Queen Anne's County

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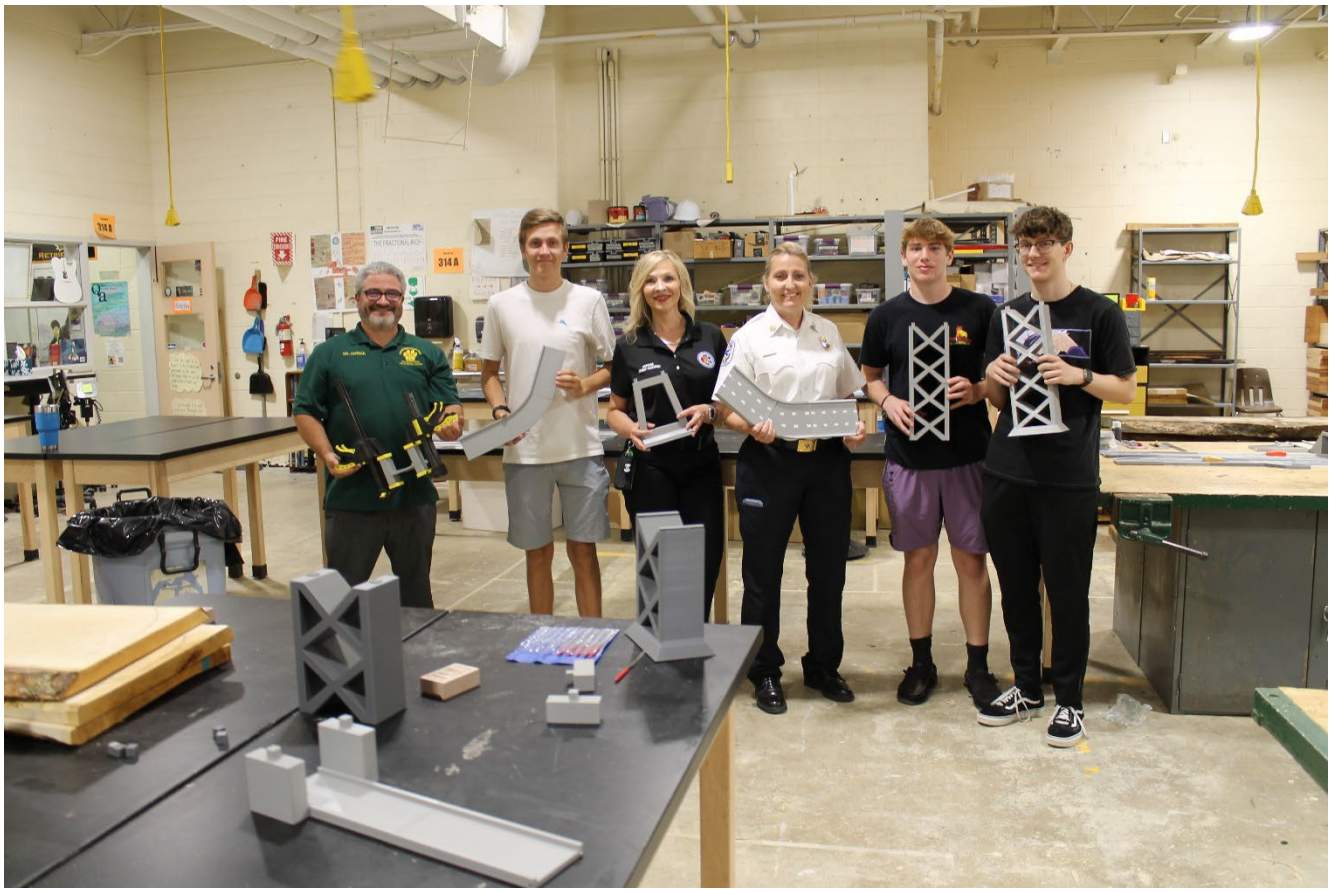

Picture L-R: Mr. Alex Herman, Mason Beville, Lt. Debra Hopkins, Chief Lori Morris, Jameson Woodward, Tyler Christman

Queen Anne's County Students Partner with Emergency Services to Build 3D Bay Bridge Training Model

A unique collaboration between Queen Anne's County High School students and the Department of Emergency Services, Special Operations Division, has produced a one-of-a-kind educational and training tool: a 3D-printed model of the Chesapeake Bay Bridge.

The project was brought to life by students in Mr. Alex Herman's Computer Integrated Manufacturing class at Queen Anne's County High School. Working from a vision shared by Lt. Debra Hopkins, the County's Emergency Planner, the students designed and built a scaled replica of the Bay Bridge using 3D printing technology.

This model will be used in a variety of ways, including:
- Visuals for the County's Beach to Bridge Traffic Management Plan
- Tabletop training exercises for first responders and multi-agency emergency response drills
- Planning discussions for special events, such as the Bay Bridge Run, where clear visuals of equipment placement and traffic flow are essential

"Having a training prop like this is invaluable," said Lt. Hopkins. "To pay for a professionally produced version would have cost the County thousands of dollars. Instead, these talented students created it for the cost of materials alone, gaining real-world engineering and problem-solving experience in the process."

In addition, this project gave students the opportunity to work with a "customer" who had real-world expectations rather than just completing a classroom assignment. They learned to balance meeting the needs of Emergency Services with what was realistically possible in their design process. This experience gave them insight into how to navigate customer expectations, adapt their capabilities, and deliver a successful product, an important lesson for any future career path.

The project was completed by students Mason Beville, Jamison Woodward, and Tyler Christman, along with their classmates in the Computer Integrated Manufacturing class. The class was guided by teacher Mr. Herman, with support from Lt. Hopkins.

This effort builds on the strong and growing partnership between Queen Anne's County Emergency Services and Queen Anne's County Public Schools. In addition to this project, Emergency Services staff regularly provide students with hands-on training in CPR, Stop the Bleed, Community Emergency Response Team (CERT) skills, and Homeland Security curriculum support.

"Resilient and confident students flourish from opportunities like these," said Hopkins. "We are proud to prepare our young people for bright futures in public safety, engineering, and beyond – while also directly benefiting the community with lasting resources."

The Department of Emergency Services looks forward to continuing this partnership with local schools and exploring future projects that strengthen both student learning and community preparedness.