

Geoscience Projects That Bring the Community into the Classroom
Mike Phillips
Geology Professor
Illinois Valley Community College

I began my professional career working full-time as an environmental geologist outside of academia. I began teaching evening classes at a community college because I wanted to show students that geology was not just as an interesting look into how the earth operates but how the study of the earth directly impacts their lives. To that end, I have used my consulting experiences to shape my assignments, my instruction, and my community outreach.

I have students complete projects that provide them with the incentive and opportunity to examine their surroundings. In my Environmental Geology course, students must complete a capstone project where they investigate the hazards and resources in the area around their home. In my Natural Disasters course, students complete two projects each describing a single type of hazard and its impact on the community where they live or would like to live.

These projects are successful because they provide students the opportunity to apply material covered in class to their personal surroundings. Although most students do not intend to pursue a career in geoscience, by providing them with a practical example of what geologists actually do, some may choose to become geologists while others will know when it is prudent to consult one. Because students have a personal connection to the project area, they are able to connect the geologic information to pre-existing knowledge, which improves retention. Former students comment on the value of the projects as they have made adjustments to their homes, changed their insurance coverage, and shared information with family, friends, and neighbors.

The students' projects are important to me professionally because they enhance my knowledge of the local area and improve my understanding of how students perceive the material we cover. When I read and assess the students' projects, I can see how the students interpret the course material and apply it in real-world situations. In some instances, this has led to changes in how the material is presented in class; while in others, it has provided evidence that students have developed a deep understanding.

The primary challenges have been to ensure students have a clear understanding of my expectations and access to appropriate data sources. To address the first challenge, I have incorporated data collection and reporting for the project in many of the lab exercises, which allows me to provide useful feedback on their work prior to the submission of the final project. To address the second challenge, I have created a web-based resource page and devote class time throughout the semester to class discussions of where and how to collect data and assess its quality.

SERC/ Cutting Edge Activity Descriptions:

Environmental Geology of the Area Where You Live:
<http://serc.carleton.edu/NAGTWorkshops/intro/activities/23424.html>

Natural Hazards Term Project:

<http://serc.carleton.edu/NAGTWorkshops/environmental/activities/62809.html>