

Erica Barrow
Associate Professor
Ivy Tech Community College
Indianapolis, IN

Real-World Motivation

I am excited to attend this year's workshop focusing on supporting 2YC geoscience student success. My name is Erica Barrow and I am in charge of Earth Science (SCIN 100) and Physical Science (SCIN 111) at Ivy Tech Community College in Indianapolis, IN. Ivy Tech is Indiana's only community college; the main campus in Indianapolis has current enrollments averaging 25,000 students per semester. I am the only full-time instructor in geoscience and oversee approximately 15 part-time adjuncts in my subjects. Earth Science and Physical Science are a part of the Associate of General Studies degree (LAS Division); Ivy Tech does not currently offer a specific degree in science or geoscience.

Earth Science is a lecture/laboratory course combining geology, meteorology, and oceanography. Most of the students taking Earth Science are enrolled to fulfill a required science elective within their major; therefore, incoming student knowledge and enthusiasm for science is relatively low. Fostering student success within geoscience is a constant challenge for me. The major strategies I employ to support student success within my classroom are to motivate students through real-world examples pertaining to students own lives and to utilize current events across the globe.

I have found that the strongest motivator for student success is to relate classroom material directly to student own lives. An example of a real-world assignment I assign that directly pertains to students is on home water sources and usage. Within Earth Science we spend several lectures and a lab working through the water cycle, surface water/ground water transport, etc. Following this in-class work, I have students investigate their own source of home drinking water via internet resources. Students track their own water throughout the municipal water supply, aquifer, surface water reservoir, water treatment plant etc. Many students understand the biological importance of water but have never really wondered where their tap water comes from or that it is a limited resource. Comments at the end of the semester show me that this assignment is one of the most memorable and impactful experiences for students.

Related to real-world discussions, another strategy I employ to enhance student success is to utilize current events (Earth Science related) from around the globe to expand student's global awareness. Each semester my students are required to write three essays summarizing and critiquing a current event article published in a recent scientific journal. Students choose their own article from a list of provided journals (the article must relate to specific topics we have covered within the three different units of the class). This assignment gives students the opportunity to investigate a topic that interests them in a deeper and more meaningful way. Students are also given the opportunity to present/discuss their findings with the class or in small-group interactions. This assignment also helps to introduce non-science majors to the various career options available within science and science-related fields.

I am looking forward to learning about other strategies for ensuring student success.