

# girls in engineering: shaping the future

## You are invited...

...to join us in an exciting year-round **engineering program designed for for female students** entering 6th grade in Fall 2011 who want to learn more about the role engineers and engineering play in our lives. This is an opportunity to engage in a long-term research study, from grade 6 through grade 12, aimed at fostering female students' interest in engineering as an innovative, creative, and exciting field that shapes our lives.

Students will engage in hands-on learning experiences designed to nurture their natural curiosity and will apply their creativity to solve engineering design challenges.

### Why Engineering?

Engineering unleashes the spirit of innovation. Engineers constantly discover ways to improve our lives. Engineers help shape the future. Exploring engineering when in middle school gives opportunities for students to experience first-hand how science, technology, engineering, and mathematics can impact real-life challenges. An enhanced awareness and knowledge of engineering will expand a young student's opportunities in tomorrow's world, whether as an entrepreneur, inventor, scientist, technologist, engineer or mathematician who can compete in the global workplace of the 21st century, or as a technologically literate citizen who can make more informed choices for themselves and their families. According to the National Science Foundation, only 11% of women in the United States are employed as engineers.

### Our Goal

Is to inspire female students to explore engineering design and to foster their natural curiosity and encourage the spirit of innovation needed to engage with the grand challenges of our time.

### Who is eligible to apply?

Female students **entering** 6th grade in Fall 2011 in the Kyrene School District are eligible to apply.

### Program Requirements

Participants are required to take part in out-of-school programming from 6th grade through 12th grade. Each year, participants will experience a 5 day long hands-on workshop in the summer before school starts, 2-3 Saturday events each in the Fall and Spring semesters with workshops and field trips to the Arizona Science Center or Museums, and a 3-5 day long hands-on workshop in the summer immediately after school ends. Participants are required to provide the program director with access to their school records (e.g., attendance, course enrollment, course grades, AIMS scores).

### Application Process

Download the application packet at <http://k12.engineering.asu.edu/gie>

Submit completed application packet to your elementary school secretary by **Wednesday, May 4, 2011**

You will be notified of your selection by Monday, May 9, 2011.

Selected participants and their parents/guardians must attend a required orientation on Friday, May 13, 2011, 6:00 pm, in the Kyrene School District, 8700 S. Kyrene Road.

learning engineering through design

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Program Facilitators

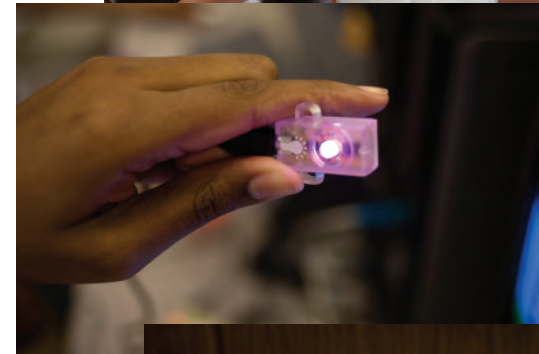
Arizona State University, Ira A. Fulton Schools of Engineering:  
**Tirupalavanam Ganesh**, Assistant Professor, Engineering Education  
**Christine Foster**, Doctoral Student, Engineering Education  
**Linda Kreckler**, Doctoral Student, Art Education  
**Tania Lyon**, Undergraduate Student, Engineering

Kyrene School District educators:  
**Suzi Mast, Theresa Sweeney**

Students will engage in engineering design challenges and cultivate the engineering habits of mind.

Students will have opportunities to develop their creativity, communication and collaboration skills to solve engineering design challenges.

Students will also explore the role of engineering and its impact on our daily lives and develop an understanding of what engineers do at work.



**create bold solutions. turn ideas into realities.  
help shape the future. make a world of difference.**