

# GEMS PROGRAM – Exploring Opportunities!

Is this what you thought you would be doing when you grew up? How much money do you make? What are those rings? Those were just a few of the many questions asked by over 65 girls from the Minneapolis Public School District touring Productivity Inc on Thursday, July 17. The girls, 4th – 8th grade students, are participating in a 10-week summer program called Girls in Engineering, Mathematics and Science (GEMS), hosted by Augsburg College.

The GEMS program is also offered during the school year, October – May. There are approximately 400 girls involved with the after-school GEMS program, and

approximately 11-15 schools participate.

GEMS was created 11 years ago, and provides opportunities for young girls while creating small learning communities in which responsible risk-taking



**gems**

is encouraged and playful learning and tinkering are an accepted and integral part of the curriculum. Performance improves, positive attitudes increase, and interest in math, science, and technology grows and directly affects subsequent school and career choices.

Touring Productivity, in mid-July, gave students the opportunity to view their robotics, a high interest for the students; as they get a chance to work with robotics in their Lego League, where they assemble and engineer robots from Lego bricks, and then program the robots into computers.

The girls got to touch, hear and see... and even commented on the smell of the many machines Productivity distributes. They observed a Nakamura-Tome STW-40 three turret multi-tasking turning center, being integrated with a FANUC M16iB/20 toploading robot. In addition, they also got to view a RoboFlex CS pre-engineered robotic loading system that was connected to a Haas SL-20 long bed lathe with live tools. The girls couldn't get over how the Haas lathe could make "those metal rings." They all wanted one to take home.

From the machines, to the products, to even the scraps, the students were engaged and eager to learn, and Don Engles, manager of the automation group at Productivity, was proud to teach them. The GEMS program, indeed, opens the door for many young girls and the manufacturing industry – providing a successful win across the board.

Part of the GEMS curriculum includes field trips, where the students tour manufacturing facilities. "We want to empower the girls and get them to think outside the box," said Mary Smith, second grade teacher from the Minneapolis school district. "There is a very high need and we want to reinforce students to go into this area... it is an economically secure area." Touring manufacturing facilities gets students engaged in the industry – they have the opportunity to view real-life examples.

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