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Grand Opening of Rocklin High School Engineering Support Technology Lab – Oct. 29

ROCKLIN – On October 29, Rocklin High School students will demonstrate the design and manufacturing skills they are learning at the Grand Opening of the Engineering Support Technology lab newly renovated with support from the Sierra College Science, Technology, Engineering and Math (STEM) Collaborative (www.sierraschoolworks.com).

Celebration presentations begin at 5:30 in the Tech Lecture Hall at Rocklin High School located at 5301 Victory Lane in Rocklin followed by student demonstrations and tours of the design and fabrication labs (M4 & M3) at 6 PM. **The public is invited to the event to see how students are being prepared for college and careers in Advanced Manufacturing.**

Using industrial design software and fabrication equipment, Engineering Support Technology students explore how to make a better model of an excavation robot that could work on the moon, produce community service projects such as a bean bag toss cutout for Valley View Elementary School and make beautiful customized projects they can use and display. At the event, students will demonstrate drafting skills in parametric 3D modeling software and fabrication skills using standard and advanced manufacturing equipment:

- **CNC Mill Domino Project** -- 2D tool path & machine set-up
- **CNC Router Trivet Project** – Effects of bit diameter, bit profile & depth of cuts
- **Big Dog Mill Aluminum Door Sign Project** – 3D tool paths & programing from solid models
- **Laser Cutter Business Card Project** – Engraving and cutting
- **Trivet Design** -- Drafting using solid modeling
- **Lego Introductory Design** – Build part, modify, assemble and print (Engineering Design Tools and Workflow)
- **NASA Lunabotics Mining Competition Trophy Design** – Students design trophies for NASA and they are produced on the Sierra College rapid prototype 3D printer for presentation to winners of the competition (Engineering Design Process)
- **Team Building Activities** – Students develop skills to work effectively together in the labs (Employability and Workforce Development Skills – Soft Skills)

Dan Frank, Engineering Support Technology teacher, has a passion for giving students the confidence to turn their ideas into a concept, develop the design and then produce a finished product. “When I was a student, I worked in the UC Davis engineering shop making projects for research,” said Frank. “I discovered how fun it was to work with metal, figure something out, and see the resulting product being used. In this class, I mentor and challenge students while I share the thrill of using advanced Manufacturing equipment to convert a scrap of metal into an amazing project.”

Carol Pepper-Kittredge, Director, Sierra College Center for Applied Competitive Technologies (CACT), explained that the Sierra STEM Collaborative works with high schools to prepare students to study mechatronics, welding, engineering, or drafting and engineering support at Sierra College. “The new lab at Rocklin High School introduces students to the exciting career opportunities in design and manufacturing,” said Pepper-Kittredge. “Dan Frank is inspiring students by giving them real world experiences to channel their creativity. His students have a jump start on making career plans.”

The Sierra College Center for Applied Competitive Technologies serves manufacturers and technology companies with customized training & technical support; provides entrepreneurs with access to rapid prototyping and other manufacturing technologies; and through the Sierra STEM Collaborative supports career technical education programs in manufacturing & product development, engineering & design pathways at the high school and college level. Additional information is available at www.sierracollegeetraining.com or contact Carol Pepper-Kittredge at 916-660-7801 or cpepper-kittredge@sierracollege.edu.