GeoFORCE Alaska: Field-based Geoscience Education for Rural High School Students

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GeoFORCE Alaska is a four-year, field-based, summer geoscience program designed to raise graduation rates in rural Alaskan high schools, encourage participants to pursue college degrees, and develop Alaska's technical workforce. Launched in 2012 by the University of Alaska Fairbanks (UAF) in partnership with the longstanding GeoFORCE Texas program, GeoFORCE fosters scientific interest and ability through hands-on field projects, travel, and teamwork over the course of four consecutive summers. GeoFORCE Alaska students enter the program after 8th or 9th grade and embark on their Fourth-Year Academy before or immediately after their senior year of high school. The curriculum builds across the program, reinforcing grade-level expectations and giving students the opportunity to apply the scientific method to relevant questions at spectacular geological locations. Each summer, students spend a day on the UAF campus learning new concepts and skills, followed by a weeklong field trip that provides opportunities to complete practical exercises using geological tools. The First-Year Academy takes students across Alaska, from Kinross Fort Knox mine to Healy coal deposits, Denali National Park, and Portage Glacier. A capstone project at the end of the Fourth-Year Academy involves making a geologic map and cross section of tilted strata exposed at Dinosaur National Monument in Utah. Results show that participants graduate from high school at rates significantly higher than their peers, acquire skills that facilitate academic success, and gain the confidence to attend college.

GeoFORCE Alaska is supported by Alaska Native Regional Corporations and industry sponsors at a level that allows recruitment of a new cohort every four years and delivery of one summer Academy annually. Due to the quadrennial recruiting schedule and regional funding model, only 50% of students from Northwestern Alaska, North Slope, and Interior school districts currently have the opportunity to apply. The program seeks to expand the region served and increase the frequency of recruiting in order to offer the GeoFORCE experience to students from school districts throughout rural Alaska. Alternate year recruiting and delivery of two summer Academies annually would allow all interested students in these districts to apply.