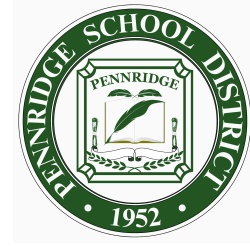


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FOR IMMEDIATE RELEASE

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Pennridge Students Recognized for Innovation in Navy & Marine Corps 250th STEM Challenge

Future Fleet Builder Kits Delivered Following Regional Maritime Innovation Competition

PERKASIE- Pennridge High School students continue to receive recognition for their innovative work in the Navy & Marine Corps 250th STEM Challenge, a regional, maritime-focused competition held in conjunction with the 250th anniversary celebration of the U.S. Navy and Marine Corps.

The “Shark Tank”-style challenge, hosted during the Navy & Marine Corps Homecoming 250 celebration in Philadelphia, brought together students, educators, military leaders, and school districts from across Pennsylvania, New Jersey, and New York to explore how science, technology, engineering, arts, and mathematics (STEAM) can support the future of naval innovation and maritime manufacturing.

Sponsored by BuildSubmarines.com, the competition invited students to research real-world naval challenges and design prototypes connected to shipbuilding, fleet sustainability, maritime engineering, navigation, maintenance, and advanced manufacturing. Students were encouraged to work collaboratively in teams to develop innovative solutions to authentic challenges facing the U.S. Navy and Marine Corps while applying engineering, design, creativity, and problem-solving skills.

As part of the continued recognition for participating schools, Pennridge High School students will now receive Future Fleet Builder Kits provided through Homecoming 250, BuildSubmarines.com, the Submarine Industrial Base (SIB) Program, and Blue Forge Alliance.

The kits include technology tools, classroom resources, and lesson materials designed to extend learning opportunities in maritime manufacturing, advanced technology, automation, robotics, additive manufacturing, and career literacy.

Judge George Leone, President of the Homecoming 250 organization, visited Pennridge High School to personally recognize students for their participation and innovation in the Navy & Marine Corps 250th STEM Challenge. Leone has played a key leadership role in coordinating the regional Homecoming 250 celebration efforts, helping connect schools, military organizations, and community partners throughout Southeastern Pennsylvania and New Jersey. During his visit, he congratulated students on their creativity and problem-solving while presenting Future Fleet Builder Kits designed to help extend STEM learning opportunities tied to maritime innovation, advanced manufacturing, and future workforce development.

Leone emphasized the importance of continuing the educational impact of the event.

“These kits help extend the impact of the STEAM competition and give schools additional tools to connect students with STEM learning and real-world maritime career pathways,” Leone said. The educational kits were designed by TECHnista, LLC to help schools integrate emerging technologies and real-world technical skills into classroom instruction.

As part of the experience, participating students also had opportunities to engage with broader Homecoming 250 programming throughout Philadelphia and Camden, including visits to the Innovation Pavilion, the Battleship New Jersey, the Independence Seaport Museum, the Cruiser Olympia, the Submarine Becuna, and active-duty Navy and Coast Guard vessels participating in the commemoration events. Students were also able to interact with Navy and Marine Corps representatives, explore maritime career pathways, and learn more about the advanced technologies supporting the nation’s submarine industrial base and naval operations.

Pennridge Superintendent Dr. Angelo Berrios, a Marine veteran, was one of more than a dozen educational, military, and community leaders who helped plan and coordinate the Navy & Marine Corps 250th commemoration activities throughout 2025. The regional collaboration was designed to create meaningful learning opportunities for students and staff across Southeastern Pennsylvania and New Jersey while strengthening partnerships between schools, industry leaders, and members of the Armed Forces. Through the initiative, students gained rare exposure to the Navy and Marine Corps’ advanced technological innovation, engineering expertise, and real-world problem-solving processes connected to national defense, shipbuilding, manufacturing, and maritime operations.

Dr. Berrios praised the opportunities created through the initiative and the way Pennridge students rose to the challenge.

“Our students are future leaders and innovators,” said Dr. Berrios. “When they are given opportunities to think critically and solve problems through a technologically innovative lens, they rise to the occasion every time. Competitions like this not only showcase their talent but

also prepare them to compete and contribute in a global economy. My hat's off to our students and to Mrs. Thomas for representing Pennridge with such purpose and distinction."

Mrs. SueEllen Thomas, Pennridge High School's Enrichment and Gifted Mentor, shared the opportunity with students early in the school year and encouraged collaborative participation across grade levels and interest areas.

"Teams of three and four were recommended, but students were encouraged to participate even if they did not yet have a team," Thomas said. "The goal was to inspire students to think creatively, collaborate, and explore innovative ideas connected to real-world naval and engineering challenges." The event encouraged students to combine creativity, collaboration, and technical problem-solving as they explored emerging technologies and future maritime careers tied to the nation's submarine industrial base.

More than 15,000 companies across all 50 states contribute to the U.S. submarine industrial base, and the nation is expected to need approximately 140,000 additional workers in the coming years to support submarine production and sustainment efforts.

By combining classroom innovation with hands-on learning opportunities, the Navy & Marine Corps 250th STEM Challenge and Future Fleet Builder Kits initiative aim to inspire the next generation of engineers, innovators, builders, and problem-solvers while strengthening connections between schools, industry, and national service.

Several Pennridge High School teams initially signed up for the competition, but despite scheduling changes and conflicts with other student activities, two Pennridge teams fully developed and submitted their projects for display and evaluation at the Innovation Pavilion during the celebration.

One Pennridge team, seniors Finn Bachman, Gavin Chodoroff, and Gavin Mill, known as "Two Gavins and a Finn," developed a shark-skin-inspired hull design prototype intended to reduce drag and improve ship efficiency. Their project used biomimicry and 3D-printed engineering concepts to model how shark skin denticles can reduce turbulence, improve maneuverability, and increase fuel efficiency.

Major General Ryan S. Rideout, Commanding General of the 2nd Marine Aircraft Wing, praised the students' work.

"I am really impressed with the simplicity and low-tech ideas which are very cost-efficient and use nature as a way to create a solution," Rideout said. "Their understanding of nature and how shark skin works, as well as how we could mimic that shark design because it's already known to be the most efficient swimmer and predator in the water, was brilliant."

A second Pennridge team, Brandon Millili, Elijah Kurzman, Fenix Bock, and Soulayman Abdi, calling themselves "The Anti-Barnacle Boys," tackled the problem of barnacle buildup on ship hulls by creating a self-powered, environmentally friendly solution using triboelectric nanogenerators (TENG) and specialized coatings to prevent biofouling and reduce drag.

Lt. Cmdr. Kristopher Reyes praised the students' research and real-world application.

"Their project has a very good chance of being implemented because of their brilliant power source design," Reyes said.

Major General Rideout also commended the team's efficient use of energy and engineering creativity. Enrichment and Gifted Mentor SueEllen Thomas reflected on the dedication shown by students throughout the process.

"Even with scheduling changes and a busy season of student activities, these teams continued working both in and out of school to complete their projects," Thomas said. "Seeing their ideas displayed at the Innovation Pavilion and reviewed by high-ranking military leaders was an incredible experience for our students. Their work proves that innovation can spark anywhere when students are given opportunities to explore."

For more information about maritime career pathways and educational resources, visit BuildSubmarines.com.

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