

SDSU Society of Women Engineers Girl Scouts Engineering Workshop November 2018



Girl Scouts getting to know the SWE members

Last semester, the **SDSU Society of Women Engineers (SWE)** collaborated with the **SDSU Mechatronics team** to host a workshop during which sixteen Junior Girl Scouts had the opportunity to earn their badges in Mechanical Engineering and Robotics. After arriving at the EIS Zahn Innovation Center, the Girl Scouts were given a demonstration of a 3D Printer, and the Mechatronics autonomous underwater robot by Austin Wulf, Mechatronics Mechanical Engineering Lead. Jade Sommers, SWE Outreach Officer and Mechatronics Mechanical Engineering Designer, explained the basic engineering design process and talked the Girl Scouts through some common pitfalls engineers often run into. The Girl Scouts were divided by rank, Brownies, Daisies, Juniors, and Cadettes, and led by SWE members in their individual engineering challenges. The groups initially started out creating simple mechanical designs, creating “fling flyers”, board games, and cranes out of recycled materials such as cardboard boxes and Styrofoam. Then, the Brownies, Daisies, and Juniors created leap bots, model cars, and paddle boats, respectively. The single Cadette in attendance worked on designing, building, and programming a small robot with an Arduino and servo motors. While the Girl Scouts were working on their engineering projects, the Troop Leader, Amanda Murphy, and the Girl Scouts’ parents were given a separate challenge - a competition to build the most structurally sound marshmallow tower. At the conclusion of the workshop, the Girl Scouts were able to demonstrate their creations, and were presented with their badges by the SWE members that assisted them. This event provided an excellent opportunity for young females to discover their engineering potential through hands-on activities and a trial-and-error building process. This event also showcased other SWE members as role models, giving representation to females in engineering. The Girl Scouts left with the creations they built, their badges, and a newfound confidence in their engineering abilities.



Cadette wiring Arduino robot
with SWE member



A Daisy receiving her Mechanical
Engineering badge from SWE
member



Brownies testing their model cars
with parents