

Greater Interest in Government

The purpose of the Greater Interest in Government Program, established in 1969 by Frederick A. Faville, Illinois Beta '19, is to stimulate interest in civic affairs and public-policy issues among student members of Tau Beta Pi. The Executive Council awards annual grants up to \$750 each for these activities from the investment earnings of the Greater Interest in Government Fund.

Iowa Alpha's Alternative Energy in the Classroom

WITH THREE PRESENTATIONS given to classes of fifth-grade students in the Iowa State hometown of Ames, spring of 2003 brought the culmination of a GIG Grant awarded to Iowa Alpha in 2002. Under development for nearly two semesters, it remains far from over!

The original proposal outlined a series of seven different modules on alternative-energy sources designed to appeal to elementary-school students. The goal was a simple "suitcase presentation" that could be transported from school to school. Each module would comprise an informative poster, a physical display, and a vocal presentation, with a website available for teachers and students to further explore the subjects. Module topics would range from alternative-energy sources to wind power to Iowa-specific research on ethanol. Hands-on activities were also outlined to increase student interest.

At the beginning, it was obvious that we had an ambitious task before us. Before we could develop the modules, we had to educate ourselves on current advances in alternative energy. Because the project was inherently segmented, a plan was devised in which several modules would be completed for use in the initial presentations. The feedback from those presentations would then aid in the creation of remaining modules.

The first three presentations were finally given during the week of April 21-25, with two or three volunteers presenting our modules to groups of fifth graders ranging in number from 17 to almost 50 students. The material presented included posters on the greenhouse effect, hydroelectric power, wind power, and current developments in Iowa. Accompanying the greenhouse segment was a physical model of two versions of the Earth made from plywood, a glass bowl, two halogen lamps, and an intricate paint job. Thermometers heated by the lamps showed how heat was trapped when a glass bowl was placed over the second Earth model—similar to how the sun's energy is trapped by excess greenhouse gases. Enhancing the wind-power segment of the presentations was a hands-on activity in which the students created pinwheels with construction paper, a thumbtack, and a pencil. Pinwheels were used to demonstrate the conversion of wind power (blowing) to mechanical power (pinwheel rotation).

We feared that our presentations would simply not appeal to students, so we attempted to prepare for this by devising unique displays featuring as much graphically presented material as possible. This scheme worked better than expected, as each hour-long presentation



Iowa Alpha in action.

contained at least 10 minutes of questions. Several were so creative and challenging that we had to plead an unfortunate lack of knowledge, despite practice sessions aimed precisely towards avoiding that scenario. Therefore, the purpose of our accompanying website is not only to provide succinct summaries of our presentation material, but also to direct curious individuals to other sources of information. Despite our best efforts, we can by no means incorporate everything we want into our presentations and still keep them under an hour.

That said, this GIG project will definitely continue in 2003-04, throughout which we will plan semimonthly presentations. Feedback from the first three presentations will be considered while improvements are made on the current modules, and working models of both a water turbine and a wind turbine will be added to the hydroelectric and wind-power modules, respectively. We also plan to assemble additional modules on solar and nuclear power, intending to incorporate them into our presentations by next spring. With so much work remaining, an additional cabinet position was created this semester, GIG Project Chair. Its sole purpose is to direct this project throughout the next year.

Despite the unanticipated extended schedule, Iowa Alpha is very pleased with the results of this GIG project. Feedback from the teachers whose classes we visited has been overwhelmingly positive, and most volunteers indicated that they enjoyed interacting with all the future engineers—after the stage fright wore off!

For a better idea of the material presented in our modules, visit our alternative-energy website, linked from the Iowa Alpha homepage at www.public.iastate.edu/~tbp. During the year, 15 members, two electees, and one advisor contributed their time and effort to GIG.

—Brian M. Crawford, Vice President