

Colorado Four Corners Native American STEM Pipeline Project



The Four Corners Native American Science, Technology, Engineering, and Math (STEM) Pipeline Project is a grassroots, collaborative effort to increase college readiness and success for Native American students in STEM fields in Southwest Colorado.



The ultimate goal of this project is to dramatically increase STEM degree attainment among Native American students, one-third of whom will become STEM teachers within their communities. This project will provide tribal communities with opportunities to compete for high-wage, high-skill STEM occupations while increasing the pipeline of Native American STEM teachers to make lasting cultural shifts in their communities.

Partners include the Community Foundation Serving Southwest Colorado; Fort Lewis College; Southwest Colorado Community College; San Juan Board of Cooperative Educational Services; the Durango, Ignacio, and Montezuma-Cortez school districts; the Ute Mountain Ute Tribe and the Southern Ute Tribe; and The Colorado Education Initiative (CEI).



IGNACIO SCHOOL DISTRICT 11 J1
Home of the Bobcats



THE NEED

Southwest Colorado is home to a significant number of Native American families, with over 1,200 students attending nine local school districts. Nationally, Native American students disproportionately graduate high school academically underprepared for postsecondary education, especially in STEM fields. In Southwest Colorado, Native American student achievement is up to 80 percent lower than peer scores in math and science. In addition, less than 12 percent of Native American students take all three sciences in high school (biology, physics, and chemistry). This trend is a major contributor to the underrepresentation of Native Americans in STEM professions.

THE APPROACH

A key component of this project is the implementation of the Colorado Legacy Schools (CLS) program in Durango, Ignacio, and Montezuma-Cortez school districts beginning in the 2016-2017 school year. CLS is a proven program that will dramatically increase the number of Native American students enrolling and succeeding in Advanced Placement (AP) math, science, and English courses. CLS students graduate with the skills and content knowledge required to be college-ready in STEM. CLS focuses on improving access to AP courses because students who master AP coursework are three times more likely to earn a college degree than those who do not.



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CEI is seeking \$150,000 in 2016 and again in 2017 to fully implement the Colorado Legacy Schools program in three high schools, impacting over 500 Native American students and more than 20 teachers.

The partners included in the Native American STEM Pipeline Project have made a commitment to action through the Clinton Global Initiative to engage in this work.

CLS RESULTS TO DATE

Results to date are impressive. On average, in the first year of program implementation, CLS has:

- Increased the number of qualifying scores on AP exams by 70 percent at 23 schools.
- Increased the number of students of poverty earning qualifying scores by 78 percent.*
- Increased the number of female students earning qualifying scores in math and science by 90 percent.
- Increased the number of students of color earning qualifying scores by 107 percent.*

*For students of color and students of poverty, these increases outpace the growth in enrollment, meaning these schools are simultaneously increasing college readiness and closing the achievement gap. These schools have transformed their cultures — elevating expectations and turning the notion of who is AP-ready and AP-worthy on its head.

MOVING FORWARD

The immediate need faced by the tribal community in Southwest Colorado is to transform public education for Native American students to ensure college readiness for all.

At \$250 per student per year (on average), CLS is an economical and effective way to close the socioeconomic achievement gap for both college enrollment and graduation. CEI's role as a trusted partner and convener to stakeholders in the region, its industry connections, and its communications capacity will support this local effort to achieve success.

CEI is the lead organization in advancing STEM

education in Colorado and is currently working with other districts across the state to build out similar STEM career pathway programs. Additionally, the partners included in the Native American STEM Pipeline Project have made a commitment to action through the **Clinton Global Initiative (CGI)** to engage in this work. Commitments to action — a defining feature of CGI — are concrete plans that address a pressing challenge. The exposure provided through CGI will help draw national attention to the Native American STEM Pipeline Project and advance replication across the country.

Anticipated Outcomes

✓ Graduate High School College-Ready

Approximately 500 Native American students in the region will participate in CLS and complete rigorous AP courses, preparing them for success with degrees in STEM fields.

✓ Graduate College with Degrees in STEM fields

Fort Lewis College is one of only two higher education institutions in the nation to provide tuition-free education to all Native Americans. This project advances a recruitment strategy that focuses on annually creating a postsecondary Native American STEM cohort group and providing ongoing academic support in order for at least 90 percent of the cohort to graduate from Fort Lewis College with at least 50 percent earning STEM degrees.

✓ One-Third Return to Southwest Colorado to Teach

This project will support at least one-third of each cohort's graduates to enroll in the FLC Master of Arts in Teaching Program in science or math with student teaching in their home communities.

Contact lkuehl@coloradoedinitiative.org to get engaged.



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