

GRADE 5 LESSON 2

Lesson Details	
Title	Introduction to Archaeology and the M-231 site
Supporting Question(s)	Where is the site and how was it discovered?
Social Studies Standard(s)	P1.1 Use appropriate strategies to read and interpret basic social science tables, graphs, graphics, maps and texts. P2.2 Evaluate data presented in social science tables, graphs, graphics, maps and texts.
Connections for integration	ELA: RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
Lesson Objective(s)	<p>What should students know or understand? Students will describe the location of the M-231 site and explain how the site was discovered.</p> <p>What should students be able to do? Students will use data presented in maps and text to answer a supporting question.</p>
Academic Vocabulary	artifacts primary sources secondary sources archaeology archaeologist
Instructional Resources	<ul style="list-style-type: none"> • Lesson 2 PowerPoint • Lesson 2 Investigation Sheet • Vocabulary Cards #6 - #10
Lesson Extensions	<ul style="list-style-type: none"> • To demonstrate how difficult archaeology can be divide students into pairs and give each pair a paper plate, a pair of scissors and a small plastic bag. Have each pair cut their paper plate into 10 to 15 pieces. Then, have the pairs place three of the pieces aside and put the rest into the small bag. Have them trade bags with another pair and try to re-construct the paper plate using tape.
Additional Resources	<ul style="list-style-type: none"> • Powerful History focuses on archaeology in Vermont but has a great deal of good information on archaeology for teachers. In addition it includes several text selections that can be used with students as they study Early U.S. History during the year. It can be downloaded at this link: https://www.velco.com/uploads/documents/powerfulhistory.pdf

Lesson Sequence	
Beginning/ Launch	<ol style="list-style-type: none"> 1. Using SLIDE 2 remind students that the Anishinabek lived throughout the Great Lakes region. Draw attention to the term “Anishinabek Aki” on the slide and explain that this is what they called the region in their language of Anishinaabemowin. 2. Using SLIDE 3 point out the Grand River and share the text on the slide. Explain that in this lesson students will learn the answer to the question on the slide.

Middle	<ol style="list-style-type: none"> 3. Using SLIDE 4 and Vocabulary Card #6 introduce the term ‘artifact’ and explain that the slide shows some Anishinabek artifacts that were discovered near the Grand River. Using Vocabulary Cards #7 and #8 explain that artifacts are “primary sources” or firsthand evidence of the past. 4. Using SLIDE 5 and Vocabulary Card #9 to introduce the term ‘archaeology.’ Display SLIDE 6 and ask students what the map appears to show. Discuss their answers and then guide them in understanding that the map shows several archaeological sites that have been discovered along 40 miles of the Grand River. 5. Display SLIDE 7 and introduce the term ‘archaeologist.’ Ask students how they think archaeologists discover artifacts from the past. 6. Display SLIDE 8 and give each student a copy of the Lesson 2 Investigation Sheet. Explain that students will be recording their ideas on this sheet during the rest of the lesson. 7. Using SLIDES 9 – 18 demonstrate how archaeologists ‘dig into the past.’ Make sure to stop on SLIDES 10, 11, 14 and 16 and have students to try to identify artifacts on the slides and complete the appropriate section of their Investigation Sheet. 8. Display SLIDE 19 and explain that archaeology is like trying to put a puzzle together. Artifacts are the puzzle pieces. However, as students should have seen in the slides, sometimes the artifacts are broken. In addition, only a few artifacts from the past are usually found at a site. For these reasons it is hard to put the puzzle together. 9. Display SLIDE 20 and point out the archaeological site shown with the red square. Explain that students will now learn how this important site was discovered. 10. Display SLIDE 21 which shows Ottawa County in Michigan. Click to show the Grand River. Then, click to show Highway 31. 11. Using SLIDES 22 and 23 explain that a drawbridge carries Highway 31 across the Grand River. Explain that a drawbridge can be raised up to allow boats to travel down the river. This often causes traffic jams especially in summer. 12. Display SLIDE 24 and ask students to turn and talk with a partner about a way to solve the traffic problem. 13. Display SLIDE 25 and explain that the Michigan Department of Transportation (MDOT) decided to build another bridge across the Grand River. Display SLIDE 26 and discuss the question on the slide. Make a connection to civics by explaining that building and maintaining bridges is a public service provided by the government of Michigan. 14. Display SLIDE 27 and explain that MDOT does ‘impact studies’ before building a bridge. This means MDOT studies what impact the bridge would have on various components of a site such as animals that live at the site. Have students predict what another one of these components might be. Discuss their answers. Then, display SLIDE 28 to reveal some of the components MDOT studies. 15. Using SLIDES 29 and 30 explain that the site chosen for the new M-231 bridge included a potential Anishinabek archaeological site. For this reason MDOT conducted a survey of the area and then an excavation of the site. Use SLIDES 31 - 33 to show photographs of the excavation. 16. Using SLIDE 34 explain that Anishinabek leaders and cultural experts were included as members of the archaeological team from the beginning. Ask students why they think this was important.
Ending/ Closure	<ol style="list-style-type: none"> 17. Display SLIDE 35 and have students complete their Lesson 2 Investigation Sheets. Have students share some of the things they would like to learn about the M-231 site.

Lesson Notes

SLIDES 9 to 18	Note that the Teacher Information Sheet labeled <i>Interpreting Archaeological Deposits</i> provides additional background information for these slides.
SLIDES 20 to 29	The building of the M-231 bridge by the Michigan Department of Education provides an excellent example of how governments provide public goods and services. Make sure to make this Civics connection.
SLIDE 27	Explain to students that a Centennial Farm is a farm that has been in the same family for at least 100 years. Special markers are placed on these farms. As a lesson extension locate examples of Centennial Farms located near your community. Lists of these farms and more information on Michigan Centennial Farms can be found at the following website: https://hsmichigan.org/programs/centennial-farm-program/centennial-farms-spotlight/

Grade 5

Lesson 2

Instructional Resources

- Lesson 2 Investigation Sheet
- *Interpreting Archaeological Deposits* – Teacher Information

Lesson 2 Investigation Sheet

PART 1

Layer	What artifacts can you identify?
1	
2	
3	
4	

PART 2

MDOT studies the impact a bridge site will have on _____

PART 3

What are some of the things you'd like to learn about the M-231 Site?

Interpreting Archaeological Deposits

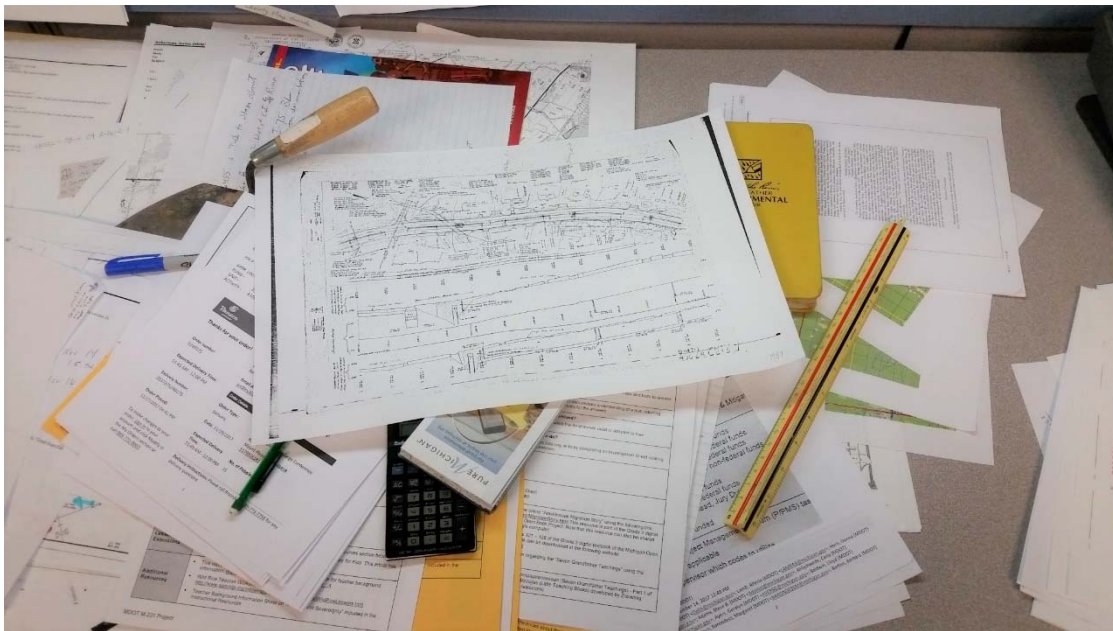
Teacher Information

The **Law of Superposition*** is a relative dating method first developed for interpreting the ages of rock layers (the primary study of geologists) and non-human fossils (the primary study of paleontologists [NOT archaeologists]). Archaeologists, since they study people and their cultures through artifacts and the remains of their houses, structures, and other items buried in the ground or partially preserved on the surface also use this law to help them understand the age of artifacts, bones, and other archaeological materials. Most archaeologists, however, use the law of superposition to interpret the ages of artifacts within and between the layers of sediment and soils where artifacts and objects are found. In its most straightforward application, the Law of Superposition says that older artifacts will be found below the more recent ones. This is what is illustrated on the Stratigraphy Slide, an idealized illustration that is simplified so that students can understand how archaeologists use the principles of both stratigraphy (layers of soil and sediments) and the relative position of individual items in each soil layer.

A useful example is to imagine huge rainstorm that causes a river to flood. As water from the surrounding fields and forests drains into the river, the river becomes loaded with dirt from the nearby fields and forests. When the river can no longer flow within its banks, it spreads across the land. The water slows down as it spreads out over the land and the heaviest dirt particles fall onto the land. Once the rains stop, the river retreats, depositing more dirt onto the land and then goes back within its banks. Let's say this this happens every 500 years for a period of six thousand years. This would result in 12 layers of sediment that might look like this:



In between the floods, people lived on the top of the land and their remains are buried by the next flood. So, clearly, all the artifacts found in Layer 11 will be older than those found in Layer 7 in the above picture. But remember, our simple example states that the floods only happen every 500 years, so that the Layer 7 soil may have up to 500 years of human occupation. Can we assume that the artifacts will be perfectly sorted from the top to bottom of Layer 7 if people are trampling artifacts, digging holes for firepits or refuse pits or storage pits, or animals are burrowing holes for dens? This is beginning to sound a bit more complicated as many artifacts may be moved horizontally and others vertically within, in this case, Layer 7. This might better be conveyed as an archaeologist's messy desk with the papers, pens, and other items scattered about in overlapping layers in separate piles on this archaeologist's desk below:



The US-31/M-231 sites, are located far enough from the Grand River that floods rarely, if ever, reached the terraces upon which the sites are located. Thus, all the accumulations of artifacts and archaeological deposits are compressed into 10 or 12 inches of soil with no evidence for discrete soil layers separating the occupations. Thus, our sites are best compared with the messy desk above. And, the Stratigraphy Slide, if it were to accurately reflect the actual archaeological deposits at our sites should be compressed into a single layer with artifacts a bit more jumbled vertically and horizontally.

*Some of the ideas and examples in this explanation of the M-231 Stratigraphy Slide were taken from or inspired by the document by the Ontario Museum of Archaeology at <https://archaeologymuseum.ca/the-law-of-superposition/>.