



Project to
enhance

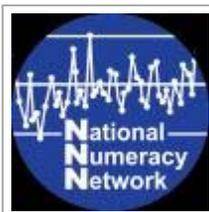


quantitative literacy wherever quantitative problems arise in the undergraduate curriculum.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the NSF.

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The Goal



NNN is a 501(c)(3) corporation to promote quantitative literacy. [For more information](#)

Quantitative Literacy, the opposite of math avoidance, is the habit of mind which enables a person to engage quantitative material in order to solve a problem or to frame an argument. Like maturity, quantitative literacy comes with experience and growth. The goal of Spreadsheets Across the Curriculum (SSAC) is to promote this experience and growth.

[learn more about SSAC and QL here](#)

The Pedagogy



GLY 4866 at USFJ

Teaching with SSAC. Ask students a quantitative question in non-mathematics context -- a question that requires consideration of numbers, tables or graphs, and/or a calculation or estimate. Then ask the students to build a spreadsheet to answer the question. What mathematics applies? How do you do the mathematics? How do you design the spreadsheet to calculate an answer? What cell equations belong in the cells? In

short, ask students to figure out [How to Solve It](#) ([more info](#)) using the software that resides in the technology sitting on their desks.

[learn more about teaching with SSAC here](#)

The Library



Title slide of a module in the 2006 series.

The SSAC Library. SSAC modules are PowerPoint presentations that lead students to build Excel spreadsheets while they examine and solve elementary mathematics problems in non-mathematics context. In working through the modules, students apply their problem-solving abilities to three, interacting sets of problems simultaneously -- by determining the correct cell equations to populate the spreadsheets, by working through the embedded mathematical content, and by attacking the in-

discipline problem or problems of the context. The modules are intended to be intense activities in problem solving.



Workshop participants making modules at the 2006 workshop in Olympia WA.

[learn more about the design of SSAC modules here](#)

The General

Collection consists of modules that were created specifically for SSAC and its goal of developing QL skills in non-mathematics context. These modules were made mainly by participants in project-supported, week-long workshops held in Olympia Washington in July 2005, 2006 and 2007 by the Washington Center for Improving the Quality of Undergraduate Education (The Evergreen State College). Currently there are 45 modules in the collection.

[learn more about the general collection here](#)



Background slide for module that asks students to find the volume of the Panabaj, Guatemala, debris flow of October 2005.

The Physical Volcanology Collection consists of nine modules developed by Chuck Connor (University of South Florida) and Peter LaFemina (The Pennsylvania State University) for their respective courses. The modules are patterned after the SSAC style and pedagogical approach. The intent of the modules is to teach the volcanology content, and less so the embedded mathematics.

[learn more about the physical volcanology collection here](#)

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