

The Native American Astrobiology in the Secondary Classroom Initiative

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Across the nation, Native Americans are the most underrepresented racial group across in the sciences and mathematics. The “Astrobiology in the Secondary Classroom” (ASC) project was designed to provide students from underrepresented groups with opportunities to engage in scientific activity centered about the highly interdisciplinary and exciting field of Astrobiology. The goal of ASC was to use the field of Astrobiology as a platform to introduce concepts in astronomy, planetary sciences, microbiology, geosciences, and other related fields of study to help modify the negative views or apathetic attitudes of students towards the sciences and mathematics. This in turn might contribute to more students willing to consider incorporating the sciences and mathematics into their higher education and career goals. Under a NASA award, The University of Montana Native American Research Laboratory (NARL) adopted the structure and content of the original NSF-funded ASC project and with slight modifications administered the ASC curriculum to racially-mixed classes of students at high schools on or near Indian reservations in western Montana. Over 115 students were exposed to the ASC curriculum during 2009. In addition, novel curricular tools were developed at NARL for a K-8 audience and were implemented at reservation schools. This presentation demonstrates some of the curricular tools, assessment tools, and other materials that were used as part of this Astrobiology education project and provides preliminary data of the outcomes of using topics in Astrobiology to engage students in science and mathematics.