

EDGE Students Explore Arizona's Natural Wonders Above and Below Ground

by Rebecca Patterson-Markowitz



On December 12, 12 students from EDGE charter school traveled to Colossal Cave Mountain Park for a day of cave exploration and hiking. We began our adventure with a trip down into the cave, which holds a steady temperature of 70 degrees throughout the year. It was a welcome change from the chill of the morning! Bill, our guide, asked the students if they had ever been in a cave before. Not one raised a hand. He was delighted to share his passion for the cave with the equally enthusiastic students.



Students at Colossal Cave Mountain Park.

As we made our way through the rooms we learned about how the cave had been used as a ceremonial place by the Hohokam, a train robber hideout in the 1800s, a chapel for its civilian conservation corps workers during the Great Depression, and finally a filming location for endless B horror movies. Bill also took us further back in time to when the walls of the cave were sediment at the bottom of an ocean. He explained that over millions of years the limestone formed by hardened sediment was eroded by thermals pushing up from below creating chambers and the now porous walls. At different moments of the tour Bill pointed with his flashlight above our heads to the fault line, visible where two different colors of rock met at a large fissure. Although Colossal Cave is a dormant cave that sustained damage from tourists in the 1900s, it is unique in its formation. Less than 15% of the world's caves are formed by thermal water pushing up from below. Emerging from the cave's main entrance, we were happy to discover it had warmed up while we were inside.

We hopped back in the van to drive to the Arizona Trail crossing of the La Selvilla Campground. The park is home to many wonders! First, we stumbled upon Hohokam bedrock mortars, likely used to grind mesquite beans and other seeds. Students were particular surprised to find out that because of this grinding technique the Hohokam often ate bits of stone with their meals, causing their teeth to be ground down over time. Next we passed below a crestate saguaro.



Students learn from Bill in the main chamber.

We decided to end our hike down in the *arroyo* where the beautiful yellowing leaves of the cottonwood trees were rustling in the breeze. Students were asked to compare the cottonwood leaves to the leaves of other desert trees. They came up with the obvious differences in size and deciduousness. This led to a discussion of desert plant adaptation strategies, focused on drought resistant plants.

We spend the rest of our time amidst the cottonwoods eating lunch and getting to know each other. There was one giant cottonwood that had grown or fallen into a diagonal that was easy for students to sit on and clamber up. They took turns snapping photos of each other and asking “Will you send that to me?!” Brooklyn, a junior, commented that she had a bunch of pictures of practically strangers on her phone. Most of these students didn’t know each other before the Seeds of Stewardship outing, and they are slowly forming friendships.



Brooklyn and Magnus enjoy the fall colors.

Engaging with the landscape of the Sonoran Desert, whether it be trail, cave or citizen science, consistently helps to bring these relative strangers together to form friendships and share meaningful experiences in the great outdoors.



There was room for everyone on this old cottonwood tree.

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