

Empowering the next generation through STEM education and cultural heritage

Through supporting schools and community organizations, Dell Technologies aims to help all communities thrive in the digital age.



Business needs

Rural communities like the San Carlos Apache Tribe have historically had limited technology and STEM education access. To bridge this gap, Dell Technologies partnered with schools and community organizations to integrate game-based STEM learning and cultural heritage to inspire and prepare the next generation of under-resourced youth.

Innovations



Increased digital opportunity through learning experiences that students might not otherwise have encountered.



Promoted intergenerational learning as youth collaborated with elders to incorporate cultural values.



Taught participants lasting foundational and life skills.

Outcomes



Expanded educational opportunities for students who explored STEM subjects.



Strengthened cultural identity with projects linking Apache heritage and real-world challenges.



Built a supportive community by creating an inclusive environment of trust and learning.



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Valerie Key-Cheney,
Member of the San Carlos Apache Tribal Council,
Peridot District



The Girls Who Game program addresses digital opportunity and access challenges while connecting youth to their cultural roots.

Connecting tradition and technology

The San Carlos Apache Indian Reservation, established in 1871, spans 2 million acres of rural land in central Arizona. Obstacles like limited internet connectivity, limited technology resources and historical barriers created a gap in access to modern learning resources. Like in many other rural and under-resourced communities, young people on the reservation had difficulty finding learning opportunities in science, technology, engineering and math (STEM). “Some of our youth thought it was impossible to have access to technology and gaming for educational purposes,” says Valerie Key-Cheney, a member of the San Carlos Apache Tribal Council for the Peridot District.

The tribe also recognized that many students faced emotional and psychological challenges. Lorraine Jackson, a fifth-grade teacher at Rice Intermediate School, notes, “Some students struggled with low confidence and feelings of disconnection. They needed a space where they could feel seen, supported, and encouraged to explore their potential through learning and leadership.”

The community sought to provide students with STEM and leadership opportunities while staying connected to ongoing cultural traditions.

Bridging gaps in STEM access and inclusion

The San Carlos Apache Tribe found its solution in the [Girls Who Game](#) (GWG) program, created by Dell Technologies with partners Microsoft and Intel. This initiative empowers students — especially girls and under-resourced youth — to develop STEM and leadership skills through game-based learning using Minecraft: Education Edition. In partnership with Hesperus, a U.S. nonprofit dedicated to supporting Native American and Alaska Native communities, the GWG program addresses how to solve challenges with digital solutions while connecting youth to their cultural roots.

Hesperus worked closely with the San Carlos Apache Tribe’s community elders, including language, botany, history and water conservation experts, to incorporate cultural lessons into the program. Local museums and tribal leaders also offered firsthand insights into Apache traditions and practices.

Building confidence, community and STEM opportunities

The San Carlos Apache community’s GWG initiative started with a handful of students. Interest in the program grew as participants benefited from GWG, and it scaled to six schools.

GWG has created a thriving community of learners, educators and mentors. The program blends cultural traditions with modern technology, offering students a unique chance to learn Apache history and STEM skills.

By facilitating intergenerational learning, the program allows youth to connect with their elders and creates a meaningful educational experience. Through Minecraft, students bring traditional practices and landscapes to life, making the learning process both interactive and culturally enriching.

“The leadership skills and pride in being part of the Girls Who Game program were obvious,” explains Roberta Patten, a Girls Who Game Coach for the San Carlos Apache Tribe. “The students latched onto this program because of the focal point on the sustainability of our reservation. It was clear that the program not only enhanced their self-identity as Apache but also led to positive changes for our tribes.”

Inspiring youth to lead and succeed

The program’s success is reflected in its growth to multiple schools and in students’ personal transformations. Participants gained confidence, developed leadership skills, became more connected to their communities and discovered new possibilities for their futures.

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Fifth-Grade Teacher, Rice Intermediate School



"This program has been a fruitful, educating and self-esteem-building opportunity for Apache girls and boys on the San Carlos Apache Reservation," says Key-Cheney, reflecting on the program's positive impact.

"I saw the students emerge as leaders and begin to collaborate," shares Jackson. "I also witnessed the students learn to inquire with peers. Questions from peers made them a stronger team."

GWG fosters a sense of belonging, personal growth and community connection among students. It has become a source of support. "One of the young community members was facing issues at home and was struggling with her mental health," Jackson recalls. "This program gave her a sense of belonging, acceptance and confidence about life. I asked her what she thought about being in the GWG program, and her response was, 'I felt excited to learn how to code.'"

Growing GWG's momentum and preparing students for real-world challenges

The program is scaling, helping more students connect STEM learning with practical applications. For example, high school participants are using Minecraft to tackle real-world challenges, such as water conservation. This innovative approach fosters creativity and critical thinking, empowering students to envision and pursue STEM opportunities. As Key-Cheney highlights, this

impact extends beyond academics, inspiring Apache youth to set goals for their future careers and leadership roles.

"After participating in Girls Who Game, our Apache youth have shown their abilities to become motivated and successful and to dream big by setting goals to become our future tribal leaders, doctors, lawyers, teachers, etc.," concludes Key-Cheney. "On behalf of the San Carlos Apache Tribe, a heartfelt thank you to all of those who made this possible for our children."



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