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The following lessons were created by **Ted Eischeid**, a teacher participating in a 2010 National Endowment for the Humanities Summer Institute for Teachers entitled, "Exploring the Past: Archaeology in the Upper Mississippi River Valley."

Archaeology Infusion Project

Earth Science – 8th grade

Big Themes in Archaeology to focus on-

Defined: The systematic study of antiquities to reconstruct the past.

Big Themes I Learned This Week to Apply to our study in Science 8 to focus on-

1. Archaeology is a science, based on evidence, hypothesis-testing, and inference.
2. People adapt to their environment to meet their needs for food, water, shelter, and space; humans invent/use technologies to improve their lives.
3. Humans use resources to survive; how they use these resources can affect their lifestyles and survival.
4. Humans have a history of resource use, depletion, and adjustment.
5. Change is a constant in human societies, e.g., the environment, culture, and technology all change.
6. Basic earth science principles like stratigraphy, superposition, and uniformitarianism can be illustrated by archaeology.
7. Humans seem to display common attributes over time that can help connect the past to the present in terms of the human experience.
8. Humans have an interest in where they came from and how the past connects to their present lives.

Specific Topics in Science 8 With Archaeological Connections:

1. Paleontology (using evidence to decipher the past)
2. Superposition (important in relative dating)
3. Uniformitarianism (how can the present be used to learn about the past)
4. Properties of rocks/minerals (cleavage, fracture, hardness),
5. Radiometric dating (use C-14 example from archaeology).
6. Resource use (current/past, mining, food/water/shelter/space)
7. Climate change (history of and how humans have responded to it)
8. Force and motion (atlatl)

Local Resources to Connect to-

1. Niagara escarpment
2. Local archaeology (mounds, “arrowheads”, etc.)
3. Mid-america Geographic Foundation: <http://www.mid-america-geographicfoundation.com/>

Approach-

Infuse archaeology activities into present Science 8 curriculum as a way to build understanding and interest in human connections with the landscape and environment of Wisconsin. Activities will be identified that complement topics in Science 8 and reinforce the BIG themes from Archaeology I learned during this workshop.

Rationale-

Students need to be allowed to make connections between current and past cultures, and engage themselves in hands on activities that allow them to develop connections to their present knowledge and the curriculum. Archaeology can be used to do this. Fundamental understandings of our use of the Earth, past and present, can help students develop the BIG ideas needed to shape the future of our planet.

Details-

- A. Activities-
 - a. Flint knapping
 - b. Atlatl
 - c. Mounds/burial customs
 - d. Project Archaeology: Intrigue of the past.
 - e. Timelines: geologic events, climatic events, human history.
 - f. Story-time: read and written
 - g. Artifact sharing/mysteries for EC
 - h. Speaker from MAGF

Resources Needed-

1. Flint/chert for knapping
2. Knapping tools
3. Arrowhead replicas
4. Atlatl model

Activities referenced in following section:

“Project Archaeology- Intrigue of the Past”. Smith et al., USDI-BLM, 1996.

Big Themes Learned This Week and Supporting Lessons:

- A. Archaeology is a science, based on evidence, hypothesis-testing, and inference.
 - i. Activity- “Observation & Inference”...

- B. People adapt to their environment to meet their needs for food, water, shelter, and space; humans invent/use technologies to improve their lives.
 - i. Activity Demos: Atlatl throws.
 - ii. Flintknapping.

- C. Humans use resources to survive; how they use these resources can affect their lifestyles and survival.
 - i. Activity: Culture Everywhere.

- D. Humans have a history of resource use, depletion, and adjustment.
 - i. Activity: Archaeology-a conservation issue.

- E. Change is a constant in human societies, e.g., the environment, culture, and technology all change.
 - i. Activity: Pollen analysis.

- F. Basic science principles like stratigraphy, superposition, radiometric dating, and uniformitarianism can be illustrated by archaeology.
 - i. Activity 1: Archaeology and tree-ring dating.
 - ii. Activity 2: Chronology-the time of my life.

- G. Humans seem to display common attributes over time that can help connect the past to the present in terms of the human experience.
 - i. Activity 1: Culture everywhere.
 - ii. Activity 2: Grave robbers.

- H. Humans have an interest in where they came from and how the past connects to their present lives.
 - i. Activity 1: Why is the past important?
 - ii. Activity 2: Your family tree & the ‘tree of life’? (Ted’s activity)