

Inquiry Lesson

## What Caused the Colonists of Roanoke to Disappear?

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March 2010  
Prepared for Grade 10

## Inquiry Lesson Plan

### **Overview**

When explorers set off to start colonies in the New World, they faced many difficult situations. One of these colonies was the colony of Roanoke led by Sir Walter Raleigh. The story of what happened to the colonists of Roanoke is one of history's greatest mysteries. Since there were no traces of the colonists left behind, historians have only been able to come up with likely hypotheses about what happens, but the question still remains: What caused the colonists of Roanoke to disappear?

### **Rationale**

This inquiry lesson is important for students to engage in because it engages students in critical thinking. Students use questioning and hypothesis building in order to come to a tentative conclusion about a topic that is still debated about hundreds of years after it happened. Students are able to see that there are multiple ways of looking at situations and as new information becomes available, we sometimes need to change our conclusions.

### **Multiple Objectives**

By engaging in this inquiry lesson, students will:

- Identify possible ideas for what caused the colonists of Roanoke to disappear.
- Develop an opinion on which hypothesis they believe is the most credible.
- Recognize and identify credible versus non-credible sources.
- Share their ideas and opinions in a respectful way within the classroom setting.
- Complete a 2-4 page paper on what they think happened and why including evidence to support their opinion.
- Participate in class discussions about possible hypotheses and whether evidence shared supports or discredits hypotheses.

### **Wisconsin Model Academic Standards Addressed**

B.12.1 Explain different points of view on the same historical event, using data gathered from various sources, such as letters, journals, diaries, newspapers, government documents, and speeches

B.12.2 Analyze primary and secondary sources related to a historical question to evaluate their relevance, make comparisons, integrate new information with prior knowledge, and come to a reasoned conclusion

B.12.4 Assess the validity of different interpretations of significant historical events

E.12.14 Use the research procedures and skills of the behavioral sciences (such as gathering, organizing, and interpreting data from several sources) to develop an informed position on an issue

## Grade Level

This inquiry lesson targets 10<sup>th</sup> grade American History students. This lesson could also be adapted to fit lower or more advanced classes if the data sets were modified. Lower grades would need to have data sets that have a lower reading level and higher level classes may need data sets with more information or less guidance.

## Time

This inquiry lesson is designed for four to five fifty minute class periods, depending upon the amount of discussion generated by the data sets.

## Course

This inquiry lesson is designed for use in a U.S. History course. Studying colonies and reasons for their success or failure helps students connect the past to the present by showing them that people then had successes and failures just like we do today. Studying hardships in colonies also gives students an idea of what the time period was like.

## Materials

1. Computer and projector to show: <http://www.youtube.com/watch?v=o99Y4Brq-GY&feature=related>
2. 30 copies of Hypothesis/Evidence Tracking Sheets (SEE ATTACHED)
3. 5 copies of data sets (SEE ATTACHED)
4. Overhead, transparency sheets and marker
5. Blackboard/Dry Erase board

## Procedure

### 1. Engagement in the Inquiry

This inquiry lesson plan will be introduced via a video (approximately 10 minutes in length.) The video can be found at <http://www.youtube.com/watch?v=o99Y4Brq-GY&feature=related>. A clip from 1:37 to 4:48 should be played first. In this clip, students will see colonists arriving at the Island of Roanoke and are told about how they ran out of supplies. They will see that John White makes the voyage back to England for more supplies, but cannot get them back to the colony because of war. Then a clip from 5:50 to 9:13 should be shown. In this clip students see John White coming back to the colony only to find the entire thing abandoned. After viewing the video, the instructor will give a brief overview of each step in the inquiry process (steps 2-4 below), describe the plans for assessment, and answer any questions that arise. Students should already be situated in their groups (5).

### 2. Elicit Student Hypotheses

A student volunteer should hand out the hypotheses worksheets to all students while the teacher is writing the following question on the board: "What caused the colonists of Roanoke to disappear?" The teacher then asks the students to individually write down any hypotheses they can come up with on their hypotheses sheets. After several minutes (or after the students seem to have stopped writing down more hypotheses), have the students share all of their ideas within their groups. Remind them that they do not need to re-copy duplicate or similar hypotheses. Once students have

come up with group hypotheses, tell them that they may come up with one “out-of-the-box” hypotheses (Explain that the idea can be somewhat crazy, but could possibly fit.). Ask each group to share one of their hypotheses with the class. Keep a running list of these on the overhead transparency sheet and continue so that each group has eventually shared all of their hypotheses (without repeating other groups). Students should be keeping track on their Hypotheses sheets as well. At this point in the lesson all hypotheses are considered valid. As the list is being compiled, the teacher should be handing out the first data set for one group to read out loud. The members of the group reading aloud should all have a turn reading. Let the students know that they can read as little as one sentence and as much as one paragraph (This way all students have a chance to read and no one feels overwhelmed by the reading).

### 3. Data Gathering, Data Processing, and Hypothesis Revision

After the data is shared, the teacher facilitates discussion about what was read. The teacher may need to help students to draw out important information that was given. Students should think about the “Questions to Consider When Interpreting a Primary Source” listed on the back of their hypotheses worksheet. The teacher may have these questions written on the board to make it easy for students to refer to them. The teacher asks which hypotheses on the list may have been supported or undermined by this data or if any new hypotheses can be generated. The recorder then marks a “+” by hypotheses that have been supported by the data and a “—” by the hypotheses that have been undermined. If the class agrees that a hypotheses can be completely discredited it may be crossed off the list. Any new hypotheses should be recorded on the class master copy as well as on the students’ individual copies of the hypotheses worksheets. This entire process is repeated for all of the data sets. As the students become more comfortable with the inquiry process less teacher facilitation will be needed. The students should start to take more responsibility for the discussion of data.

### 4. Conclusion

After the last data set is presented, discussed, and hypotheses revised, the teacher will have the students circle one or two hypotheses on their worksheets that they feel is most strongly supported through the data they were given. This portion should be done individually, not as part of a group. Students will then be given the “Inquiry Lesson Writing Rubric.” Students will be asked to write a two to four page paper about their tentative conclusions. These papers should include a thesis statement and evidence to support their argument. Students will hand this first copy in and will have a chance to make revisions after teacher feedback.

### **Assessment**

Both formal and informal assessments will be used with this inquiry lesson. Students will be assessed formally based on the writing assignment using the rubric that was given to the students. Informally, students will be assessed based upon participation during class and group discussions. Feedback will be given to students in the form of the scored writing rubric and written comments on their participation.

What caused the colonists of Roanoke to disappear?

Hypotheses	Supporting Evidence	Discrediting Evidence

## Questions to Consider When Interpreting a Primary Source

1. Are there any problems in understanding the literal meaning of the document?  
That is, are there words you have to look up? Phrases you don't understand?  
(Ask your teacher for help if you do not understand something)
2. Who made the document, and under what circumstances?
3. When was the document made?
4. How well placed was the witness to observe and record the event(s)?
5. Is bias (personal opinion and unreasoned judgment) present?

The colony, landed on Roanoke, consisted of one hundred and seven persons, of whom Ralph Lane was the Governor, Amidas, the admiral, Hariot, the historian and chaplain, and John White the artist. So soon as they were settled at the island, they began the exploration of the country. This was done in boats, and entirely toward the south. Visiting the Neuse and the western shore of Pamlico Sound, they explored Currituck, on the east; while on the north, they penetrated to the distance of one hundred and sixty miles, and ascended Moratio, now known as the Roanoke river, probably more than fifty miles from its mouth. This was done with extreme labor and peril, as the Indians had deluded them with a story of mines of gold, and having notice of Lane's coming, were prepared to attack him.

This river he afterward explored. But ere long, either from oppression or fear of the English, the Indians assumed a hostile attitude, and laid plans to surprise them. The English had to be continually on their guard, and in the mean time famine compelled them to leave Roanoke in large parties, to obtain subsistence from the corn-fields, or proceed along the coast for shell-fish.

About the first of June, 1586, Lane, with a party, left the island, proceeding across the sound, and by a stratagem, hardly authorized in an honorable soldier, captured and killed the chief of the country and many of his people.

Data Set 1:

"Roanoke Island: The Site of the First English Colony in America." *The Continental Monthly* 1, no. 5 (1862): 541-552. [http://memory.loc.gov/cgi-bin/query/r?ammem/ncps:@field\(DOCLD\)+@lit\(ABR1802-0001-119\)>::](http://memory.loc.gov/cgi-bin/query/r?ammem/ncps:@field(DOCLD)+@lit(ABR1802-0001-119)>::) (Accessed October 10, 2009).

Data Set 2:

"Raleigh's Lost Colony." *The New England Magazine* 17, no. 5 (1895): 565-588.

[http://memory.loc.gov/cgi-bin/query/r?ammem/ncps:@field\(DOCID\)+@lit\(AFJ3026-0017-83\)](http://memory.loc.gov/cgi-bin/query/r?ammem/ncps:@field(DOCID)+@lit(AFJ3026-0017-83)):: (Accessed October 10, 2009).

On the way they were reduced to the necessity of subsisting upon a decoction of sassafras leaves; and when they reached the broad sound, which lay between them and their destination, they were weak from want of food. It was on the eve of Easter, and a heavy gale lashing the waters foaming billows warned them against attempting the passage in their frail boats; accordingly they "fasted very truly" that day, and on Easter morning were rejoiced with the pleasant skies and tranquil waters. They were expecting when they reached Chimpanum, a fishing station of friendly natives, to be able to obtain fish to allay the pangs of hunger; but great was their disappointment when they reached the place, late in the afternoon of Easter, to find it deserted. They found, however, a few fish in the abandoned weirs, which revived them somewhat, so that the next morning they reached Roanoke in safety. Here Lane found the people he behind in a perilous situation. Rumors of disaster to his party had reached Roanoke, and Winginia, who upon assuming the chieftainship, had taken the name of Pemisapan, and had for some time regarded the English coldly, became offensively insolent to the little colony in its weakness, and, contemning the Christian faith which they had shown some regard for, openly taunted the English with the weakness of their God, who had been unable to protect his friends against the fury of the savage Renapoaks.



Data Set 3:

"Extreme Droughts Played Major Role In Tragedies At Jamestown, 'Lost Colony.'" *ScienceDaily*, 28 April 1998. Retrieved October 26, 2009, from <http://www.sciencedaily.com/releases/1998/04/980428075409.htm>

ScienceDaily (Apr. 28, 1998) — WILLIAMSBURG, VA--The worst droughts of the past 800 years likely played a major role in the mysterious disappearance of Roanoke Island's "Lost Colony" and in the "starving time" endured by colonists at Jamestown, researchers from the College of William and Mary and the University of Arkansas have concluded after studying growth rings of ancient trees in the Tidewater area. The findings were just published in the current issue of Science journal.

"If the English had tried to find a worse time to launch their settlements in the New World, they could not have done so," said Dennis B. Blanton, director of the William and Mary Center for Archaeological Research. "From 1587 to 1589, the most extreme drought in 800 years is implicated in the disappearance of the Lost Colony, and the Jamestown settlement was later plagued by the driest seven-year episode in 770 years. These droughts make the dry summer of 1997 pale in comparison."

The Roanoke Island settlement was established in 1587 but settlers soon mysteriously disappeared, leaving only the enigmatic word 'Croatoan' carved on a tree. More is known about the hardships at Jamestown, which was founded in 1607 but nearly failed during the period from 1609 to 1610 -- historically known as 'the starving time'-- when the colony suffered 'an appalling death rate.' According to historians, 43 percent of the 350 colonists alive in June of 1610 were dead by the end of that summer.

At Blanton's request, Arkansas climatologists spent several months analyzing the existing core samples, which covered the period between A.D. 1185 and 1984, for information about rainfall and temperatures during the Tidewater growing season. Archaeologists from William and Mary's Center for Archaeological Research did extensive historical and archaeological research into past Tidewater climate conditions. Both groups then correlated and interpreted the data.

"The tree-ring data indicate the extraordinary drought conditions that attended the settlement of both the Roanoke and Jamestown Colonies," the Science article says. A tree growth anomaly map for the period 1587-1589, for example, shows that the Lost Colony drought affected the entire southeastern United States, but was particularly severe in the Tidewater region near Roanoke. The cypress growth anomaly map for the Jamestown drought, 1606-1612, reveals that the most severe drought conditions during that period occurred in the Tidewater region near Jamestown. (An anomaly map illustrates specific conditions -- in this case growing-season precipitation -- over a certain geographical area.)

"The Roanoke and Jamestown colonies have both been criticized for poor planning, poor support, and for a startling indifference to their own subsistence," concluded the writers in Science. "But the tree-ring reconstruction indicates that even the best planned and supported colony would have been supremely challenged by the climatic conditions of 1587-1589 and 1606-1612."

Data Set 4:

Odrowaz-Sypniewska, "The Roanoke: North Carolina." Available from <http://www.courtlylives.com/Roanoke.html>

Richard Grenville (1542-1591) was on the ship called *Tiger*. They went ashore at Pamlico Sound, hoping to make friends with the locals. Manteo was born on Croatoan Island. Wanshee did not go ashore with the others, as he was tiring of the English and wished only to return home. They went to a settlement called Pomeic, some thirty miles from the *Tiger*. Raleigh had told Grenville that they were to treat the Natives with respect. Their punishment for disobedience was death for rape, twenty blows from a cudgel for striking an Indian, and imprisonment or slavery for entering an Indian's property or home uninvited.

The Natives were hospitable, but the colonists treated them harshly. When Grenville noticed his silver drinking cup missing, his anger rose and he vowed to have his men burn their corn and village, and kill Chief Wingina. This was ignorant behavior for a man who had a colony that needed the Natives to feed them. Grenville was born in Clifton House and was brought up in Buckland Abbey, in Devon, England. He was the cousin of Sir Walter Ralieggh and Sir Francis Drake, and had once met Theodore Paleologus, the last Byzantium emperor. Paleologus retired to Clifton, England. You could say that Grenville had friends in high places. This was not the first time his temper had got him into trouble. In 1562, Grenville was in a dispute on the Strand and ran through Robert Bannister with his sword. He left Bannister to die, offering no assistance. Grenville was pardoned.

Data Set 5:

Drye, Willie. "America's Lost Colony: Can New Dig Solve Mystery?," *National Geographic News*, 2 March 2004.

### Recent Clues

Souvenir seekers have been digging on Roanoke Island at least since 1653, when trader John Farrar and three friends from Virginia landed on the island and left with artifacts from the English colonies.

Union soldiers stationed on Roanoke Island during the Civil War dug for artifacts, and in 1895, Philadelphia journalist Talcott Williams, who was also an amateur archaeologist, did some excavations in the area now enclosed by the national park boundaries.

Professional archaeologists have done several excavations since the late 1940s. They found artifacts undoubtedly left by the colonists, including remains from Hariot's science laboratory. But they didn't find the site of the colonists' village.

The members of the First Colony Foundation hope to learn more about Hariot's laboratory and the location of the village. Their curiosity has been piqued by several clues.

In 1982 Evans—who was then a student working at the Fort Raleigh National Historic Site—discovered the remains of an old well thought to be from the 16th century. Evans found the remnants in Roanoke Sound, an indication of serious erosion on the northern end of the island.

In 2000 National Park Service archaeologists using ground-penetrating radar discovered rectangular-shaped objects buried beneath several feet of sand. (Park Service staff did not excavate the objects, but suspect they could be related to Hariot's work.) In 2002 a swimmer stepped on a 16th-century ax head in shallow water just off the northern end of Roanoke Island.

Finding the well and the ax head offshore has prompted some members of the First Colony Foundation to wonder if the site of the colonists' village eroded away and now is submerged. Underwater archaeologist Gordon Watts says that at least 600 feet (180 meters) and perhaps as much as a quarter-mile (0.4 kilometer) of the island has gone underwater since the 16th century.

"That's one fact that you cannot ignore," Watts said. "If you're doing a comprehensive search for the 1585-1587 settlement, you can't ignore the possibility that the site is now underwater."

Like any classic mystery, however, there's polite disagreement among some of the experts about where the village might have been. Acclaimed archaeologist Ivor Noël-Hume, who led an excavation in the Fort Raleigh National Historic Park in the 1990s, thinks it's highly unlikely the village site is now underwater.

"That's only a personal view, I do assure you," Noël-Hume said. "I wouldn't want to discourage further excavations. But I think you're going to find the remains of the settlement on a piece of land."

Noël-Hume says he'd like to see an excavation done in an area of sand dunes near the beach on the northern end. That could be "very informative," he says.

Virginia archaeologist Nick Luccketti, who also has worked at Fort Raleigh, says he has a reason to believe that maybe the village site hasn't been lost to erosion. "I've talked to collectors who have walked the beach on the north end for 30 years, and they don't have any 16th-century European artifacts in their collections," Luccketti said.

Despite their disagreements about where the colonial village may have been, the experts concur that the English effort to plant colonies on Roanoke Island was a milestone in U.S. history.

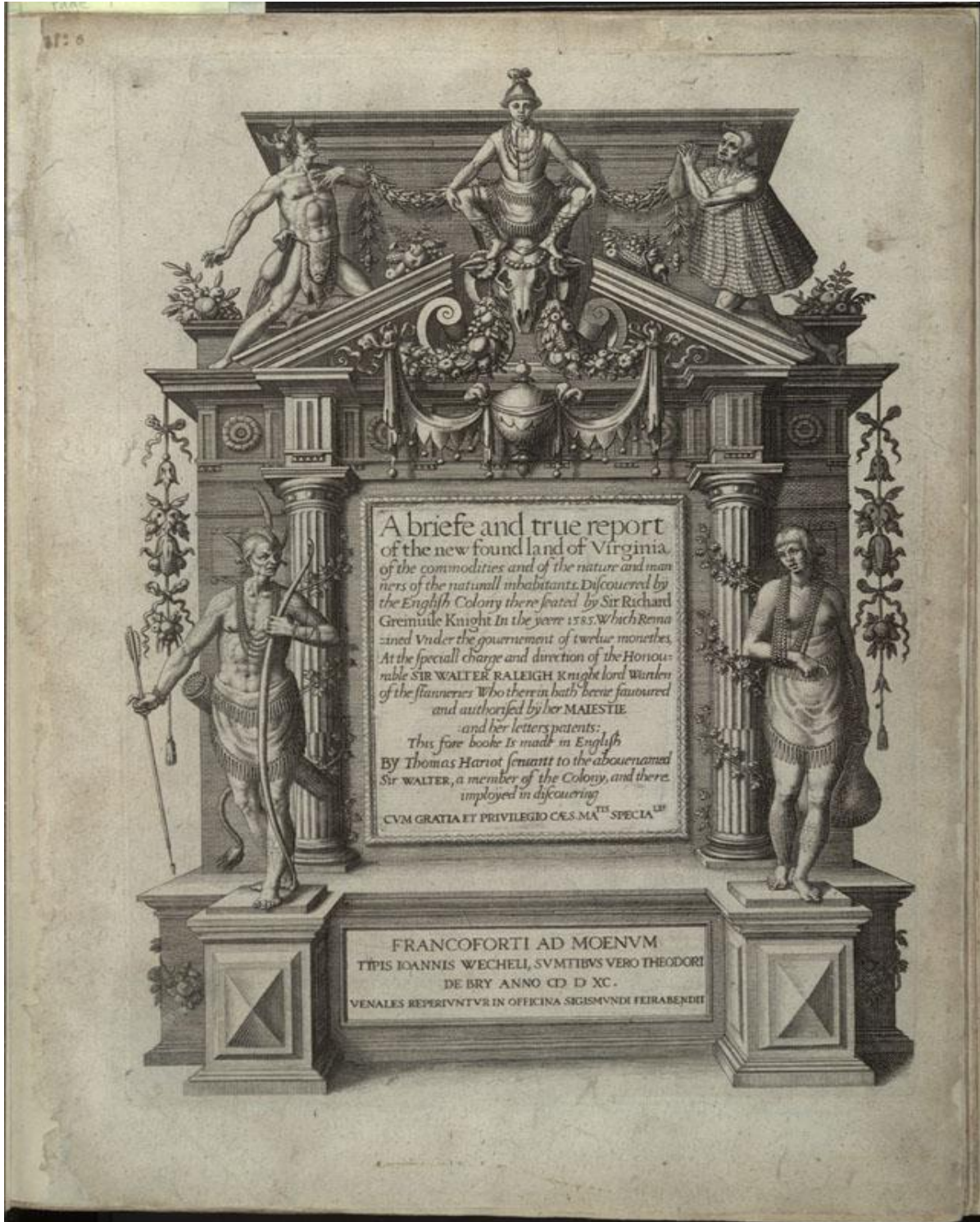
"It earned its place in American history when Thomas Hariot worked in the science center and sent back a report that said America is worthy of commercial investment," Noël-Hume said.

Luccketti thinks lessons learned at Roanoke Island helped ensure the survival of the Jamestown colony 20 years later. Hariot told the Jamestown colonists about the Native Americans' extreme fondness for copper ornaments, and so the colonists brought copper with them. When the Jamestown colonists were on the verge of starving, they traded copper to the Indians for food, and that saved the Jamestown colony from extinction, Luccketti says.

Still, Evans thinks the mystery of the Lost Colony also is important because it lures people into the story of Roanoke Island.

"As long as the Lost Colony is unexplained, it stays fascinating for a lot of people," Evans said. "It's their entry into the story. They go in trying to figure out what happened to the colonists, and then they learn history. I don't want to take away the mystery. That's what makes it different and exciting."

Data Set 6:  
de Bry, Theodor. "A Briefe and True  
Report of the New Found Land of  
Virginia." Copper-Plate Engravings. *Rare  
Book & Special Collections Division*. From  
American Treasures of the Library of  
Congress Online Catalog.  
[http://www.loc.gov/exhibits/treasures/tr  
m069.html](http://www.loc.gov/exhibits/treasures/tr<br/>m069.html).



**Data sets sited:**

de Bry, Theodor. "A Briefe and True Report of the New Found Land of Virginia." Copper-Plate Engravings. *Rare Book & Special Collections Division*. From American Treasures of the Library of Congress Online Catalog.

<http://www.loc.gov/exhibits/treasures/trm069.html>.

Drye, Willie. "America's Lost Colony: Can New Dig Solve Mystery?," *National Geographic News*, 2 March 2004.

"Extreme Droughts Played Major Role In Tragedies At Jamestown, 'Lost Colony.'" *ScienceDaily*, 28 April 1998. Retrieved October 26, 2009, from <http://www.sciencedaily.com/releases/1998/04/980428075409.htm>

Odrowaz-Sypniewska. "The Roanoke: North Carolina." Available from

<http://www.courtlylives.com/Roanoke.html>

"Raleigh's Lost Colony." *The New England Magazine* 17, no. 5 (1895): 565-588.

[http://memory.loc.gov/cgi-bin/query/r?ammem/ncps:@field\(DOCID+@lit\(AFJ3026-0017-83\)\)::](http://memory.loc.gov/cgi-bin/query/r?ammem/ncps:@field(DOCID+@lit(AFJ3026-0017-83))::) (Accessed October 10, 2009).

"Roanoke Island: The Site of the First English Colony in America." *The Continental Monthly* 1, no. 5 (1862): 541-552. [http://memory.loc.gov/cgi-bin/query/r?ammem/ncps:@field\(DOCID+@lit\(ABR1802-0001-119\)\)::](http://memory.loc.gov/cgi-bin/query/r?ammem/ncps:@field(DOCID+@lit(ABR1802-0001-119))::) (Accessed

October 10, 2009).

Inquiry Lesson Writing Rubric

Name: \_\_\_\_\_

	Thesis	Evidence	Mechanics
3	Thesis is clearly stated.	<ol style="list-style-type: none"> <li>1. At least 3 pieces of evidence are present.</li> <li>2. Evidence clearly supports thesis</li> <li>3. At least one primary source is used as evidence</li> </ol>	Sentence structure, grammar and spelling are free from error
2	Thesis is present, but unclear	<ol style="list-style-type: none"> <li>1. At least 2 pieces of evidence is present</li> <li>2. Evidence somewhat supports thesis</li> </ol>	Few errors in sentence structure, grammar and spelling
1	Thesis is not present	<ol style="list-style-type: none"> <li>1. Only 1 piece of evidence present</li> <li>2. Evidence is unclear, does not support thesis</li> </ol>	Frequent errors in sentence structure, grammar and spelling

Score: \_\_\_\_\_

Comments:

## Lesson Plan Evaluation/Reflection

This inquiry lesson is appropriate for my hypothetical 10<sup>th</sup> grade U.S. History course in Madison, Wisconsin. The best time to use this lesson would be at the beginning of the year. This is because of the chronological placement of the issue discussed and because it provides explicit instructions on how an inquiry lesson will work. Future inquiry lessons would not need as much explanation.

### **PASS Standards**

#### Standard One- Higher Order Thinking

I believe that this lesson scores a 4 for this PASS standard. While students will be synthesizing, generalizing, explaining, hypothesizing and arriving at conclusions, they will not be doing much manipulating of materials. Many students will be participating because participation in discussions and readings are built into the lesson.

#### Standard Two- Deep Knowledge

I believe that this lesson scores a 4 for this PASS standard. The teacher provides most of the information and facilitates discussion of the data sets in order for students to gain deep knowledge about the content. Students also demonstrate their understanding by arriving at a reasoned, supported conclusion.

#### Standard Three- Substantive Conversation

This inquiry lesson, in my opinion, scores a 4 for this PASS standard. All three features of substantive conversation (1. The talk is about subject matter in the discipline and includes higher order thinking. 2. The conversation involves sharing of ideas and is not completely scripted or controlled by one party. 3. The dialogue builds coherently on participants' ideas to promote improved collective understanding of a theme or topic.) should occur and there should be at least one example of sustained conversation. Because of the way the lesson is set up, many students will be participating.

#### Standard Four- Connections to the World beyond the Classroom

I believe that this inquiry lesson scores a 2 for this PASS standard. This lesson does not directly connect to the students' lives outside of school. They do encounter a topic that I will try to connect to students' experiences and contemporary public situations, but the connection is unspecified, and there is no evidence that students make the connection.

#### Standard Five- Ethical Valuing

This lesson scores a 1 for this PASS standard. There is no value based issue discussed within this lesson.

### Standard Six- Integration

This lesson scores a 2 for this PASS standard. Only one type of integration (Interdisciplinary) is used. Students read science articles to find out about how archaeological digs and tree ring readings can help us find out what caused the colonists Roanoke disappear.

### General Improvements and Changes

In general, I am very happy with the way that this inquiry lesson turned out, but there are a lot of areas that I would improve on. First, I would find a variety of different data sets. I feel that right now there are too many text data sets. I would also incorporate more ethical valuing and integration. I also believe that it would be appropriate for higher level courses to either be able to do the research and find their own data sets or choose from a larger database that I would create.

### Transcendent Teaching and Learning Issues

In writing this inquiry lesson plan, I have learned many things. I have learned that I will need to allow plenty of time to plan for activities and lessons. I also learned that, though there are many resources available, searching for resources can be difficult. I will remember this when having my own students perform research. I need to remember that I need to teach my students how to research before expecting them to know how to effectively find data and other information.

I do believe that, overall, this inquiry lesson fits well into my teaching philosophy. I believe that students in Social Studies classes, in this case a history class, need to learn how to think critically and form tentative conclusions. I really believe that students will learn how to question things that they once thought had to be true after participating in these types of lessons which will make them more thoughtful individuals as well as better citizens.