David Kung* (dtkung@smcm.edu), 18952 E. Fisher Rd, St. Mary's College of Maryland, St. Mary's City, MD 20686. Math and Social Justice: Improving the world with semester projects in a liberal arts math course.

College students' last math class could rehash algebra, teach "useful mathematics" that will never be used, wax philosophical about esoteric mathematics - or we could use this opportunity to teach students how to use mathematics to improve the world.

In this liberal arts math course aimed at non-science majors, every student proposes a project that will use math to tackle an issue of their choosing - and most choose a sustainability-related topic. Through the course of the semester, groups of students tackle renewable energy projects, conservation initiatives, and fair trade issues. By the end, they have learned both interesting mathematical content and how to apply it to be an informed, responsible, and active citizen.

This talk will describe the course, give examples of student projects, and present data on changes in students' quantitative literacy skills and attitudes toward mathematics. (Received September 22, 2010)