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Living Archaeology Weekend: building a bridge to the past through technology

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Resumen

Durante más de veinticinco años, el proyecto Living Archaeology Weekend (LAW) ha proporcionado una experiencia educativa activa al alumnado de 5.º curso de educación primaria en un espacio natural al aire libre como es el área de Red River Gorge (Daniel Boone National Forest, Kentucky). Aparte de estar configurada a modo de exposición de arqueología, rodeada de una naturaleza que te sumerge en épocas pasadas, y del impacto que dicha experiencia proporciona, LAW ofrece a los estudiantes una oportunidad única para aprender los modos de vida de las gentes del pasado mediante la experimentación y la observación de sus tecnologías. Este capítulo está dedicado a describir los objetivos educativos del citado proyecto, a señalar los apoyos conceptuales que proporciona y a trazar brevemente las características de su desarrollo. Junto a esto, se analizan los resultados de la evaluación formal realizada. Finalmente, se hace alusión a los principales factores que han contribuido a la larga duración del proyecto y a su éxito, así como sugerencias específicas sobre cómo plantear y desarrollar programas similares al LAW.

What is Living Archaeology Weekend?[1]

Deep in the mountains of eastern Kentucky lies the scenic, historic Red River Gorge. A world-class rock-climbing spot (Ellison, 2016; Jarrard and Snyder, 1997), campers,

[1] The authors are grateful to the Living Archaeology Weekend sponsors, demonstrators, volunteers, educators and students who participate in this unique event. We are especially pleased to acknowledge the administrators and leaders of DBNF, KAS, KYOPA and KHC for their various forms of support for the program over the years. Thanks also go Niki Mills, who helped prepare the map in figure 2; and to Bill Sharp, a long-

Figure 1. Aerial view of the Living Archaeology Weekend venue before the Gladie Visitor's Center was built. The Gladie Cabin and barns (left) and the recreated Indian village houses (right) are visible (1997) (LAW Photographic Archive)

hikers and climbers from all over the world seek the solitude of its narrow, forest-covered ridgetops, natural rock arches and bridges, tall hemlock-filled valleys or «hollers», and winding streams (figure 1).

The Gorge also attracts archaeologists, geologists, ecologists and other scientists, who come to study its cultural and natural resources. Known worldwide as part of an independent center of plant domestication (Gremillion, 1993, 1996, 2004; Gremillion, Windingstad and Sherwood, 2008; Smith, 2006), plant biologists study the Gorge's rare plants and forest fire history (Delcourt, Delcourt, Ison, Sharp and Gremillion, 1998; White and Drozda, 2006). Archaeologists document and investigate the area's many rock art sites, dry rockshelters that preserve otherwise perishable materials and open sites, places where prehistoric Native peoples once lived (Neumeyer, 2003), as well as the region's historic-era archaeological sites, like iron furnaces, tar kilns, house sites and nitre mines (Ison and Hockensmith, 1995; O'Dell and George, 2014; Updike, 1999).

time LAW member and volunteer, who reviewed a draft of this article and checked our facts regarding the event's early years.

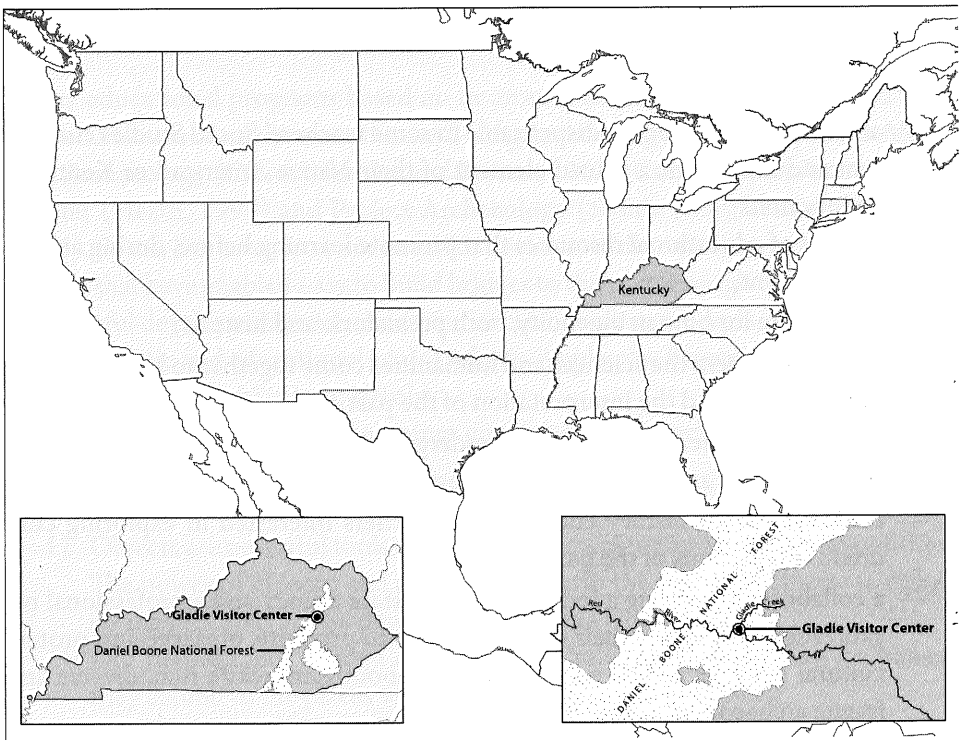

Figure 2. Red River Gorge and the Living Archaeology Weekend event location (map by C.W. Pritchard and E.N. Mills/LAW Steering Committee)

In late September, Living Archaeology Weekend breaks that solitude. The US Forest Service, as it has done for decades, hosts a free, two-day event at the Daniel Boone National Forest's Gladie Historic Site/Gladie Visitor Center along the picturesque banks of Gladie Creek and Red River (Carmean and Faulkner, 2004) (figure 2). Living Archaeology Weekend (<www.livingarchaeologyweekend.org>) is Kentucky's longest continuously running archaeology education event and the cornerstone of Kentucky Archaeology Month. It is one of the few archaeology education programs of its magnitude in the Commonwealth and in the region. The event offers school children and a national general audience a variety of educational activities in Native American and pioneer lifeways, archaeological interpretation and site preservation.[2]

[2] Living Archaeology Weekend is a two-day event. This article discusses only the first day, when school children are the exclusive participants. The Saturday program is open to the general public. The long history of the event, coupled with the incredible popularity of the Red River Gorge, ensures that between one thousand and one thousand five hundred general public visitors, from toddlers to grandparents, attend the event. Many are from Kentucky and surrounding states, though states across the country often are represented. Some visitors are destination tourists who come to the Gorge specifically for this event. Others are incidental or

But Living Archaeology Weekend is so much more than the September event. It is a comprehensive program that is:

- an outdoor classroom, indispensable to some teachers' Social Studies curriculum and for others, a valued element of their Native American or Kentucky history units;
- a series of educational resources that promote learning before, during and after the event;
- a showcase for human ingenuity, both prehistoric and historic;
- a program where the sciences and humanities come together to benefit education, research and the interpretation of the past;
- an experiential learning venue for undergraduate and graduate students interested in public archaeology/archaeology education;
- a laboratory for history education researchers interested in exploring children's conceptions of the past;
- a collaboration among a federal agency, a state agency and a professional organization that meets their responsibilities to promote, preserve and protect cultural heritage and to educate citizens about Kentucky's rich, diverse and fragile archaeological and historic sites;
- an award-winning archaeology education event planned and organized by a handful of dedicated professionals, realized by talented artists and technology demonstrators devoted to sharing their knowledge about the resourcefulness of past peoples and supported by a host of volunteers and sponsors who generously give their time and money to ensure the event's success.

This chapter describes this unique program's educational goals and conceptual underpinnings, briefly outlines its development, and identifies its component parts, paying particular attention to how LAW compares with archaeology fairs. It discusses the September event's educational effectiveness, based on the results of a formal assessment, and also considers the major factors that have contributed to LAW's longevity and success. It closes by offering specific suggestions about how to develop a program of this type and what to consider when planning and carrying out an event like Living Archaeology Weekend, with the aim of encouraging others to develop similar programs.

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opportunistic visitors who were in the vicinity for another purpose (e.g., camping, hiking, climbing, fishing) but who chose to attend while visiting the Gorge.

Conceptual underpinnings, objective and goals

Many educational programs based on or around archaeology were founded in the United States around the same time as Living Archaeology Weekend, such as Alexandria Archaeology (Cressey, Reeder and Bryson, 2003), Crow Canyon Archaeological Center (Heath, 1997) and Project Archaeology (Smith, Moe, Letts and Paterson, 1996). Some, like LAW, have survived for decades, while others have not. Important factors that have enabled LAW to build bridges to the past through technology are the thoughtful development and refinement of clear guiding concepts, and the program's programmatic and educational goals (Adams, Applegate, Brown, Henderson, Laracuente, Pritchard and Schlarb, 2016b).

Four core conceptual underpinnings guide the Living Archaeology Weekend program.

1) Objects are powerful tools that hold deep meaning and historical significance. The power of objects, and more importantly, the power of objects *in context,* establishes links across time to past peoples (Hodder, 2012).
2) Our heritage, our history, our identity is held in objects and in the patterns they exhibit in the places where people made and used them.
3) By studying the technology and artistry of objects, we can better understand and teach about past peoples' knowledge and the foundations of their creativity, problem solving and daily lives at a heritage place, such as an archaeological site.
4) Because of the profound importance of objects to our heritage, the places they are found or to which they are linked must be preserved and protected. These places are important to understanding our history and understanding who we are as a people.

The Living Archaeology Weekend program encourages participants to uncover and discover the significance of objects, and through them, realize the connections they have to people long ago and to reflect on the similarities all human beings share (figure 3). The Living Archaeology Weekend event creates a place where it is not hard to imagine Native American and frontier families going about their daily lives. To students, these long-ago lives may seem very different from their own. But guided by knowledgeable practitioners, students have a chance to explore long-ago technologies and to see and make connections between those past lives and their own. They can step into the shoes of past peoples, step back in time, albeit imperfectly and briefly. In that moment, they are the same people, applying their own human ingenuity to a common challenge: to make a life for themselves and their families.

The objective of LAW is to provide school children with diverse, high-quality, multisensory educational opportunities in three areas: objects/artifacts associated with past technologies and other lifeways, archaeological interpretation and archaeological site preservation. This objective is met through educational resources and hands-on activities, and in partnership with educators and event demonstrators.

Living Archaeology Weekend has three program goals. LAW will

1) promote an appreciation for cultural diversity and cultural accomplishments focusing on Kentucky's rich Native American heritage spanning eleven thousand five hundred years and continuing to the present, as well as the lifeways of Kentucky's frontier period settlers;[3]
2) inform students about the past as it is known through archaeology, including but not limited to Kentucky archaeological site types, culture history and reconstruction of traditional Native American and pioneer lifeways;[4] and
3) foster respect for cultural resources and promote stewardship of the archaeological record.[5]

LAW's objective and its programmatic goals are operationalized through three educational goals. After attending the Living Archaeology Weekend event, students will understand that

1) Native peoples who lived in the Red River Gorge had needs similar to ours: food, clothing and shelter, as well as families, government, trade, art and beliefs;
2) frontier period settlers used new but parallel technologies to address similar needs, as they developed farms, industries and communities in the Red River Gorge; and

[3] In Kentucky, there is a pervasive and unfortunate misconception that Indians never lived in Kentucky and only came here to hunt. This simply is not correct. Activities associated with the LAW event demonstrate the truly rich Native heritage of Kentucky, which spans eleven thousand five hundred years and continues to the present. Frontier period pioneers settled in Kentucky beginning in the 1700s. In eastern Kentucky, longhunters involved in the fur trade were among the earliest settlers, followed by homesteaders who farmed the land. Later, mining and ironworking became important industries.

[4] LAW demonstrations and educational materials describe the variety of prehistoric and historic archaeological sites in Kentucky, such as rock art petroglyphs, rockshelters, iron furnaces and mills. Activities at LAW highlight the depth of human history in Kentucky and cultural developments, including how archaeologists study culture history.

[5] Looting and rock art defacement in the Red River Gorge re-inforce the need for site protection, and provide attendees with actionable alternatives for site preservation. The Gladie Cabin and the Red River Gorge Archaeological District illustrate the importance of preservation programs like the National Register of Historic Places (Neumeyer, 2003).

3) we all have a responsibility to preserve the places in the Red River Gorge where these past people left behind the traces of their ways of life.

The early history of Living Archaeology Weekend

A description of the historical development of LAW illustrates the program's educational mission. It also demonstrates the manner in which an archaeology education program can evolve and expand over time.

LIVING ARCHAEOLOGY IN A ROCKSHELTER (1989-1994)

LAW began in 1989 at a time in American archaeology when many archaeologists were developing education programs and events, spurred by their concern about looting and the hope that educating the public about America's fragile archaeological heritage might be one way to combat it (Friedman, 2000: 13; Little, 2002: 10). By educating teachers who would, in turn, instruct their students, the «multiplier effect» (Selig, 1991) would ensure that future community leaders and private citizens would value archaeological sites and work to preserve them. The underlying assumption was that education equaled site preservation.

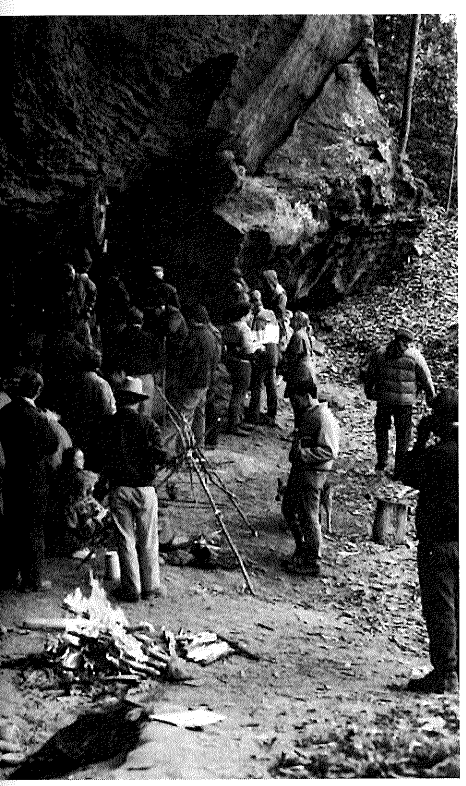


Figure 3. The very first LAW venue was a small unnamed rockshelter (1992) (LAW Photographic Archive)

From the very beginning, «Bringing the Past to Life», as the LAW event was initially called, was committed to educating the public and school children about the lifeways of prehistoric peoples and about the need for stewardship and preservation of archaeological sites. It was held during these early years in a rockshelter (figure 3), because rockshelters in the Red River Gorge have always been the main targets of looters. An estimated average of two hundred eighty people —adults, children, and families— walked to the event along a one-quarter mile trail. Between five

and eleven presenters demonstrated Native American technologies, including Native foods, cooking, pottery making and flint-knapping, and gave slide presentations about site protection and other archaeology topics. Event organizers considered the event's primary focus on lifeways reconstruction —and on ancient indigenous technology, in particular— its biggest strength (Carmean and Faulkner, 2004; Sharp, 2014).

Throughout its long history, LAW has been a cooperative undertaking. For its first three years, the local Red River Historical Society organized the event on the Daniel Boone National Forest (DBNF) in the Red River Gorge (Sharp, 2014). In 1991, the DBNF assumed primary responsibility for the event, in collaboration with the Red River Historical Society and the Kentucky Heritage Council (the State Historic Preservation Office). In 1993, organizers renamed it «Living Archaeology Weekend» (Carmean and Faulkner, 2004; Sharp, 2014).

Living Archaeology Weekend (1995-2006)

In 1995, safety concerns motivated organizers to move the event three miles northeast to the Gladie Historic Site on the banks of Red River (figure 1). This had the effects of improving event accessibility, increasing event attendance and providing on-site facilities for both visitors and demonstrators. Now school students and their teachers could visit. With these changes and improved advertising, visitation increased tenfold to an estimated average of two thousand six hundred people annually (Carmean and Faulkner, 2004).

With special grant funding, event organizers recast the LAW venue as a «recreated» Indian village, constructing houses and other village architecture using authentic materials and building methods. Between fifteen and eighteen individuals provided demonstrations of Native American technologies, retaining some of the initial ones and adding some new ones. Demonstrators included professional artisans and living history demonstrators with a deep interest in authentically reproducing ancient technologies, whose careers consisted of demonstrating and performing at living history events. Most at that time were members of the Society of Primitive Technology (<www.primitive.org>). Other demonstrators were experienced amateurs with the same interests. In certain years, grant funding supported Native American demonstrators, like storytellers. Over the course of these twelve years, the event became less ad hoc/more structured and more «professionalized». DBNF personnel remained the main event organizers (Carmean and Faulkner, 2004).

Initially, school children of all ages attended the event in its new location. An on-site excavation demonstration at the Gladie Historic Site was held for a few years, too. But organizers soon learned that too many students negatively impacted all par-

ticipants' learning and enjoyment. Starting in 2004, they narrowed LAW's targeted Friday audience to fourth-fifth grade students because its content connected best with the public school curriculum in those grades. Organizers discontinued the on-site excavation after they determined that it was not educationally effective. They discovered that an educationally successful excavation with school children required extensive student preparation beforehand, and without it, gave students the wrong message, as it focused on a single archaeological field method —digging (Carmean and Faulkner, 2004).

Also in the summer of 2004, the Gladie Cultural and Environmental Learning Center (now the Gladie Visitor Center) opened at the Gladie Historic Site. Event organizers saw this as an opportunity for Living Archaeology Weekend, given its goals, to dovetail with those of the new Center. They laid out a roadmap for growing the event in the years ahead, emphasizing the need to (1) garner greater Native American involvement in the event, (2) improve the link to archaeological inquiry and to site protection and the event's anti-looting message, (3) assess the event's educational effectiveness and improve its integration with school curricula and (4) obtain external grants to sustain the event as it expanded in the coming years, in terms of not only the number of demonstrators and visitors but also in its scope (Carmean and Faulkner, 2004). The current Living Archaeology Weekend Steering Committee (see below) has embraced these suggestions in its work.

Through 2006, with modest support from the Kentucky Heritage Council and other organizations, the DBNF funded, organized and hosted the Living Archaeology Weekend event. But the event faced the loss of its direct federal funding and was threatened with discontinuation in 2007 (Adams, Applegate, Brown, Henderson, Laracuente, Pritchard and Schlarb, 2016a). Event costs were rising as the DBNF budgets were shrinking.

Members of Kentucky's professional archaeological community responded, and three organizations joined together to save LAW: the DBNF, the Kentucky Archaeological Survey (KAS), which is jointly administered by the Kentucky Heritage Council and the University of Kentucky's Department of Anthropology, and the Kentucky Organization of Professional Archaeologists (KYOPA), a not-for-profit professional organization. These organizations signed a Memorandum of Agreement and ever since, have worked collaboratively to plan and organize the Living Archaeology Weekend event. DBNF hosts the event, KAS leads the development of educational materials and KYOPA is responsible for raising funds. Since 2007, the LAW Steering Committee, made up of representatives from these three organizations, has planned the event. It is the responsibility of the Steering Committee to provide the venue, the resources and the opportunity for Kentucky's students and citizens to uncover, discover and rediscover their fascination with the past through archaeology at LAW.

Living Archaeology Weekend today (2007-present)

Over the last decade, the LAW Steering Committee has transformed Living Archaeology Weekend into a comprehensive program consisting of the event itself and related initiatives. A combination of elements contributes to the uniqueness of both the LAW program (its mission, organizational structure, planning approach, educational materials and collaborations with educators, and year-round presence through follow-up activities and virtual platforms) and the LAW event (its venue setting, structure and physical layout, and personnel).

Even its name reflects its uncommon educational and interpretive context and its emphasis on what has been learned about the lives of past people through the study of the archaeological record. «Living Archaeology Weekend» reverses the standard way of thinking about the relationship between artifacts and sites and the cultures that produced them. From this perspective, *any* culture and its material remains can be considered «living archaeology». Thus, the «archaeology» at the LAW event is «living», because visitors see objects/artifacts made and used in context. It breathes life into the objects/artifacts and indirectly, into the lives of past peoples who once made and used these objects.

Ironically, artifacts recovered from archaeological sites, though present at the event, are not its focus. Instead, past technologies are presented, primarily through replicas and reproductions made and exhibited by the demonstrators. Interpretive theories and archaeological methods such as excavation are not emphasized. Students likely do not know that, as they walk across the venue grounds, they are walking across a prehistoric archaeological site spanning eight thousand years and a late 1800s-1950s historic archaeological site. Importantly, LAW has been successful in meeting its goals of archaeology education without the overt aspects of archaeology typically associated with archaeology fairs (see Thomas and Langlitz, 2016, and a following section). The manner in which this is accomplished is illustrated by the following descriptions of the event and the program.

The LAW event

Months of work, planning, meetings and development of educational materials culminates each year at the Living Archaeology Weekend event. Demonstrators arrive the day before with their items for display and hands-on activities. Many of the volunteers arrive then, too, some of whom camp on-site. Everyone hopes for perfect fall weather, and anticipation hangs in the air, anticipation not too much different from that of the young visitors and teachers who will board busses in the morning to make the trip to the venue.

Living Archaeology Weekend's human resources: a chorus of diverse voices

The original LAW event focused exclusively on the technologies and lifeways of Native peoples who lived in the Red River Gorge area, especially during the prehistoric era. Although the reconstructed village is gone, a casualty of vandalism and natural decay, the demonstration of prehistoric technologies remains a major focus. Many of the original prehistoric technologies continue to be demonstrated, but in an attempt to keep the event fresh, since 2006, new prehistoric technologies have been added (see demonstration description in the following section).

But most of the LAW demonstrators were not Native Americans, and contemporary Native voices were limited. Thus, after 2008, the LAW Steering Committee reached out to federally recognized Indian tribes with whom the US Forest Service consults regularly. Over the years, the Absentee Shawnee Tribe of Oklahoma, the United Keetoowah Band of Cherokee Indians, and the Cherokee Nation have responded by providing educational content and cultural heritage demonstrators at the event. Not only does the participation of Native demonstrators bring the Native story into the present, their contributions to the LAW program are essential to dispelling common public misperceptions and stereotypes about Native culture and heritage today. Students and other visitors have the unique opportunity to engage directly with Native peoples through LAW, and with their own Native ancestry in some cases.

The stories of Euro-Americans, African Americans and other frontier period pioneers of the Red River Gorge area also were not included before 2007. Now demonstrations focused on pioneer technologies are part of the LAW program. The emphasis is on technologies and lifeways that parallel those demonstrated for Native peoples, in support of the LAW goal of illuminating the similar needs of different cultures.

The event's talented demonstrators and its many volunteers are the heart of the Living Archaeology Weekend event. They lend their skills and talents to promote understanding of and appreciation for the technologies and lifeways of Kentucky's Native and pioneer peoples.

Today's LAW demonstrators include archaeologists, primitive technology specialists, artists and tribal members and leaders – who include adults and youths. Many have participated in Living Archaeology Weekend since the first event was held in a rockshelter in 1989. Demonstrators replicate the traditional technologies of Kentucky's Native peoples, or those of the Eastern Woodlands or Ohio Valley, and those of the Kentucky frontier. They provide contextual relevance to the technologies featured, sharing their skills with a deep commitment to and enthusiasm for the technologies they demonstrate. Individuals spend months prior to the event preparing their materials and making items for display. Demonstrators carefully develop their

presentations, drawing upon regional archaeology, archives, artifact collections, oral history, history, conservation, educational programs, exhibitions, museums, performance, publications and their own research.

But it takes more than technical expertise and artistry and authenticity to be an effective demonstrator. A demonstrator must be able to connect with people and especially elementary school children. Thus, Living Archaeology Weekend demonstrators are interpreters *and* educators.

To ensure that the event runs smoothly, long-term, prior planning is critical. But *at* the event, volunteers are essential. They assist demonstrators, freeing them up to engage with visitors. They manage the flow of visitors through the demonstrations, watch booths during demonstrator breaks, almost exclusively deliver certain demonstrations, like the pump drill and the Native plant cultigens demonstrations, and run errands. Volunteers also provide essential assistance with logistics, helping set up and tear down the venue. Over the years, LAW's force of dedicated volunteer has grown. Volunteers include professional archaeologists, tribal members, members of civic and avocational groups, state and federal agency employees, and university undergraduate and graduate students.

The Living Archaeology Weekend experience for students and teachers: promoting a journey back in time

To get to Living Archaeology Weekend, students and their teachers travel deep into the Daniel Boone National Forest along a winding two-lane road that follows the narrow Red River valley. Surrounded by tree-covered ridges and rock outcrops, they leave the 21st century behind. Modern conveniences are present at the Gladie Visitor Center, but nestled as it is in a wooded valley, the Center, too, seems isolated, secluded and removed from the world at large. Without the distractions of an urban landscape, cell phones, traffic sounds and the trappings of contemporary life, the stage is set for a vivid and compelling outdoor learning experience.

During their visit, students and teachers can quite literally walk «back through time», moving from the more familiar to the less familiar, making comparisons to their existing and to their new points of reference. The historic Gladie log cabin anchors the frontier/pioneer technology section of the event. Demonstrations are arranged adjacent to the cabin. A shallow ravine spanned by a short footbridge leads to the prehistoric/Native American technology section, where demonstrations are arranged in a strip of woods lining the north bank of Red River.

The Friday program is reserved for fifth graders, since the program content complements Kentucky's Native American curriculum covered in the Fall term. School

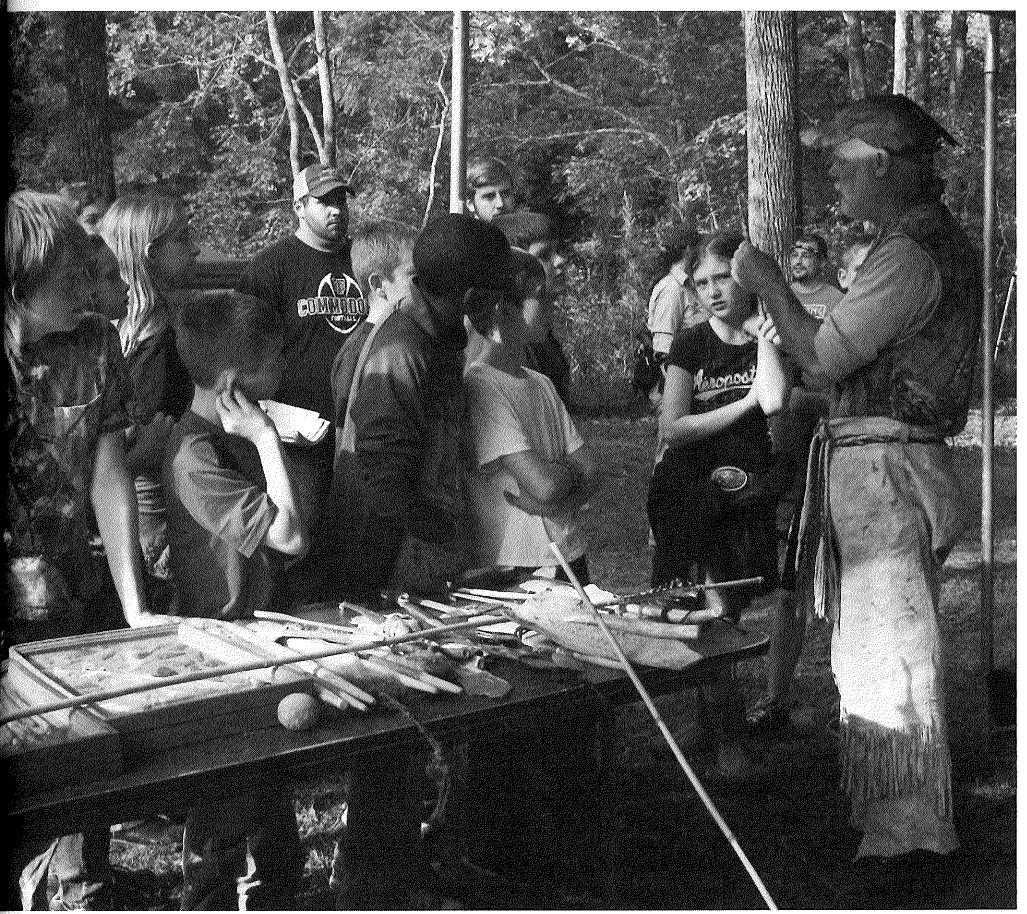


Figure 4. Demonstrator Johnny Faulkner describes how Native flint-knappers made stone tools (2013) (photo by D. Applegate/LAW Steering Committee)

visits from 9 AM to 4 PM are pre-scheduled for staggered arrivals. All schools attend the event for at least two hours, but many stay much longer. The majority of children who visit LAW attend public schools, but parochial and home school students also attend. Since few opportunities for educational field trips are available for schools in the region surrounding the Red River Gorge, those located in counties in the immediate vicinity are given scheduling preference.

Over the past five years (2012-2016), the number of students attending LAW ranged from eight hundred to one thousand two hundred seventy-five (averaging one thousand and thirty students per year), not counting the teachers, aides and chaperones. This represents a total of twenty-eight public schools and twenty-two private schools (seventeen home school groups, three Christian academies and two Montessori schools). An average of twenty-one schools (thirty-nine classrooms) attended each year.

Figure 5. DBNF archaeologist Randy Boedy shows a student how to hold an atlatl to shoot a spear (2013) (photo by E.J. Schlarb/LAW Steering Committee)

Among the prehistoric technologies students can watch are flint-knapping, pottery making, cooking outdoors over an open fire and on a hot flat rock, bone tool manufacture and the manufacture of blow darts and blowguns (figure 4). They learn about textiles and cane baskets, fishing technology, musical instruments and Native medicinal plants. At other demonstrations, students experience technologies like making cattail mats, using pump drills, shooting a spear with an atlatl (figure 5), planting and grinding seeds, chopping wood with stone axes and scraping deer hides. Native demonstrators present their histories, languages, music, dances, clothing and games. Among the pioneer technologies students can observe are blacksmithing, shingle making and cooking outdoors in a cast iron kettle. They participate in quilting, spinning, weaving and shucking corn kernels from the cob.

Demonstrators emphasize environmental factors as they illustrate and discuss the tools, prior inventions, skills and processes related to their technologies. The blowgun

Figure 6. A popular hands-on activity: using a pump drill to drill through shell (2013) (photo by D. Applegate/LAW Steering Committee)

demonstrator, for instance, lays out the series of technologies that make the blow dart possible, beginning with the natural resources available in the woods surrounding his display. He demonstrates the skills it takes to make the blow dart, and then provides dramatic evidence of the skill required to use it —he shoots a dart over students' heads into a nearby tree! Most exhibitors also describe the problems that their technologies address: like curing illnesses, carrying water, keeping people and their material goods dry and providing food (Levstik, Henderson and Lee, 2014).

When hundreds of fifth graders are scattered across the slopes below the Gladie Visitor Center (see YouTube videos link on LAW website), the event grounds can look like organized mayhem. Experienced educators, however, will recognize a very dynamic learning environment. In groups of from ten to twenty, students cluster around each demonstrator, listening as one describes medicinal plant use and another demonstrates pioneer firearms. They wait their turn to twist cordage or to grind corn kernels with an old-fashioned hand crank. Teachers and parent chaperones and demonstrators are asking questions, engaging students in reflection and discussion.

Some demonstrations are purposely set up so that students can make event mementos to take home. For example, at the pump drill demonstration, using stone-tipped pump drills, students can try their hand at drilling a hole in a mussel shell (figure 6), which, should they choose to, can be worn by suspending it from a string. At the Native plant domestication station, after using a shell or elk scapula hoe to create a furrow or using a ground stone *mano* and *metate* to grind sunflower seeds, they can select a Seeds Changing History seed packet to take home (see packet description below).

Students are not the only ones who take home LAW souvenirs. Each teacher receives a packet at the event. It contains a list of newly-developed educational materials available on the LAW web site, instructions about the essay contest, and that year's small tokens of appreciation, like a LAW magnet or a bookmark.

The LAW program

Today's Living Archaeology Weekend program extends learning beyond the two-day event to illustrate the parity between ancient and more modern technologies and the technological links that extend from modern times back through the frontier era and into the ancient past. Through the LAW program, local students learn more about their ancestors' struggles, adaptations and contributions to contemporary society, and gain a sense of pride in their much-maligned Appalachian heritage.[6]

Planning and funding

Delivery of a comprehensive educational program like LAW requires that Steering Committee members meet at least once monthly in the eight months preceding the event, taking great care and concern when making all decisions about the program and considering any foreseeable positive and negative repercussions. They select a special project for the upcoming year, guided by the program's goals and mission, and develop supporting educational materials, often in response to suggestions from the

[6] Appalachian mountain people are not a race or ethnicity like African Americans or Native Americans, but they are still marginalized and degraded just as much. The stereotypes are of a population that is very poor, uneducated, backwards, lazy, clannish, incestuous, unsanitary and unlawful. In reality, they live in a very rural, economically depressed region far from access to employment opportunities or quality health care. They are a proud, independent, ingenious, complex population with their own unique culture, known for their crafts and artistic skills and their generosity and friendliness to one another («Stereotypes of Appalachia», 2016). To read more about Appalachian mountain people, see Billings, Norman and Ledford (2013), MacGillis (2016) and Rehder (2004).

previous year's teacher evaluations. The Committee reviews the roster of demonstrators for that year, and closer to the event date, attends to logistical details. It develops the annual t-shirt and souvenirs, and it considers sets policy regarding issues as varied as vetting new demonstrators, deciding whether and when to allow sale of items at the event, determining the appropriateness (or not) of wearing period costumes and considering available grants.

Over the course of the last decade, the DBNF has made formal commitments to provide recurring funding for the event on a long-term basis. This means that, for a period of four or five years, the Steering Committee can depend on a source of partial funding. Currently, Living Archaeology Weekend receives cash and in-kind contributions from a wide range of sponsors, including archaeology consulting firms, state and federal agencies, federally recognized Native American tribes, preservation organizations, professional and civic organizations, universities, businesses and individuals.

Developing educational material

In 2008, the Steering Committee received a grant from the Southeastern Archaeological Conference to begin developing educational resources for the LAW program. Since then, the Committee has created original lessons and other illustrated content directed at the technologies demonstrated at the event, site stewardship issues and archaeological concepts. These materials, refreshed with new topics each year, add to the expanding resource base for educators. A selection of these materials featuring new items is organized each year into packets for teachers who attend the LAW event. Today, the program's website (<www.livingarchaeologyweekend.org>) makes these resources easily accessible (see appendices 1 and 2).

One especially noteworthy set of educational materials is the Seeds Changing History project, which highlights ancient Native peoples' farming practices and the Red River Gorge archaeological record's critical role in establishing eastern North America as an independent center of plant domestication (see LAW website). Content essays for teachers provide information about the plants, many of which were domesticated by Native peoples in the Gorge. Seed packets for students consist of a card depicting a featured cultivar, like sunflower or goosefoot. The card explains the plant's history, nutritional value and planting instructions. A small plastic bag is attached to the card containing several seeds for planting later.

Creating a digital presence

The development and launch of the Living Archaeology Weekend website in 2011 significantly extended the program's reach beyond the event itself. Here educators find content and educational materials; visitors access maps and learn more about the demonstrators; volunteers download guidelines; and sponsors access financial statements. Images and up-to-the-minute event announcements are distributed. Creating a social media presence on Twitter and Facebook has enhanced publicity about the event, and spurred a recent study by the Steering Committee focused on identifying effective publicity approaches.

Evaluating and assessing the event and the program

LAW's continued success hinges on regularly evaluating and assessing the event, the demonstrators and the program's educational efficacy, then making appropriate adjustments. This assessment is conducted both internally and externally. Internally, the Steering Committee has developed evaluation protocols for demonstrators. Old and new demonstrators alike have been evaluated for their knowledge of the technologies they demonstrate, their abilities to educate people about the technology and how it relates to the past peoples of Kentucky, and their skills in communicating effectively with the public and especially school children. This has resulted in the retention of most new demonstrators and has meant that some long-term demonstrators no longer participate in the event.

Seeking external feedback, the Committee queries teachers each year not long after the event for their opinions about logistics, educational outcomes and program resources. Before the availability of online survey tools and the creation of the LAW web site, it was a one-page paper evaluation. Today, teacher evaluations are a ten-question online survey through Survey Monkey.[7]

Program elements added based on teacher feedback include the on-site scavenger hunt, the after-event essay contest and the (now defunct) one-day teacher workshop.

[7] The Survey Monkey questions posed to teachers after their students visited Living Archaeology Weekend in 2016 were the following: (1) Did you visit the LAW website before coming to the event?; (2) Did you use the «Before you go» materials?; (3) Did demonstrators relayed information in a fun and understandable way?; (4) Can your students draw parallels between the lives of people who once lived in the Red River Gorge and themselves? If yes, please provide an example. If no, why not?; (5) Are you interested in using archaeology to help teach other topics? If so, what topics and what types of activities would you use?; (6) Are there hurdles to overcome to bring your students to LAW? If so, what are they?; (7) What do you think were the best aspects of the event?; (8) What follow-up information could you use after the event?; (9) Is LAW best described as a field trip, an outdoor classroom, or as entertainment? (10) Additional comments.

Teacher comments have contributed significantly to improved event logistics. These include strict school group scheduling, staggered arrivals, capping attendance, carefully limiting access/controlling both student and school numbers in order to manage visitor flow, targeting a single grade and developing instructions that lay out attendance expectations of teachers (such as attending the event with a 10:1 student/adult ratio) and students. The Committee has given up trying to control the weather (!), but it has prepared a clear contingency plan in case of inclement weather.

The significant role the event plays in some public school teachers' curriculum can be documented indirectly by the history of their schools' event attendance. For example, in 2016, of the twenty-two schools that attended LAW, thirteen schools (59 %) also participated for the last two to three years. Of those, nine (41 %) had attended the event for the last five years, and four (18 %) had attended for nine or ten years (the decade spanning the Steering Committee's responsibility for holding the event and for which detailed data are available).

Feedback from teachers and observations of students engaging with demonstrators at the event made it clear that learning was taking place (and that students were having fun in the process!). However, over the years, the Committee has observed that some instructors «only» bring their students to Living Archaeology Weekend as a field trip and provide them little or no scaffolding for their experience. In contrast, the outdoor learning experience was richer for students whose teachers integrated Living Archaeology Weekend into the curriculum, prepared them beforehand and arrived at the event with assignments/tasks for them. Thus the purpose of LAW's curricular content, lessons and activities is realized: to provide teachers the materials they need before their visit and during their visit, and so they can extend learning after the event.

Eventually, the Committee needed to know how well LAW was meeting its educational goals in a more formal way. So, in 2011, researchers conducted an assessment (Levstik, Henderson and Lee, 2014), building on a larger study designed to assess the impact of hands-on learning experiences on early adolescents' archaeological and historical thinking (Henderson and Levstik, 2016; Levstik, Henderson and Schlarb, 2005). One of only a few assessments of archaeology education programs in the US (but see Ellick, 1997; Clark, 2009; Henderson and Levstik, 2016; Moe, 2011, 2016), this research can serve as a model for other public outreach assessments. Because its approach and findings are profoundly informative, the following section summarizes the assessment's findings and makes the case for educators to include in their instruction participation in events like LAW.

LAW's educational value: what are the students learning?

Archaeology educators know that children respond enthusiastically to the study of the past through the lens of archaeology. Previous research (Davis, 2005; Henderson and Levstik, 2016; Levstik, Henderson and Schlarb, 2005) has shown that students love the mystery surrounding the discovery of objects/artifacts. It has emphasized archaeology's power to motivate student interest (Bage, 2000; Wearing, 2011; Williams, 2000) and student inquiry (Brody, Clark, Moe and Alegria, 2014; Moe, 2011). But research also has shown that students do not know how to interpret objects accurately, or how to interpret them in context. They have difficulties making the link between humans and objects (Henderson and Levstik, 2016). This compromises their ability to imagine ancient lives as fully as they might. The LAW assessment identified this is as an instructional, not a developmental, issue (Levstik, Henderson and Lee, 2014).

The Fall 2011 assessment studied fifth-grade students' learning as it related to only the prehistoric Native American technologies demonstrated at LAW. These students' understanding of the link between humans and material objects developed in response to three important experiences. First, after classroom instruction in cultural content, in this case, a unit on Native Americans, they encountered material objects in a setting (the Gladie Historic Site where LAW is held) that allowed them to see the proximity of natural resources to past peoples' living and working areas.

Next, literally in front of their eyes, LAW demonstrators transformed raw materials into tools, using mainly replicated objects they had made, as well as examples from archaeological sites. Demonstrators presented material objects as expressions of evolving rather than static cultures. As a result, students could more easily observe the sequence of actions and decisions that led to a particular tool and tool use.

In addition to seeing the tools made, students themselves could *use* the tools. It is one thing to read about grinding grain with a *mano* and *metate,* for instance, but quite a different thing to feel the physical strain of producing anything even vaguely resembling ground sunflower meal, much less grinding enough to actually feed anyone. Because of the physicality of the students' experience at LAW, they could appreciate the skill and dexterity the demonstrators exhibited and, by extension, the people for whom these technologies were the stuff of daily living.

Third, teacher-directed student reflection back in the classroom provided crucial opportunities for students to clarify, organize and reinforce their developing ideas. This reflection took an «experimental archaeology» approach (Hurcombe, 2008; Outram, 2008). It asked students to trace the steps in a tool's production and everything needed to make it: to trace its *chaîne opératoire* (literally the «operational chain». Used in this context, the term refers to the steps in the technical manufacture

and use of ancient tools and technologies, including the sequence of mental operations and the social relationships surrounding their production and use [Edmonds, 1990; Schlanger, 1994; Shott, 2003]).

This relatively simple but powerful instructional intervention, which models one way in which experimental archaeologists and the LAW demonstrators themselves understand ancient technologies, helped students make better sense of prehistoric peoples and their connections to the present. This directed reflection provided the tipping point for the students in making the link between people and objects in meaningful and complex ways.

The LAW assessment showed how the combination of classroom instruction in cultural content, contextualized experiences with ancient technologies (the Living Archaeology Weekend event itself) and focused reflection on those technologies (the *chaîne opératoire* and related activities) brought the past into immediate focus for students and directed their attention toward connecting human intelligence to ingenuity. They could make the link between humans and objects.

Object-based investigations deepen students' understanding of groups and cultures, especially for those who did not leave a written record, and help students better understand the full scope of the human experience. But this requires instruction in interpreting objects as the evidence they are. Teachers using objects during instruction should encourage students to touch *and use* objects: drill a hole using a pump drill or try grinding corn. These experiences reinforce the concept of the physical challenges prehistoric people experienced in their daily tasks. If visiting an event like LAW is not possible, show students online videos depicting the manufacture and use of the objects. Then, teachers should take one more step: ask students to think about/to reflect on the steps, all the steps, involved in the manufacture of the prehistoric tools. In other words, do a *chaîne opératoire* (see Levstik, 2014). Purposefully employing the concept of *chaîne opératoire* as a prompted reflection can help dispel one of the most fundamental myths and misconceptions students have about Native Americans and other past peoples: that simple technology equals simple-minded people.

What Living Archaeology Weekend is not

On the face of it, LAW may appear very similar to an archaeology fair or public archaeology day held at a museum or park. To develop a program and event similar to LAW, it is important to understand exactly how it is similar and how it is very different (see Thomas and Langlitz, 2016: 466, who provide helpful insights on fair development).

Similarities

The Living Archaeology Weekend event shares some of the same logistical and planning challenges as archaeology fairs and public archaeology days (Thomas and Langlitz, 2016: 466-470). Planning takes place through partnerships. Institutional support comes in the form of in-kind donations of venue space, staff time and volunteers. The elements (booths, diverse hands-on experiential activities, demonstrators replicating ancient technologies) and the logistics of handling large numbers of visitors also are the same.

Some goals are similar, too: outreach to people, hands-on experiential learning, and interactivity and engagement with individuals during the event. Teaching and learning is informal, and visitors gain access to reliable and responsible information that dispels myths and stereotypes and teaches about preservation and conservation issues.

Like LAW, these events are committed to presenting the human experience as exemplified through materials and documentary evidence. LAW's materials link, however, is presented less as objects/artifacts from archaeological sites, and more as technology examples and as objects of daily life.

Differences

Archaeology fairs promote the discipline of archaeology. Archaeology techniques are illustrated, and visitors learn about archaeological techniques, the process of archaeology, how to be an archaeologist or the issues and concerns archaeologists face (Thomas and Langlitz, 2016). At archaeology fairs, visitors often experience a mish-mash of cultures and time periods. Thus, fairs are «archaeology *smorgasbords*» or «archaeology *tapas*». They offer visitors tantalizing little tastes of a variety of archaeology-linked tidbits.

The LAW program is different. Living Archaeology Weekend showcases the ancient and pioneer technologies of a specific region and the *content* generated by archaeological research, not the process. It uses archaeology's focus on technology to explore Kentucky's past peoples and cultures, and to promote cultural understanding and stewardship. A diversity of select technologies is demonstrated, linked to one theme, with an intentionality of parity between the prehistoric/Native and frontier/pioneer sides of the event. Living Archaeology Weekend is a six-course meal rich with regional flavor.

Other aspects set LAW apart from archaeology fairs. Its demonstrators are not archaeologists doing archaeology. LAW demonstrators are artists and technology rep-

licators. An archaeologist may be a LAW demonstrator, but he or she is not present at the event in the role of archaeologist. The Living Archaeology Weekend program is an entity unto itself with an overarching purpose and vision and a focused theme. Unlike an archaeology fair, it is not an umbrella venue for various groups with their own agendas and goals, vision and purpose.

Many fairs do not conduct evaluations or assessments (Thomas and Langlitz, 2016). LAW seeks evaluation from participating teachers, and the Steering Committee has conducted an assessment of its educational programming (described previously). Thomas and Langlitz (2016: 477) consider archaeology fairs and public archaeology events good for raising general awareness, but they are not structured to be in-depth teaching and learning opportunities. LAW, on the other hand, has as its goal engaged understanding (Marks, 2000; Newmann, 1992) about and appreciation for the intelligence and ingenuity of past peoples.

The secrets of LAW's success

As the assessment of student learning at LAW revealed, the program *is* successful in achieving its educational goals. Though luck and coincidences certainly played a role, there are several purposeful factors that have contributed to LAW's longevity and success.

First and foremost, LAW has an important *message* to convey to the audience, an extremely popular *vehicle* to deliver the message and a great *story* to conceptualize the message. The message focuses on stewardship, or the long-term conservation of cultural resources through protection (defending something valuable from harm), and preservation (saving something for the future), through education. LAW's creators determined that educational outreach, especially to teachers of students in their formative years, was a critical tool to deal with the accelerating rate at which cultural information and human histories were being lost to looting. Education and stewardship remain at the core of the LAW message.

The discipline of archaeology, especially its focus on interpretation of material culture, is the vehicle to deliver that message. As described previously, the public responds enthusiastically to the study of the past through archaeology. An event with the word «archaeology» in the title surely will get the public's attention and encourage their participation, providing an audience for advancing the stewardship message.

Further, the event organizers were blessed with a compelling story within which to conceptualize the message, a story that is evidenced by the amazing archaeological record of Native Americans, Euro-Americans and African Americans in the Red River Gorge and eastern Kentucky. Students and teachers who participate in the event have

personal connections to, and therefore a vested interest in, the content presented by demonstrators. They learn that their ancestors were among the few peoples in the world to invent agriculture, because of the fragile evidence preserved in the rockshelters and other archaeological sites in the region. Students and teachers learn that the industries forged by their ancestors helped shape the development of Kentucky as a state, because of the archeological remains of iron furnaces, saltpeter mines, grist mills and coal camps. Visitors learn that the arts and crafts of their ancestors helped to create the rich and vibrant cultural identity of Appalachia, because of the river cane flutes, mouth harps, spindle whorls and rock art preserved in archaeological sites. By studying and protecting these irreplaceable resources, students can better understand and preserve their own heritage.

The fact that LAW is held in the Red River Gorge is a related factor contributing to the event's longevity and success. Rather than holding the event in a school gymnasium, a parking lot or another venue that has no relevance to the content, students and teachers are immersed in the very place where the amazing events of the past unfolded. They gain a strong sense of the environment, both natural and cultural, and the ways in which it shaped human adaptations across time. Long-time LAW demonstrator and nationally recognized cane artist Robin McBride Scott, who demonstrates how pre-contact Southeastern United States Native peoples used river cane to make baskets and other items, explained that «demonstrating at LAW is different in many ways from demonstrating at other events. Because of its location, I am able to point out river cane growing right behind my demonstration area. [Visitors] seem to have a greater interest in learning more about how I use it in basketry». As such, LAW is not simply a way to get students and teachers out of the classroom. It is a means of implementing place-based immersive learning to enhance its educational mission.

A third major factor contributing to the longevity and success of Living Archaeology Weekend is the stability in leadership and management over its twenty-nine-year history. As noted above, for its first two decades, a small core of dedicated DBNF staff archaeologists organized LAW with the support of the Forest's administration and in collaboration with local partners. This stability continues with the current LAW Steering Committee. Initially, several original LAW organizers served on the Committee, insuring a smooth transition in event management. The current Committee members have been involved for years, and several have served on the Committee since its inception. Overall, leadership stability has insured that the educational mission has remained consistent, and at the forefront of the event, over the years. With this structural continuity, and the institutional knowledge and extensive contacts accumulated by the organizers, each year the event has developed and expanded incrementally on the foundation established at its creation, avoiding the need to reset or reinvent it with personnel changes.

A final major factor contributing to LAW's longevity and success is the corps of talented and dedicated demonstrators who «bring the past to life» at the event. They have invested considerable time and effort learning the archaeological basis for and practices of their technologies. They return year after year, some traveling great distances, because of their belief in the program's mission, the impacts they have on the audience, and the knowledge they gain by interacting with other demonstrators, not because of monetary remuneration. LAW demonstrators are passionate about their work, and that enthusiasm spreads to visitors. As archaeologist and veteran LAW demonstrator Larry Beane explained, «LAW really isn't so much about me, but about getting people interested in history and archaeology enough so they will care about preserving it».

Challenges

Despite its great successes, the Living Archaeology Weekend program has had its share of growing pains, disappointments and challenges. Among the continuing challenges are engaging with educators, incorporating contemporary Native American perspectives, maintaining adequate funding and event «freshness», maintaining relationships with demonstrators and improving publicity. Several of these issues are considered below.

While many teachers make effective use of LAW educational materials to prepare their students for the event, some teachers' reluctance to do so, or to participate in professional development workshops and pre-event classroom visits, continues to disappoint. Collaboration with and input from classroom teachers are important for meeting and sustaining the program's educational goals. It takes continual planning and discourse to meet their needs, given their demanding schedules and ever-changing curriculum requirements. Access to LAW information and materials that educators can use effortlessly is essential. Recognizing that not all teachers can attend LAW, the Steering Committee encourages educators to use LAW's online resources available on the website and plans to create videos available online.

Because the Native American tribes recognized by the US Government and with whom the US Forest Service consults on heritage matters were historically removed from Kentucky and reside now in Oklahoma and North Carolina, logistics and expense prevent Native groups from routinely participating at the event, though they enjoy coming and support the mission of the program. Their concerns about non-federally recognized tribes and non-Native people demonstrating Native technologies at LAW keeps other Native groups from participating.

Securing adequate and sustained funding and enough volunteers remain constant challenges, as does the issue of event «refreshment»: retaining the old and main-

taining quality, but keeping teachers coming back to see what's new. Demonstrator turnover at the event has been minor, but rising costs have forced some long-time demonstrators to stop participating. Increasing age and life changes have meant that others can no longer participate, although they do drop in to visit from time to time. As demonstrators retire, the Committee will need to find replacements. This is a fast-approaching issue that will require a response in the very near future.

Pearls of wisdom: developing an immersive archaeology education event

Living Archaeology Weekend has matured as an archaeology education event, and, given the accomplishments and challenges it has experienced along the way, the committee is at a point where it can use its experiences to offer suggestions to others who don't have access to an existing immersive archaeology education program but are interested in developing one. Outlined below are the Committee's top «pearls of wisdom» that outline what to do and what to avoid. Thoughtful, intentional deliberation in planning will greatly enhance the chances for success.

Have a clear identity

One of the most important tips is this: have a clear idea of your event's identity. Everything else about it —from demonstrators and participants to publicity and branding— flows directly from its core mission. The mission identifies what the event strives to accomplish and why it is important. It helps to keep you focused, it provides cohesion for the organizers and it conveys to others the intent of the event.

Part of developing a clear identity is identifying the intended audience(s) (Zimmerman, 2003: 7-14). Who do you want to reach, and why? If students are the primary audience, what grades or ages will you target, and what are the pedagogical reasons for that focus? If educators are the audience, what disciplines are most appropriate and what types of schools (e. g., public, private, parochial, home-based) do you intend to serve? Further, it is critical to seek feedback from the intended audience(s) early in the planning stages. This helps to insure that they have a vested interest in the event, will see the value and importance of the program and will actively participate. The «if we build it, they will come» approach presumes you know what your audience wants and assumes your event fulfills those needs. This is a presumption you can ill afford to make.

Another part of developing the event's identity is the content. What does the audience want to know and what do you want the audience to learn? What specific

archaeology-related information is key to your mission and what more generalizable, life-long lessons do you want your audience to take away from the event? Why is that knowledge important? The six key goals of public archaeology education are useful in answering these questions at a broad level, and they can be recast in a manner that highlights the specific content of your event (Applegate, 2015):

1) inform the public about the past as it is known through the study of the archaeological record;
2) promote public appreciation for past cultural accomplishments and cultural diversity;
3) communicate the importance of the proper practice of archaeology;
4) enhance the identification of archaeology as a profession and of qualified archaeologists as professionals;
5) promote stewardship of the finite and endangered archaeological record;
6) apply basic academic skills such as reading comprehension, problem solving and mathematics.

In addition, give careful consideration to the activities that will most effectively operationalize your mission and reach your intended audience(s) with the content you privilege. The types of demonstrators who deliver the content, and the manner in which they do so, must be connected clearly to the event's educational goals. In many ways, activities are the public face of an archaeology education event. They are the most visible and tangible expressions of your mission, so the activities must be unified and consistent with the event's identity.

Conduct diverse assessments and provide tools for evaluation

An archaeology education event/program without assessment, like a stool with only one leg, is one that is destined to limited success and potentially even outright failure. Sound educational programs include assessment because the educational process is incomplete without it (McNutt, 2000: 193). Continuing, comprehensive and honest assessment is critical for determining whether or not you are fulfilling your mission. And, pragmatically, the results of assessments can be used to solicit sponsors and justify the event's continuation to others.

Programmatic assessment, which differs substantially from evaluation, is ongoing, interactive and intended to improve learning. It is process oriented, focusing on measurement of how learning is going. Assessment is a reflective endeavor because it considers the degree to which your internally defined educational mission and goals

are being met. The findings of assessments are diagnostic, geared toward identifying areas for improvement (Angelo and Cross, 1993; Apple and Krumsieg, 2001). As certain problems are resolved and others arise over the history of an event, assessments can be adjusted to address those issues. Multiple methods of assessment (e. g., surveys or questionnaires, interviews, focus groups, participant observation) that solicit feedback from each audience are a must.

In complement to assessment, a second leg of the event appraisal stool, evaluation, is another important aspect of appraising the impacts of a public archaeology education program like LAW. Evaluation is a product-oriented endeavor used to measure what a student (or other audience member) has learned and the quality and accuracy of that learning. The findings of evaluation are judgmental in that they are used to arrive at an overall grade, score or other performance indicator. Evaluation is prescriptive in that the results are compared to externally imposed standards of measurement (Angelo and Cross, 1993; Apple and Krumsieg, 2001). Because evaluation is in the hands of the educators whose students attend the event, there are two primary roles for event organizers in the evaluation process.

First, organizers can provide tools for educators to use before the event to evaluate prior knowledge and pre-event preparation, during the event to evaluate specific content-targeted learning, and after the event to evaluate comprehensive and integrative learning. Accordingly, event organizers should: 1) become familiar with educational evaluation and collaborate with teachers in developing and field-testing evaluation tools; 2) become familiar with governmental education standards and consider how event activities relate to them; and 3) strive to develop evaluation tools that not only are grade-appropriate but also are creative and engaging for students. Second, organizers can provide educators with the specialized content and resource lists they need to evaluate their students' understanding of the material. Such content must be conveyed in ways that are concise, avoid excessive technical jargon and are easily accessible to educators (Fagan, 2006: 13-28).

While assessment and evaluation are not counting the number of people who attend an event and asking what they liked and disliked about the program, these types of data are important for judging an event's impacts because they can reveal insiders' perspectives of the audience. Thus, they form the third leg of the event appraisal stool. Such quantitative and qualitative information provides insights for potential adjustments to the activities, helps to fine-tune the publicity and marketing plan for the event and, like assessment, can provide data for soliciting sponsorships and justifying continuation or even expansion of the event.

Start small and start planning early

As you start to develop a new program, do not aspire to emulate LAW in its current state. As described previously, the scope and size of LAW have increased substantially over time. The Living Archaeology Weekend event that exists today is not the same as the one that existed at its formation. It started as a small event with a handful of demonstrators delivering a limited range of activities in a Kentucky rockshelter. It is important to be realistic about what you can accomplish with the resources at your disposal. Identify your core mission and educational goals and focus on mastering them to the best of your ability before expanding in new directions. It is important to recognize that one event can't be everything to everyone. In fact, an event doesn't *need* to be everything to everyone in order to be successful.

Realize, too, that it takes a considerable amount of time to organize an archaeology education event, even a modest one. Do not underestimate how much preparation goes into hosting and putting on an event like LAW, which requires year-round attention. Planning should begin early, because the necessary tasks unfold in sequential phases, tasks inevitably take longer than you expect, and issues will arise that you cannot anticipate. Develop an event-planning calendar to guide your organizing. Identify the target date for your event, make a list of the tasks, then work back from the event date to schedule time ranges and target completion dates for each task. And take heart in the fact that the planning gets a bit easier with each passing year!

Collaborate, collaborate, collaborate

An event with the scope of Living Archaeology Weekend simply would not be possible without the support of a wide range of collaborators. This is as true today as it was in LAW's early years. Regardless of the size of the event, it is essential to develop a network of diverse partners to assist with educational initiatives, logistics, funding, promotion and program delivery. Potential partners include archaeologists, demonstrators, volunteers, educators, school administrators, professional organizations, civic groups, local businesses, branding and public relations specialists, state and federal agencies and government officials. Remember that their support can be financial, material (e.g., shade tents, corn for grinding, stone or shell for pump-drills) and in-kind (e.g., volunteer hours, advertising, web-design). An endorsement from a local politician can be as significant as a check for $1000. Whenever possible, assign or delegate responsibility for major tasks to your partners.

Appreciate the central roles of demonstrators

Demonstrators are among your most important collaborators. It is critical to recognize how integral they are to an archaeology education event like LAW. They are your mouthpiece, the primary means by which your message is conveyed to the audience. Secure the participation of quality demonstrators who not only are knowledgeable about the content they present, but also have proven educational skills and the ability to connect with students and others. Establish a vetting process to insure that they meet these requirements. High-quality demonstrators can make an event —in fact, the reputations of demonstrators can be the reason some visitors attend— and bad demonstrators can jeopardize an event's reputation and thus, its success.

View demonstrators as partners, not as employees. You want the best demonstrators to return year-after-year, and you should be aware that they often get requests to participate in other events on the same dates. You want them to have a sense of ownership, a vested personal interest in the event and its ongoing success. Seek their input in planning, as their expertise in specific content areas can be extremely helpful in refining the mission and planning activities. Solicit their feedback in assessment, since they experience the event in intimate ways that differ from yours and the audience(s). It is important to provide demonstrators with expectations and guidelines to insure your program is cohesive and on-message, but it is better to frame this in the context of collaboration as opposed to mandates.

Generate adequate, sustainable funding

There are financial costs involved with any archaeology education endeavor, and, depending on the amount of material and in-kind support, the direct costs generally are scalable according to the size and extent of the program (see LAW website). Because funding is an essential resource, organizers must develop a sound campaign for generating adequate money to sustain the event over multiple years. Potential sources of grants and financial contributions —including foundations, businesses, government agencies, tourism bureaus, civic groups and professional organizations— can be identified through Internet searches, networking and word-of-mouth. Develop colorful, exciting, concise marketing packets to share with potential sponsors, tailoring the packets to specific types of donors when appropriate. Acknowledge the sponsors in as many ways as possible, such as signage at the event, printed materials generated in conjunction with the event and advertising and publicity. Send each donor a thank-you note and synopsis of the event every year. Inform them about special accomplishments and honors related to the event.

Get the word out

Every archaeology education event needs an audience, so it is essential to devote adequate time and resources to advertising and publicity. There is nothing more disappointing than to invest considerable effort in organizing a high-quality event only to have low visitation. You cannot control the weather or the scheduling of competing events in your region, but you can control the promotion. The best way to reach educators is through direct communications to individual teachers (as opposed to administrators, though that might be effective in other instances) through listserves and email messages, as well as letters and phone calls. Use print and online versions of newspapers, arts and entertainment guides and tourism guides. With these media, you can issue press releases, solicit feature stories, run advertisements or enter event information on calendars. Create social media outlets, such as Twitter accounts and Facebook pages, to disseminate event information. Post flyers, posters and brochures at local businesses and tourist attractions. Commercial and public radio spots are a cost-effective way to reach a large audience. And plan for overflow parking in case you are blessed with a flood of visitors!

Looking to the future

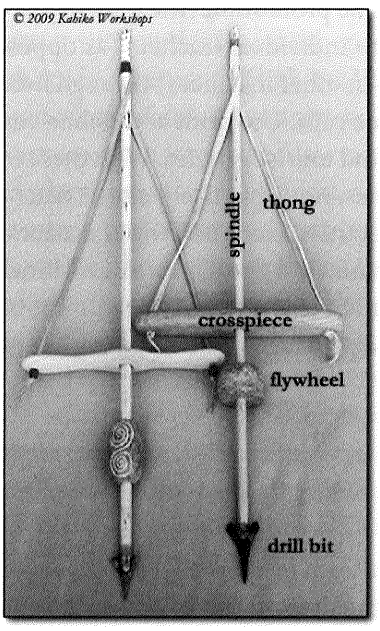
Living Archaeology Weekend is the result of a team of devoted, caring people who seek, through education, to positively impact the lives of visitors and to advance the messages of cultural respect and stewardship. Collaboration is paramount to the success of the program. Thanks to the support of a team with many arms, Living Archaeology Weekend today is successful and growing. While the program's success comes through the thoughtful development and refinement of clear guiding concepts and programmatic and educational goals, none of it would be possible without the encouragement, input and heartfelt participation of sponsors, demonstrators, volunteers, educators and students who participate in this unique event.

During its first decade, the Steering Committee has attended to the most immediate concerns —learning how to run the event, putting into place its vision for the event and developing a program that offers a proven educational experience for school students. In the years ahead, as LAW evolves, the Committee will turn its energies to long-range planning, improving publicity, finding sustainable funding and attracting new members to the Committee to ensure that LAW will remain what it has been since the beginning: a celebration of the people and heritage of Kentucky's unique Red River Gorge region.

Appendices

Appendix 1. Prehistoric technology content handout

A Word About Pump Drills



For thousands of years and into recent times, American Indians used three types of drills. The pump drill was one type.

A pump drill is a hand-held tool used to make cylindrical holes in soft materials like bone, shell, wood, pottery, shale, and soapstone.

It is made of five components:

- vertical wooden shaft or **spindle**
- horizontal wooden **crosspiece**
- stone, clay, or wooden **flywheel**
- chert or flint **drill bit**
- **cordage** or **leather thong** attaching the spindle and crosspiece

We know about pump drill technology through native stories and craftspeople, eyewitness accounts, and anthropological studies. In addition, archaeologists find the durable parts of ancient pump drills – especially the stone drill bits and occasionally the stone and clay flywheels – at sites in Kentucky and across the Americas.

The pump drill works by twisting the cordage and crosspiece around the spindle, placing the hands on the crosspiece, and rhythmically moving the crosspiece up and down. The flywheel acts as a weight to re-twist the cordage around the spindle, repeating the spinning motion. This repeated process causes the drill bit to spin in alternating directions, drilling into the material. It is a simple process, but one that requires practice to master.

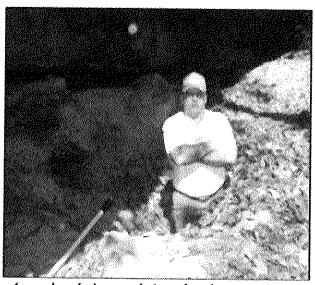
The diameter of the drilled hole depends on the size of the drill bit. Holes from one-eighth to one-half inch were common. The depth of the hole could measure many inches.

Native peoples used the pump drill to make holes in a variety of objects, such as gorgets or pendants (pictured), beads, whistles, pottery vessels, and smoking pipes. Construction of the pump drill itself required drilling holes into the crosspiece and flywheel.

Besides pump drills, demonstrators exhibit several related technologies at Living Archaeology Weekend. Look for items that are drilled, such as atlatl weights, farming hoes, and flutes. Watch the flintknappers make drill bits. Help the experts twist cordage from plants and prepare deer hides for leather thongs. Watch demonstrators work with clay and ground stones.

Appendix 2. Stewardship handout

Looting Steals Our History – Call To Action



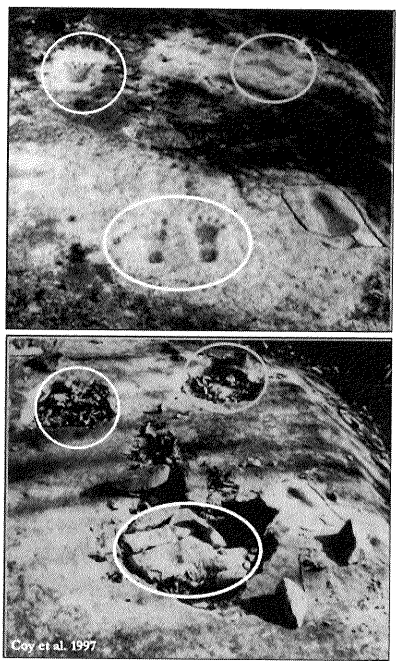
An archaeologist stands in a deep looter pit in a Red River Gorge rockshelter site.

Kentucky's **cultural heritage sites**, the important places linked to our past, are being destroyed at an alarming rate. Much of this damage is caused by development as our towns and cities expand.

Looting, the illegal or unethical destruction of cultural heritage sites, destroys places that are not threatened. Looters often target Kentucky's dry rockshelters, such as those in the Red River Gorge. They also target cemeteries, caves, and military sites.

Archaeological sites and cemeteries are nonrenewable cultural resources. Once they are destroyed, the information they hold about our past is lost forever. We must work together to preserve and protect these fragile places for future generations

Why is looting such a bad activity? Looters dig for artifacts, grave goods, and human bones. They are not concerned about where something is found. They care about how much it is worth or how pretty it looks. ♦ Looters can destroy hundreds to thousands of years of history in just a few hours. They can disturb hundreds of graves in several months. ♦ Looters keep what they find for their personal collections. Even worse, they sell the items. ♦ Looting robs all Kentuckians of the chance to learn more about our heritage and to maintain our sacred places. **Is looting archaeological sites and cemeteries illegal?** Digging into archaeological sites on state or federally owned or leased property is illegal. ♦ Disturbing someone's grave is illegal, no matter how long ago they died and were buried. ♦ Collecting and possessing human bones is illegal in Kentucky. **What can you do to help protect these fragile places?** Do you know someone who is looting an archaeological site or cemetery? If you do, report their actions to local law enforcement authorities; the land managing agency responsible for the site; Nicolas Laracuente (nicolas.laracuente@ky.gov; 502/564-7005, ext. 146) at the Kentucky Heritage Council in Frankfort; or Dr. George Crothers (gmcrot2@email.uky.edu; 859/257-1944) at the Office of State Archaeology at the University of Kentucky in Lexington. ♦ Have you discovered human remains? If so, leave the remains in place – you may have stumbled on a crime scene. Report your findings to your county coroner and local law enforcement officials. ♦ Do not buy or sell prehistoric and historic artifacts. This encourages looting. ♦ Take action to preserve and protect cultural heritage sites. Become a **steward** of archaeological sites on your land or in your community.



Before and after photographs of the Loman Hill Petroglyph Site in Rockcastle County. (Top) Designs shaped like human feet are among those native peoples carved into the bedrock. (Bottom) The rock art site after looters tried to remove the carvings. Their attempts failed. The result? The complete destruction of this one-of-a-kind site. The rock art had survived the elements for hundreds or thousands of years. It couldn't survive the looters.

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Y la arqueología llegó al aula

La cultura material y el método arqueológico para la enseñanza de la historia y el patrimonio

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