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The following lessons were created by **Jaclyn Sawyer**, a teacher participating in the National Endowment for the Humanities Summer Institute for Teachers entitled Touch the Past: Archaeology of the Upper Mississippi River Region.

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### **Understanding the Historical Process through Archaeology**

**Essential Question:** How do archaeologists interpret artifacts?

**Grade Level:** 6-8

**Subjects:** Social Studies with interdisciplinary elements for Math, Language Arts, Science, and Visual Arts.

**Objectives:**

- Students will be able to explain the elements of culture and hypothesize about a culture using evidence.
- Students will be able to explain and compare different dating techniques such as stratigraphy and radiocarbon dating.
- Students will be able to put dates in chronological order.
- Students will be able to infer from contextual clues to create a larger picture of history.
- Students will be able to demonstrate the difference between inference and observation.
- Students will be able to compare and contrast primary and secondary historical documents and artifacts.
- Students will be able to explain major migration theories of North America.
- Students will be able to form, research, evaluate and re-write a hypothesis.
- Students will be able to write a formal paragraph.
- Students will be able to use the scientific method to test a hypothesis.

**Standards:**

Minnesota State Benchmarks Covered:

6.1.1.1.1 Evaluate arguments about selected issues from diverse perspectives and frames of reference, noting the strengths, weaknesses and consequences associate with the decision made on each issue.

6.3.1.1.1 Create and use various kinds of maps, including overlaying thematic maps, of places in Minnesota; incorporate the “TODALSS” map basics, as well as points, line and colored areas to display spatial information.

6.4.1.2.1 Pose questions about a topic in Minnesota History, gather a variety of primary and secondary sources related to question, analyze sources for credibility, identify possible answers, see evidence to draw conclusions, and present supported findings.

**Duration:** 8-55 minute class periods

**Materials/Supplies:**

- Lessons on each of the inquiry areas.
- Investigation/hypothesis worksheet.

**Vocabulary:**

-Archaeology -Artifact -Primary Source -Secondary Source -Hypothesis -Culture  
-Stratigraphy -Radiocarbon Dating -Context -Inference -Observation -Migration  
-Chronology

**Setting the Stage:** Students are coming into 6<sup>th</sup> grade with a general view of social studies, but they did not have very much of it in elementary school. They need a basis of skills in order to investigate history during the Minnesota History course. This inquiry based approach will allow students to have a say in the order their lessons come in, but still hit the necessary skills to allow them to analyze history in the Minnesota history course.

**Procedure:**

1. Students will be shown a Minnesota artifact, either as a class or in a group. Students will then be presented with the essential inquiry question: How does an archaeologist find out what this is, where it came from, and when it was made?
2. Students will fill out the Hypothesis worksheet and review how to write a correct paragraph.
3. A lesson on chronology, history vs. pre-history, and timelines will be taught.
4. Going back to the student’s hypothesis, the teacher will ask the students what information archaeologists use to find out what the artifact is.
  - The student answers will then lead the teaching and discussion. Depending on where the discussion goes the students will receive lessons on the following items, helping them to analyze the artifact shown in class. After each mini-lesson, the students will go back to their artifact and use the data and evidence (provided by research or the teacher) to fill in the evidence column of their hypothesis worksheet.

Lesson Topics for the unit:

- Dating (Relative and Radiocarbon Dating)
- Stratigraphy (pg. 22 Intrigue of the Past)

- Context
- Primary vs. Secondary sources
- Observation vs. Inference
- Migration theories
- Hypothesis forming and evaluation
- Paragraph writing
- Using the scientific method
- Archaeological ethics and laws
- What are components of culture?
- Reading a Minnesota Resource Map

**Closure:** Once the lessons and inquiry are complete and students have investigated the item to a point where they think they know what it is, students will review their evidence and re-work their hypothesis using the evidence to back up their statement in correct paragraph form.

**Evaluation:** The re-worked hypothesis will be evaluated for use of evidence to support the statement. The initial hypothesis will be compared to the re-worked hypothesis to see growth in the students' understanding of the artifact and evidence.

**Links/Extensions:**

*Interdisciplinary* components may be added to enrich the students' experience. This may include:

*Science:* -Discuss how the scientific method applies to the archaeological process as well. Link radiocarbon dating when discussing the periodic table to elements.

*Math:* -Students can learn math skills through archaeology, for instance: laying out a grid on a dig and calculating surface area. Working with a coordinate system on a grid. Relating a number line to a time line. Measuring and calculating a pot's circumference.

*Language Arts:* -writing up a formal report can be incorporated into their units.

*Art:* -exploring pre-historical pottery patterns in their pottery unit.

**Resource:**

Smith, Shelley J., Jeanne M. Moe, Kelly A. Letts, and Danielle M. Paterson. *Intrigue of the Past*. Dolores: United States Department of the Interior, 1996.

## Hypothesis Worksheet

<b>Characteristic</b>	<b>Your Guess</b>	<b>Evidence</b>
<b>Material it is made out of?</b>		
<b>Relative Date of the Artifact?</b>		
<b>Primary or Secondary item for Minnesota History?</b>		
<b>Region of Minnesota this object came from?</b>		
<b>What was this object used for?</b>		

**Pre-Investigation Hypothesis:**

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**Post-Investigation Hypothesis:**

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