

Ensure Students Are Learning: Faculty Descriptions of Innovative Teaching Practices

Research Project Blends Scientific Rigor and Culture

Innovative Teaching Practice Description:

Each student completes a research project toward the end of the course that explores types of natural energy. Students begin by identifying a type of energy in which they are interested, such as hydrogen, solar, or water, among others. Based on their research, students write a paper and deliver a presentation to the class. The paper and presentation must include an introduction to the energy source; a discussion of current research; the pros and cons of the energy source; any connections to the Teachings of the Seven Grandfathers, which are important in Anishinaabe culture; and references. The presentation must also showcase a project completed in the lab portion of the course that corresponds with the form of energy they chose for their research. Some students, for example, researching hydrogen have created a model of a hydrogen car. The presentation must also include a graphical component. To deliver their presentations, students can use posters or computer-based applications, such as PowerPoint or Prezi.

No more than two students can present on the same topic to ensure that there is variety among the presentations. Students invite their family members to the final presentations. The incorporation of family members is based on the family education model, a student retention theory that examines Native American student retention; the main premise of the theory is that students are more likely to succeed if they engage family members throughout the learning process.