



JOSEPH KUSHNER HEBREW ACADEMY

RAE KUSHNER YESHIVA HIGH SCHOOL

RKYHS STEM STUDENTS PRESENT CAPSTONE PROJECTS AT INNOVATION CONFERENCE

RKYHS STEM students presented their Capstone projects at the CIJE Innovation Conference, May 6, 2018 at the NY Hilton in Manhattan. More than 1,000 students from approximately 40 Jewish Day Schools participated in the event. RKYHS seniors Emily Gruber and Jonah Braverman took home first place for Innovation in Health Care with their AED On The Go, an ultra portable and cost effective pocket sized defibrillator to treat sudden cardiac arrest.

Additional examples of RKYHS Scientific Engineering and Bio Engineering student Capstone projects included: FeedBot, an automated device to help feed people who can't feed themselves using facial recognition software and a robotic arm, PillClock, a personalized, automatic pill reminder, Glucosalyzer, a glucose detector utilizing saliva instead of having to prick your finger, LoNess, a date rape drug detector, Sole of Fire, a snow boot with a metal boot which heats up to prevent slipping, ThermoCharge, a thermoelectric generator which converts heat from the phone into electricity to charge the phone and more. RKYHS students have been working on these projects all year long and acquired skills in circuitry and programming and how to use microcontrollers, microcomputers, and countless technology components. Equally important, they have learned to persevere through frustration, to learn from mistakes, to find new ways to solve problems and to present technical information in a professional business setting. The RKYHS STEM Program includes numerous STEM related course offerings spanning all high school grades: Coding (9th grade), AP Computer Science (10th grade), Robotics Engineering (11th /12th grade); Scientific Engineering (10th grade), Genetic Engineering (11th grade), Bio Medical Engineering (12th grade), DNA Chug (all grades) and an Independent Scientific Research track (10th through 12th grades).

The RKYHS STEM approach focuses on problem-solving and critical thinking, encouraging innovation and invention, while teaching substantive science, mathematics and a variety of gateway skills, including electronics, circuitry, programming, genetics, mechanics and data analysis. Each course culminates in the presentation of year-end projects at various regional scientific/engineering conferences, including yesterday's conference, where our students display and explain their original work to peers and professionals in the field.

