

Archaeology and the Common Core: All Hands on Deck

Archaeology and the Common Core:

All Hands on Deck

By Jeanne M. Moe, Ed.D.

BLM Project Archaeology Lead

Electronic Symposium “Getting Back to Saving the Past for the Future: Heritage Education at a Professional Crossroads” at the 79th Annual Meetings of the Society for American Archaeology, April 24, 2014.

(Please do not quote without permission from the author.)

Introduction

The Common Core State Standards (CCSS or Common Core or the standards) provide an unprecedented opportunity to implement archaeology education in schools throughout the nation. The standards were developed and published by the National Governors Association and first published in 2010 (NGA 2013). The Common Core is a set of grade-by-grade performance expectations in English Language Arts and Mathematics for Kindergarten through 12th grade students to reach by the end of each year. To date 45 states, the District of Columbia, and five US Territories have adopted all or part of the CCSS and must implement the standards during the 2014-2015 academic year including the relevant assessments. The five states that have not adopted the standards are Virginia, Texas, Nebraska, Minnesota, and Alaska. Minnesota has adopted the English Language Arts Standards, but not the Mathematics Standards. The Anchorage School District, which encompasses nearly half of Alaska's population, has adopted the Common Core.



Map showing states adopting the Common Core State Standards by 2014.

As the time for implementation draws near, push back from some of the states who have already adopted the Common Core is in the news on a regular basis. While some states are now resisting the Common Core and some states never adopted them, I think that the standards will go forward and will be widely used throughout the nation (Joelle Clark, personal communication 2013). While testing for the new standards is a concern, the momentum behind the effort will keep it moving forward and it will be difficult for states not to accept the CCSS in some form.

Archaeologists and archaeology educators can help teachers implement the Common Core through the use of existing archaeology education materials that already align with the standards or through the development of new materials that align more specifically. In other words, we can use the engaging field of archaeology to help teachers do what they must do in the classroom to implement the Common Core and help students pass the required performance-based tests.

For archaeology, the most important part of the standards are the Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects. For convenience, this set of standards will be referred to as “ELA” or the “ELA Standards” in this document. While the ELA focuses primarily on language skills, students are expected to read and analyze non-fiction social studies and science texts.

What Are the Common Core State Standards?

Sidebar A: About the Common Core State Standards

www.corestandards.org/about-the-standards

The Common Core State Standards Initiative is a state-led effort coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO). The standards were developed in collaboration with teachers, school administrators, and experts, to provide a clear and consistent framework to prepare our children for college and the workforce.

The standards are informed by the highest, most effective models from states across the country and countries around the world, and provide teachers and parents with a common understanding of what students are expected to learn. Consistent standards will provide appropriate benchmarks for all students, regardless of where they live.

These standards define the knowledge and skills students should have within their K-12 education careers so that they will graduate high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs. The standards:

- Are aligned with college and work expectations;
- Are clear, understandable and consistent;
- Include rigorous content and application of knowledge through high-order skills;
- Build upon strengths and lessons of current state standards;
- Are informed by other top performing countries, so that all students are prepared to succeed in our global economy and society; and
- Are evidence-based.

The Common Core State Standards were first published in 2010 (NGA 2010) and must be implemented in all adopting states nationwide in academic year 2014-2015; some states have already begun implementation. The CCSS is designed to create College and Career Ready (CCR) high school graduates and the framers envision that all graduates will attain this level of education before leaving secondary education and entering the work force or college.

While the actual standards call for the achievement of specific skills at each grade level, the hallmarks of the Common Core are very broad. They seek to integrate knowledge across subjects, create inquiry-based learning across the curriculum, implement information text reading in history, social studies, and science, create broad cultural understanding, and rely on performance-based assessment rather than tests for evidence of learning (NGA 2010). According to the ELA Standards, students who are college and career ready in reading, writing, speaking, listening, and language can be described in brief as follows:

- **They demonstrate independence.** Students can without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information.
- **They build strong content knowledge.** Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance.
- **They respond to the varying demands of audience, task, purpose, and discipline.** Students adapt their communication in relation to audience, task, purpose, and discipline.
- **They comprehend as well as critique.** Students are engaged and open-minded—but discerning—readers and listeners.
- **The value evidence.** Students cite specific evidence when offering an oral or written interpretation of a text.
- **They use technology and digital media strategically and capably.** Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use.
- **They come to understand other perspectives and cultures.** Students appreciate the twenty-first century classroom and workplace are settings in which people from often widely divergent cultures and represent diverse experiences and perspectives must learn and work together.

Thinking broadly about the interdisciplinary field of archaeology, most of the literacy attributes of a college and career ready high school graduate can be addressed through education about archaeological inquiry and content. Archaeology may be uniquely qualified to teach cultural understanding because it allows students to step back in time and examine cultural differences and similarities without the “baggage” of contemporary prejudices and issues (Moe et al. 2002).

The Next Generation Science Standards (NGSS) were developed to complement the Common Core and were released in early 2013. These science standards are based on *A Framework for K-12 Science Education* (NRC 2012). The Next Generation Science Standards marry scientific practices to science content; NGSS content does not include archaeology *per se*, but interdisciplinary archaeological lessons could be used to address specific content in botany, biology, and astronomy, for example.

Social studies education professionals began meeting to discuss the critical state of social studies education and the impact that CCSS might have on social studies even before the Common Core was published in 2010 (Swan and Griffin 2013:317). Their work results in the College, Career, and Civic Life (C3) Framework for Social Studies State Standards, which were published in 2013. The C3 Framework is a uniform set of standards, which include both skills and content; states may opt into the national framework to develop their own social studies standards. The American Anthropological Association produced an appendix for the C3 Framework outlining the important concepts of anthropology that could and should be taught within social studies; the document includes archaeology specifically in the realm of understanding cultural similarities and differences over time and space. Some states are currently producing state specific standards in social studies to complement the C3 Framework (e.g., Kansas and Kentucky).

Possibilities for Archaeology Education

The possibilities for archaeology education within the Common Core requirements are practically endless. Because archaeology is interdisciplinary in practice, it seamlessly integrates knowledge across history, geography, and science. For example, when studying archaeology through *Project Archaeology: Investigating Shelter* (Letts and Moe 2012), a curriculum guide for grades three through five, students use oral history, historic photographs, geographic information, and authentic archaeological data to learn about places where people lived in the past and how they made their shelters and got their food. In some of the regional investigations, students use “hard sciences” such as soil science or botany to analyze data and make interpretations. Table 1 shows how *Project Archaeology: Investigating Shelter* aligns specifically with the ELA standards for 4th grade.

Generally, Project Archaeology, a national archaeology education program (www.projectarchaeology.org), fulfills many of the hallmarks of the Common Core (NGA 2010). For example, all Project Archaeology materials are inquiry-based and students master content through guided investigations, which are built from authentic archaeological research and data. Archaeological process lends itself well to inquiry-based education and we have capitalized on the nature of archaeology to build powerful student-centered educational materials. While Project Archaeology investigations contain no “correct answers,” students are expected to support their inferences and interpretations with evidence, another hallmark of the CCSS.

All new archaeology education materials can and must be more specifically aligned to CCSS, NGSS, and the C3 Framework. Educators will probably not even consider using materials that are not aligned to the Common Core, hence, there would be no reason to produce unaligned materials.

While existing Project Archaeology materials fulfill CCSS in many ways, all new Project Archaeology materials currently under development will be even more closely tied to CCSS. For example, Project Archaeology materials require students to read informational texts across the curriculum (history, geography, science, art) and to analyze the texts using CCSS reading strategies. Students are required to use evidence from their reading and from their research projects to support interpretations and arguments.

Project Archaeology materials rely on performance-based assessments to demonstrate their understanding of both concepts and content. Project Archaeology assessments include explanatory writing; persuasive speaking; designing media products to communicate results and understanding; and interpretation of research results through writing, speaking, and cooperative work. These assessments give students the opportunity to practice for the required performance-based tests under the Common Core, which will begin in 2015.

Archaeology and the Common Core: All Hands on Deck

Table 1. Common Core State Standards Alignment for *Project Archaeology: Investigating Shelter*.

ELA Standard for 4th Grade	WU	1	2	3	4	5	6	AS	7	8	9	FPU
RSIT 1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.										●	●	
RSIT 3. Explain events procedures, ideas, or concepts in a historical, scientific, or technical text including what happened and why, based specific information in the text.										●	●	
RSIT 4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a <i>grade 4 topic or subject area</i> .	●	●	●	●	●	●	●	●		●	●	
RSIT 7. Interpret information presented visually, orally, or quantitatively and explain how the information contributes to an understanding of the text in which it appears.			●		●				●	●		
RSIT 8. Explain how an author uses reasons and evidence to support particular points in a text.										●		
RSIT 9. Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.										●		
RSIT 10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.										●	●	
WS 1. Write opinion pieces on topics or texts, supporting a point view with reasons and information.												●
WS 2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.				●						●		
WS 4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.										●		●
WS 5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.										●		
WS 7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.			●	●	●	●		●	●	●		
WS 8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.		●	●	●	●	●	●	●	●	●	●	●
WS 9. Draw evidence from literary or informational texts to support analysis, reflection, and research. Apply <i>grade 4 Reading standards</i> to informational texts.							●			●	●	●
WS 10. Write routinely over extended time frames and shorter time frames for a range of discipline-specific tasks, purposes, and audiences.		●	●	●	●	●	●	●	●	●	●	●

Archaeology and the Common Core: All Hands on Deck

SLS 1. Engage effectively in a range of collaborative discussions with diverse partners on grade 4 topics and texts, building on others ideas and expressing their own clearly.	●	●	●	●	●	●	●	●	●	●	●	●
SLS 3. Identify reasons and evidence a speaker provides to support particular points.										●		●
SLS 4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant descriptive details to support main ideas or themes; speak clearly at an understandable pace.										●		●
SLS 6. Differentiate between contexts that call for formal English and situations where informal discourse is appropriate; use formal English when appropriate to task and situation.												●
LS 4. Determine or clarify the meaning of unknown and multiple meaning words and phrases based on <i>grade 4 reading and content</i> .							●			●		●
LS 6. Acquire and use accurately grade appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic.	●	●	●	●	●	●	●	●		●	●	

Abbreviations (CCSS for ELA): RSIT = Reading Standards for Informational Texts; WS = Writing Standards; SLS = Speaking and Listening Standard; LS = Language Standard.

Abbreviations (*Investigating Shelter*): WU = Warm-Up Lesson; 1- 9 = Lessons One through Nine; AS = Assessment; FPU = Final Performance of Understanding

Challenges for Archaeology Education

While the Common Core presents archaeology educators with an unprecedented opportunity to implement archaeology education in classrooms nationwide, the challenges are significant. Specifically:

- We have a small work force to do a big job. Archaeology is a small profession and compared to environmental educators we have a small professional base from which to draw. We must recruit help from educators and professionals in related fields such as historic preservation and Native American studies.
- Many other organizations and professions are doing the same thing that we are; they are “selling” teachers their materials based on real or supposed alignment to CCSS, NGSS, and the C3 Framework. Marketing educational materials to school districts and to teachers is a huge job in itself and we are competing with gigantic education publishers such as Houghton-Mifflin, Scholastic, and many others; most of which have a “sales force” devoted to the job. We have few resources and are marketing our materials on shoestring budgets.
- Teachers are overwhelmed with the implementation of the Common Core. It represents yet another new educational paradigm for them to learn themselves and to implement effectively in their classrooms. While the final outcome of national Common Core implementation should be positive, teachers are hard pressed to pull it off in the next couple of years.

What Can Archaeologists Do?

We need an army of archaeologists to help deliver existing materials that align to CCSS to teachers within the next year. Specifically archaeologists can:

- Establish a Project Archaeology program in your state, region, or town. Assist with an existing program by sponsoring workshops, providing professional development funding for teachers, recruiting teachers for online courses or other professional development opportunities such as field schools or institutes, or marketing materials at educator conferences or faculty meetings.
- Offer professional development workshops for in-service and pre-service teachers, teacher institutes, online courses, field schools for educators, and job-embedded mentoring.
- Mentor teachers in their archaeology education efforts whenever possible (e.g., assist a teacher with implementing Project Archaeology lessons in the classroom, help teachers plan and conduct meaningful field experiences for students, and help teachers use archaeology to address the Common Core).
- Supplement curricular materials with classroom work and/or field-based learning experiences for teachers and students.
- Effectively inform teachers that archaeology can help them fulfill the Common Core while engaging students in interesting cross curricular learning. Marketing to teachers is a job all in itself, but at Project Archaeology we are learning how to do it and we are making progress.
- Design educational research projects to study the efficacy of archaeology education in meeting Common Core Standards and report the results to teachers through scholarly journals and teacher magazines such as *Social Education* and *Science and Children*.

More generally, we can and must develop new archaeology education materials that are designed using the standards and specifically address as many requirements as possible. *Project Archaeology: Investigating Rock Art* was designed to fulfill as many of the ELA standards as possible (Table 2). While this unit is much shorter than *Investigating Shelter*, we were able to fulfill even more of the requirements because we developed the piece using the ELA standards as a guide.

Looking over the long haul, archaeologists can develop archaeological research designs and investigate sites to produce materials that will help teachers implement CCSS. Instead, of pursuing our own (sometimes esoteric) research interests we can think about the educational use of our work first and design our investigations to address important questions in education. For example, archaeologists might consider:

- Designing data recovery projects under Section 106 of the National Historic Preservation Act (NHPA) that can answer compelling questions for social studies and science content (e.g., food security over time, global warming, cultural relationships between and among groups).
- Designing research projects (e.g., masters' theses and doctoral dissertations) that include an educational component and study the efficacy of archaeology education in meeting Common Core requirements.

Archaeology and the Common Core: All Hands on Deck

- Re-analyzing existing collections with Common Core Standards in mind (e.g., transitions in cultures over time and space, how technology of the past influences technology today, the meaning of the archaeological record in the 21st Century).

Table 2. Common Core State Standards Alignment for *Project Archaeology: Investigating Rock Art*

ELA Standard for 4th Grade	1	2	3	4	5	FPU
RSIT 1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.				•	•	
RSIT 2. Determine the main idea of a text and explain how it is supported by key details; summarize the text.				•	•	
RSIT 3. Explain events procedures, ideas, or concepts in a historical, scientific, or technical text including what happened and why, based specific information in the text.				•		
RSIT 4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a <i>grade 4 topic or subject area</i> .	•	•	•	•	•	•
RSIT 7. Interpret information presented visually, orally, or quantitatively and explain how the information contributes to an understanding of the text in which it appears.				•		
RSIT 8. Explain how an author uses reasons and evidence to support particular points in a text.				•		
RSIT 9. Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.				•		
RSIT 10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.				•	•	
WS 1. Write opinion pieces on topics or texts, supporting a point view with reasons and information.						•
WS 2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.		•	•	•		•
WS 4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.				•		•
WS 5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.				•		
WS 7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.			•	•		
WS 8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.	•	•	•	•	•	•
WS 9. Draw evidence from literary or informational texts to support analysis, reflection, and research. Apply <i>grade 4 Reading standards</i> to informational texts.				•		•
WS 10. Write routinely over extended time frames and shorter time frames for a range of discipline-specific tasks, purposes, and audiences.	•	•	•	•	•	•
SLS 1. Engage effectively in a range of collaborative discussions with diverse partners on grade 4 topics and texts, building on others ideas and expressing their own clearly.	•	•	•	•	•	•

Archaeology and the Common Core: All Hands on Deck

SLS 2. Paraphrase portions of a text read aloud or information presented in diverse media and formats including visually, quantitatively, and orally.	•					
SLS 4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant descriptive details to support main ideas or themes; speak clearly at an understandable pace.			•	•		
SLS 6. Differentiate between contexts that call for formal English and situations where informal discourse is appropriate; use formal English when appropriate to task and situation.						•
LS 4. Determine or clarify the meaning of unknown and multiple meaning words and phrases based on <i>grade 4 reading and content</i> .				•	•	
LS 6. Acquire and use accurately grade appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic.	•	•	•	•	•	•

Abbreviations (CCSS for ELA): RSIT = Reading Standards for Informational Texts; WS = Writing Standards; SLS = Speaking and Listening Standard; LS = Language Standard.

Abbreviations (*Investigating Rock Art*): 1- 5 = Lessons One through Five; FPU = Final Performance of Understanding

Conclusions and a Call to Action

The opportunity is here and the time is now. If we do not respond to this opportunity, we may not have another chance as good as this one for many years or even decades. While the challenges are daunting and we are a small profession, we are already beginning to get the attention of teachers and administrators. For example, *Project Archaeology: Investigating Shelter* has been adopted in four school districts: Bozeman, Montana; Boulder, Colorado; Barrow, Alaska; and Wichita, Kansas. The Project Archaeology network of state and regional programs is expanding both geographically and in its reach to teachers.

The sale of Project Archaeology materials is increasing as our marketing strategies improve and expand. We are demonstrating to teachers why archaeology matters and how they and their students can be a part of the discovery and protection of archaeological knowledge. Meanwhile, archaeology education supports educators’ efforts to teach critical-thinking skills, cultural understanding, and deep understanding of historical and scientific content. Teaching archaeology solves teachers’ problems by helping them integrate subjects, introduce complex informational texts, and powerfully connect students to other cultures. One teacher said, “I think that this curriculum (*Project Archaeology: Investigating Shelter*) will be very powerful because it is rich in content, but also because it teaches and requires students to be critical thinkers. It can easily be integrated into reading and existing writing times and the structure will help us to get kids to the higher order thinking that common core standards require.”

The Common Core is almost “custom made” for archaeology and, concomitantly, archaeology provides an engaging and compelling way for teachers to meet the requirements of the Common Core. Stella Estrada, California Council for the Social Studies Director summed it up in a single sentence, “Project Archaeology is the Common Core.” If we can mobilize our profession to meet this opportunity, we can protect archaeological sites from theft, vandalism, and overuse long into the future. While we are protecting archaeological sites and building a broad public appreciation for them, we will be enhancing and protecting our profession in the bargain.

Archaeology and the Common Core: All Hands on Deck

References Cited:

Clark, Joelle

- 2013 Personal communication. Center for Science Teaching and Learning, Northern Arizona University, Flagstaff.

Letts, Cali A. and Jeanne M. Moe

- 2012 *Project Archaeology: Investigating Shelter*, reprint. Montana State University, Bozeman.

Moe, Jeanne M., Kristie Fink, Carolee Coleman, and Kirsti Krejs

- 2002 "Archaeology, Ethics, and Character: Using Our Cultural Heritage to Teach Citizenship." *The Social Studies* 93(3): 109-112.

National Governors Association Center for Best Practices, Council of Chief State School Officers

- 2010 *Common Core State Standards*. National Governors Association Center for Best Practices, Council of Chief State School Officers, Washington D.C.

- 2013 "About the Standards." www.corestandards.org/about-the-standards, downloaded November 29, 2013.

National Research Council

- 2012 *A Framework for K-12 Science Education: Practices, Cross-cutting Concepts, and Core Ideas*. National Academies Press, Washington, DC.

Swan, Kathy and Susan Griffin

- 2013 "Beating the Odds: The College, Career, and Civic Life (C3) Framework for Social Studies State Standards." *Social Education* 77(6): 317-321.