. By the third day of the rash, the rash becomes raised bumps. By the fourth day, the bumps fill with a thick, opaque fluid and often have a depression in the center that looks like a bellybutton. (This is a major distinguishing characteristic of smallpox.) Fever often will rise again at this time and remain high until scabs form over the bumps.
<b>Pustular Rash</b> <b>(Duration: about 5 days)</b> <i>Contagious</i>	The bumps become <b>pustules</b> —sharply raised, usually round and firm to the touch as if there's a small round object under the skin. People often say the bumps feel like BB pellets embedded in the skin.
<b>Pustules and Scabs</b> <b>(Duration: about 5 days)</b>	The pustules begin to form a crust and then <b>scab</b> . By the end of the second week after the rash appears, most of the sores have scabbed over.



<i>Contagious</i>	
<b>Resolving Scabs</b> <b>(Duration: about 6 days)</b> <i>Contagious</i>	<p>The scabs begin to fall off, leaving marks on the skin that eventually become pitted <b>scars</b>. Most scabs will have fallen off three weeks after the rash appears.</p> <p>The person is contagious to others until all of the scabs have fallen off.</p>
<b>Scabs resolved</b> <b>Not contagious</b>	Scabs have fallen off. Person is no longer contagious.
<p>* Smallpox may be contagious during the <i>prodrome</i> phase, but is most infectious during the first 7 to 10 days following rash onset.</p>	

- Detailed book review of Pox Americana by Elizabeth Fenn  
<http://molinterv.aspetjournals.org/content/3/6/344.full>
- Pox Americana. Elizabeth A. Fenn. New York: Hill and Wang; 2001
- Overview of smallpox exhibit at Brown  
[http://www.brown.edu/Administration/News\\_Bureau/2002-03/02-017t.html](http://www.brown.edu/Administration/News_Bureau/2002-03/02-017t.html)