

CJ Inspires Ambitions for Future Engineers

Over 130 fifth grade students from Bishop Leibold, St. Albert and St. Luke schools combined their creative talents and ideas to help “Dream Up the Future” at Chaminade Julienne in celebration of National Engineers Week (Feb. 20-26). For many, this was one of their first experiences to consider how engineering is used in our world.



CJ’s student Eagle Ambassadors led potential future engineers through a morning of discovery and adventure as they competed to create giant balloon

carbon nanotube structures, designed and constructed functional robotic arms, built and launched straw rockets, used AutoCAD design modeling software, and propelled gumdrops across tiled terrain.

“We used every day materials to make our robot arm,” said Evan Jones from St. Luke. “We completed the first challenge, and picked up a paper object with it!”



Bishop Leibold’s Megan Dancer’s best experience was launching gumdrops into a target almost 20 yards away. “We had to change the angle and adjust the notches on the red launcher for how far it was going to get the gumdrops to go into the bucket.”

In addition to discovering the effect of launch angle, rocket fin shape and size, and air pressure, students delved into an Engineer’s Toolbox to utilize AutoCAD design and modeling software under the guidance of CJ alum Cara Nartker ’09, who is pursuing a mechanical and aerospace engineering degree at the University of Dayton.

Jasmine Hughes from Bishop Leibold appreciated the new experience using the computer-aided design software. “We made an iPod on the computer. I never did something like that before. You had to follow the directions to make circles, triangles and squares. Then you had to fit and place them together, and it turned into an iPod.”

Students interested in a medical career also gained an understanding of how engineering plays an increasing role in robotic surgery. They tested their own manual dexterity and hand-eye coordination as they performed “surgery” using mechanical grabber tools.

“This day was about exposing students to a few ideas of what kinds of challenges teams of engineers can solve, and how engineers can make a real difference in the world,” said Meg Draeger, coordinator of CJ’s STEMM (science, technology, engineering, math and medicine) program. “Then, we gave them a morning of hands-on engineering design and testing of their own solutions.”

“We brought in the kind of learning experience that the Project Lead the Way engineering curriculum brings to our own high school students. It involves discovery, working in collaboration with others, testing ideas, and then making adjustments to improve your product.”

Draeger, who earned her Bachelor’s degree in industrial engineering from the University of Illinois, and her Masters from the University of Dayton, believes that it is important to introduce the idea of engineering to young students.

“At this age, it’s nice for students to see how engineering is present in their everyday lives,” she said. “It also helps answer for them where their studies in math and science can take them in the future.”

For more information about [CJ STEMM](http://CJSTEMM.org) (science, technology, engineering, math and medicine), please visit cjeagles.org, or contact Meg Draeger at mdraeger@cjeagles.org, or (937) 461-3740 x487.

