

Bringing Data into the Classroom

TIPS FOR DESIGNING SUCCESSFUL ACTIVITIES

Based on their experiences, workshop participants identified nine tips for success in engaging students with data:

- Design exercises with student background in mind; inexperience with data can be devastating to student confidence.
- Create a safety net to support students through the challenges of research.
- Develop a balance between guidance and inquiry that is appropriate for the student and the learning objectives.
- Create opportunities for students to work with data and tools outside of class or lab.
- Match the time spent in learning tools to the goals of course and student proficiency, being careful not to introduce more tools or techniques than students can or need to master within the context of the course.
- Reflection, discussion, and reporting are important aspects of the research experience that need to be incorporated in the planning of the exercise.
- Design for success by making sure the data exist, they are accessible, the tools work, and that help is available.
- Integrate physical samples and models with digital resources whenever possible.
- Create purposeful projects that are meaningful and relevant in the context of the class, curriculum, the students' experience and interests, and society. For example, projects can demonstrate/simulate the conduct and process of science, be directed towards making a new contribution (or at least replicating an authentic scientific experience), or perhaps provide a service to the community (e.g., watershed monitoring).

From: Manduca, C. and D. Mogk, 2002. Using Data In Undergraduate Science Classrooms: Final Report on an Interdisciplinary Workshop at Carleton College, 2002. Available at: <http://serc.carleton.edu/files/usingdata/UsingData.pdf>

Additional Resources:

<http://serc.carleton.edu/usingdata/index.html>

<http://serc.carleton.edu/usingdata/pedagogy.html>

<http://serc.carleton.edu/margins/collection.html>

Using Data In Your Own Classroom

Take a moment to identify an activity or a data set that you would like to bring into one of your classes. Use this space to jot down your idea.

What do you want your students to learn from the activity?

What resources or tools might you need to complete the activity?

How will you know what students have learned from this activity?