

# Digging to Learn: Teaching Science, History, and Social Studies Through Archaeology

As Logan County, West Virginia, high school students uncovered an ancient culture under their front lawn, an enthusiastic teacher led them to understand the rigor and discipline of historical research.

**R**on Moxley is an inspired teacher who dares to be different. In a single project, he opened up before his students, other teachers, and the community the excitement of original inquiry and the skills of scientific method. Moxley, you see, is an amateur archaeologist, and whenever he has a few spare moments from his high school coaching and teaching jobs, he searches for likely sites of lost Indian villages.

The campus of Man High School in the West Virginia coalfields where Rockhouse Creek joins the Guyandotte River seemed like a good prospect for a dig. This tiny valley among the rugged mountains would have been a logical resting spot for travelers, and it would have been well suited for hunting in several directions and for farming on its rich riverbottom meadows. Moxley already knew something about the valley. Years before, when the field across the street from the high school had been excavated for the Appalachian Regional Hospital, Moxley was there.

He methodically surveyed the site. On a two-meter grid, he carefully plotted the subsurface traces of an ancient community. He patiently identified the



*Archaeology begins in a school's front yard. The site of Man High School, located near the confluence of Rockhouse Creek and the Guyandotte River, was originally a resting place for travelers living in the Fort Ancient culture, dating between 1400 and 1600.*

patterns of post molds and cooking hearths. He noted the types and quantities of refuse in the trash pits and kitchen middens. He described the numerous graves, and he published

his findings in an archaeological journal. Now he was ready to explore further.

The Logan County Board of Education hesitated when Moxley proposed



*Ron Moxley, high school teacher and amateur archaeologist, made students and community members part of the dig. He shared findings with onlookers, explained as he and students worked, and set up exhibits of recently excavated artifacts.*

to dig up the front lawn of the high school, but the idea of a unique learning experience appealed to the school trustees. They gladly endorsed the project when he promised no time would be lost from regular classes. And when Moxley said there would be no out-of-pocket cost to the board, their enthusiasm caught fire.

### **Digging to Learn**

Thus it was that high school students, used to taking their West Virginia studies from a dry textbook, began to examine the evidence under their very feet. Almost with the first test probe, they hit pay dirt. Working within an area of darkened soil inside a rectangular pattern of post molds, two students unearthed a complete skeleton in flexed position. They found an arrowhead of sugar-quartz stone in the body cavity, a type uncommon to the area. They speculated that the point might have come from a raiding party traveling inland from the eastern coastal regions.

Pottery shards, animal bones, beads, gambling disks, and other evidence of former habitation turned up in abundance. A charcoal sample from a fireplace was sent off for carbon dating. Two skeletons were removed for laboratory study at the nearby Marshall University medical school.

By bits and pieces, the young diggers began to reconstruct a pattern of community life in another culture and time. The features and artifacts associated the site with the Woodside phase of the Fort Ancient culture, which dated between 1400 and 1600. Charcoal samples from at least one earthen oven, however, suggested that the site had been occupied as early as 800 A.D.

Tools and ornaments excavated at Man High School had been fashioned

from the bones of animals that have all but vanished from the area—deer, black bear, elk, raccoon, turkey, beaver, and wolf. On the other hand, no bones from rabbits or opossums, the most common present-day wild animals, turned up in the Indian trash pits. The students considered the problem. Rabbits and opossum thrive in dense undergrowth, and very little brush existed before the lumber industry removed the tall trees from the



*Almost with the first test probe, student archaeologists hit pay dirt, and proceeded carefully to remove soil with trowel and brush from an ancient grave site.*



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valley. Perhaps this was indirect testimony of the ecological changes that came with the white man.

All of this may be read about in the detailed archaeological reports that Moxley and his students wrote for publication, but our interest here is the dig itself and how the young teacher organized it as a special learning experience his students will never forget.

### A Learning Experience for All to Share

Early on, the affair caught the popular imagination. Local business firms contributed supplies and materials. Townspeople who usually came to the high school only for ball games pitched in to dig beside the students. The enthusiasm of Moxley's class drew other students into the work. The board of education provided some school buses, and by the time the grass had been reseeded over two separate excavations, more than 700 students from 4 high schools had participated in the project.

Reporters had a field day. A newspaper in the state capital editorialized about students digging into history in Logan County. "Just when it seems education is past rescue, strangled by bureaucracy, there come glimmers of how lively it can be when everybody does the right thing. Bully for Moxley. Bully for the Board of Education, too. It had a chance to offer its students a peek at a discipline most wouldn't get in college, and had the great good sense to take that chance."

This event was much more than a chance happening, however. To begin with, Moxley knew what he was doing. He had done it before. He had the enthusiasm and tenacity to stick with the project, and as a basketball coach, he knew how to work his helpers as a team and fire them up with his own example. He was president of a local archaeological society, and the experienced club members initiated the students into the rigorous method and discipline of a formal dig. Thus the students had no need for lecture or book study ahead of time. They were plunged immediately into the tedium of digging and the excitement of discovery.

Moxley saw to it that the findings were shared. Everyone was a part of

the team, and one and all engaged in the continuing speculations and evaluations as new features came to light. He taught while he worked.

"That could have been a palisade," Moxley said, pointing toward a line of slender sticks marking a series of post molds. "This house was built after the palisade. See where the pattern interrupts the line—here, and again here? This hearth was probably associated with the house." As Moxley spoke, with the easy confidence of a master teacher who enjoyed his work, he began probing the sandy floor of a pit. "We think we have a grave here," he said to several dozen onlookers. "They often buried their people within the houses." His trowel struck something solid, and he carefully exposed a bone. "This looks like a left tibia. Yes. And here is the femur. This is an extended burial. That is a sign that this person is important. Some artifacts may have been buried with the body. We usually find them in the left hand—which should be about here." The probe struck something hard, and he began working around the object with a trowel. A finely polished stone came to view. "This looks like a ceremonial celt," he said. "Bring the camera."

### An Unforgettable Adventure

Attendance set new records at Man High School during the dig. But the student lounge was vacant, and the study halls were empty. Why should anyone waste time when exciting things were happening right outside the windows? One classroom teacher marveled that her students were more alert and eager to learn than usual. When they first opened their books to study the skeletal system, everyone correctly identified the tibia, the patella, the femur, and other major bones. "That has never happened before," she said.

But Ron Moxley was not surprised. He knew that the means to begin the great adventure of learning were often close at hand and waiting to be used by an inspired teacher. And Ron Moxley had seen what people could do when someone fires their imagination. □

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