If one weren't an archaeologist, it might be skills that led them to the field. But it might be a piece of the puzzle that could answer questions about ancient people living near Fort Leavenworth. Who were they? Why were they here? Why did they leave?

As Kansas State University student Nick Jackson slowly scraped his shovel around it, he saw a tooth, then an animal's jawbone, probably from a deer. But it didn't get buried in the soil by accident. It was put there by people living on the land that is now Fort Leavenworth roughly 1,800 years ago.

The archaeological dig site post near Quarry Creek was first excavated in 1991, revisited two years ago and again this summer by students at the Kansas Archaeological Field School. This year, a dozen K-State students spent the month of June working at the site with Dr. Brad Logan, research associate professor of archaeology at Kansas State University and director of the archaeological school.

Most students, like Jackson, are anthropology or archaeology majors. The field school is required for them to get a job in archaeology. Jackson said the dig has given him the field experience to be able to identify the difference between a random rock in the soil and a piece of human-crafted pottery — skills he'll need to learn to solve the puzzles of who lived here, why and when.

"You get used to seeing a lot of things," he said. "It's the texture, and the way the dirt kind of sticks to them."

The original dig found six garbage or burn pits. The 2012 dig found another. In the 2012 dig, they're finding more items that might tell more stories about the history of people who lived in the area. The team will take the items to a lab at K-State, where another class will examine the pieces next semester.

Digging in the garbage pit, the students found bone fragments, pottery fragments, and stone projectile points. "They're like tiny capsules," Logan said.

If the pieces are larger than quarter-size, the students cataloged exactly where they found them, using a level and tape measure to plot coordinates and then making a note on a graph drawing where it was found. Even a bit of bone could solve another piece of the puzzle.

Those smaller than a quarter are also cataloged, but not on a graph, because those small bits would cover the students' graphing paper black. The items are put into paper bags with the locations marked and will be taken back to K-State.

There are pieces of the puzzle the young archaeologists do know. Previous carbon dating has shown that people used the Fort Leavenworth site between 520 to 400 A.D., which corresponds with some of the findings. K-State students have found pottery pieces with intricate designs, similar to a group of people known as the Hopewell. The Hopewell were prevalent across the Midwest and eastern part of what is now the United States, and are named for a farm in Ohio where signs of the culture were found in burial mounds there. Archaeologists don't know what the Hopewell people called themselves. They can identify similar patterns of intricate pottery that link people across the area.

There have been larger sites near Fort Leavenworth, too. The Kansas City Hopewells are the furthest west these people have been found. They likely grew crops, hunted deer and created pottery artwork. Logan said it doesn't appear they hunted many bison, which were not as dominant here as in some other areas of Kansas.

Logan said one of the findings from the 2012 dig might be an arrow point. This could be significant if it pushes the date of the introduction to the bow and arrow to an earlier time.

Most of the stone projectile points found at the site are what archaeologists typically call dart points, and Logan said it's a mistaken notion to call them arrowheads. The dart or spear points project the bow and arrow, which archaeologists believe was introduced into the Kansas area around 500 A.D. The dart points are too big to shoot from a bow.

"With a wide shaft, it just doesn't make sense," he said. "It's not aerodynamically sound."

However, the point the team found on Fort Leavenworth is smaller and could be fired from a bow, Logan said. On the other hand, it could possibly be a child's attempt to construct a dart point, or just a smaller dart point. The K-State archaeology labs will study it to determine more information.

Logan said the team was grateful to Warren Middle School in Leavenworth, which has provided the students with a place to sleep, shower and catalog findings.

The group is also grateful to Fort Leavenworth's Directorate of Public Works, which helped prepare the site by cutting down large brush.

Mike Bogner, chief of DPW's Master Planning Division, said the dig benefits Fort Leavenworth because there are no on-post resources to investigate archaeological sites. As a federal entity, however, Fort Leavenworth officials do seek out professional archaeologists anytime they're planning to build on a new piece of land. Logan himself conducted an archaeological assessment on a separate site near the current U.S. Disciplinary Barracks before it was built, for example. Some larger military installations have professional archaeologists on staff.

"Anything that they find helps us to know what we have on that site," Bogner said. "We don't have any professional archaeologist on board here, so we rely on either consultants, professionals that we would hire to do that, or the schools."

But not only does Fort Leavenworth get information as good as what would be provided by a consultant from the Kansas Archaeological Field School, Bogner said, it also provides K-State students with hands-on experience.

Abby Miller, recent K-State graduate, said she started school as an anthropology major, but switched to archaeology because she liked solving the questions about what shaped North American societies.

"Archaeology is basically cultural anthropology, but in the past," she said. "I'm curious about these people, how they shaped the world we live in through their interactions."

Pattie Pearson, a nontraditional K-State undergraduate, sifted through the soil using a wooden dowel and screen. She was able to find several small pieces of pottery, bone and burned pieces of limestone.
Even the limestone rocks found in the pit did not originate at the site.
"Every rock up here was brought by people, so every piece of limestone you see was physically brought here by people," she said.
Some pieces still show signs that they were burned in the trash pit.
"I absolutely love the idea of doing something to find out," Pearson said. "I've been thinking about the people who were here, I mean, we're talking about 1,600 years ago. These people had lives, they had a story."