

GATEWAY TO ENGINEERING
(GIRLS ARE TECHNICALLY EXCELLENT, A WAY TO LEARN ABOUT ENGINEERING)

Parent organization: Society of Women Engineers of Columbia River, <http://www.swe-columbia-river.org/>

Web address: <http://www.gatewaytoengineering.com/>

Grade level or ages served: Grades 3 – 5 and 6 - 8

Overview: The GATEway to Engineering Program is a hands-on, inquiry based camp designed to introduce girls to the world of engineering through daily themes such as Sports Engineering, Food Engineering, Theme Park Engineering, Toy Engineering, and Environmental Engineering. The program provides a safe environment for girls to interact with and explore technology and engineering. Each week long session will include activities such as: making your own ice cream, packaging / mailing your spaghetti, designing a marble roller coaster, designing a gum-ball machine, recycling paper, and building a water filtration system.

Subjects covered: Physics, Material Science, Chemistry, Environmental Engineering, Mechanical Engineering.

Size of program: Summer 2005 was the pilot year with 3 sessions: 2 sessions for grades 3-5, and one for grades 6-8. The number of sessions in future summers may be increased; an afterschool program is also under consideration. Currently the challenge has been reaching the target audience. The first year averaged 1/3 of capacity, 10 girls when up to 30 girls can be supported per session.

Where offered: Capital Center, Beaverton; PCC Central WFTC, Portland

Time spent by students: 5 days, 6 - 8 hours per day

Partners/Sponsors: Portland Community College, Community Education/Kids College, <http://www.pcc.edu/pcc/pro/comed/default.htm>

Materials available on web and/or purchase: SWE's target date for a CD of all materials is October 2005.

Training for teachers, facilitators, volunteers, leaders is: Available & Required.

Please explain: The lead instructor must be licensed to teach in the state of Oregon. All instructors are required to attend 4 hours of training where each activity was discussed in detail. This training covers the preparation, curriculum, activity demonstration, approaches to accommodate different learning styles and age appropriateness of material.

Cost structure: \$199 total (Registration \$69, Program Fee \$130). SWE hopes to have a scholarship process in place in the future.

Funding: The program was partially sponsored by the Society of Women Engineers and member donations.

Other points of interest: Campers were recruited through advertising with PCC Community Education Catalog distribution and direct mail postcards to households that fit the demographic in the regions surrounding the Capital Center. Additionally, an article was published in the Tigard Times and Beaverton Valley Times that provided some publicity.