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# Past Valedictorian Advocates for Engineering Career Field

OCTOBER 05TH 2021 BY DEE LOFLIN

## Past Valedictorian Advocates for Engineering Career Field

Poplar Bluff, MO - An alumna returned to Poplar Bluff Schools, not long after she graduated at the top of her class, to speak with the Junior High design and modeling class about her experiences thus far studying engineering.

Valedictorian and student body president of the PBHS Class of 2019, Sophie Rowland, who served as guest speaker on Thursday, Sept. 29, is a junior at Missouri University of Science and Technology in Rolla and works for Proterra, an electric vehicle technology manufacturer.

“All engineers have one objective, and it’s to solve problems,” Rowland told the class, which included exploring careers students for part of the school day. She broke down the different branches of engineering, noting that she works as a system engineer, “designing processes to be more efficient.”

Following a short presentation, Rowland led a group exercise that involved constructing a boat out of a 6-by-6 inch piece of aluminum foil using a single pair of scissors. The team with the structure that holds the greatest number of pennies without sinking in a tub of water won a treat.

Instructor Jodie Berry’s team “taco” led the challenge during third hour, with 111 pennies. Eighth grader Bryant Miller explained that their victorious strategy was to make the sides of the structure the most compact. “We kept packing [the tinfoil] in and packing it in,” he

commented, speculating that if they doubled up on layering the bottom of the boat as well, the boat could hold even more coins.

When the class reconvened to analyze the experiment, Rowland revealed that the top team created a boat with the highest surface area to distribute the weight. During the Q&A portion of the lecture afterward, Rowland advocated for the engineering career field, comparing the salary range to that of a doctor, without the additional years of post-graduate schooling.

She will complete her engineering degree in just four years, and then take the principles and practice of engineering exam in order to be declared a professional. Part of the Missouri S&T program is to complete an engineering co-op, and Rowland has ambitiously landed apprenticeships at C.E. Norton Construction & Plumbing, Hunter Engineering Company and her most recent job.

Serving as project manager, helping to build battery-powered buses, Rowland shared how Poterra makes the only bus in the world fabricated entirely out of composite material so the lightweight, aerodynamic vehicle can travel further. She worked full time at the South Carolina operation over the summer, she said, when the fifth-generation bus was released.

“I wish I had something like this when I was in school – even at the high school level,” Rowland later observed of the new Project Lead the Way elective, which is one of three Gateway courses offered this year. She said she was just fortunate to connect with local engineers to gain some initial exposure in the field.

According to Berry, the PLTW design and modeling class will continue to expose the students to as many STEM-related careers—in science, technology, engineering and math—as possible. The next guest speaker lined up will be an orthotist.

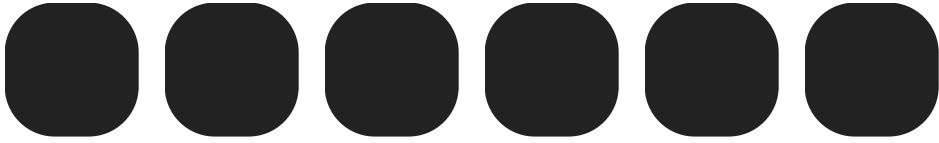
Pictured: Sophie Rowland of the PBHS Class of 2019 shows PLTW design and modeling students a picture of an electric bus she helped build.

Photo and article submitted by Tim Krakowiak, Communications/Marketing Director, Poplar Bluff R-I School District

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