

## MARMC Host Apollo Challenge Finale and STEAM Event



**By Chris Wyatt, MARMC Public Affairs Specialist**

NORFOLK, Va. (NNS) – Mid-Atlantic Regional Maintenance Center (MARMC) Fabrication Laboratory (Fab Lab) hosted Apollo Challenge participants and held a Science, Technology, Engineering, Art and Math (STEAM) fair aboard Naval Station Norfolk, April 22.



Two hundred students from three area middle schools, Deep Creek, Great Bridge and Crestwood, visited MARMC to participate in the large STEAM Fair.

The Fleet Design Challenge, better known as Project Apollo, solicited ideas using innovation from Sailors and other military branch members to create their own ideas and print them at MARMC on 3D printers.

“We are finishing up with Project Apollo today,” said Fab Lab Project Officer Lieutenant Todd Coursey. “We selected the top design teams to come down here and build 3D printers to make their designs. This is also in concurrence with the STEAM fair going on here at MARMC.”

The Project Apollo teams arrived early so they could have the 3D printers built before the STEAM fair started.

“We wanted to give the students the opportunity to come into the Fab Lab and explore and ask questions about the 3D printers and Apollo designs,” said Coursey. “We also took this opportunity to announce the winners of the design challenge.”

One of the top Project Apollo design submittals will have their design printed on the International Space Station. “The top design selected for the space print was the HYDRA Clip from USS Harry S. Truman (CVN 75),” said Coursey. “This clip is designed to repair the plastic housing on the headset/microphone, which is prone to cracking. This one piece provides Truman with \$7,200 in monthly cost savings by not having to replace the HYDRA housing every time it fails.”



The Project Apollo Finale was only one part of the STEAM fair. Guests were engaged in private industry, academic and government tabletop displays and interactive booths. Naval commands including Space and Naval Warfare Systems Center Atlantic, Norfolk Naval Shipyard, MARMC and Naval Surface Warfare Center Damneck participated alongside Old Dominion University’s (ODU) College of Engineering and Technology to show visitors the power of STEAM and what can be created by it.

“Everybody brought their interactive displays and we are really excited to have them here,” said Coursey. “The students are able to engage in various STEAM activities and see what we do here on a daily basis with respect to technology.”

ODU was on hand for the day to show students not only the types of innovative projects they can expect to build in college, but how these projects are helping to shape industry today.

“We are so happy that MARMC and Lt. Coursey reached out to us to be a part of this fair,” said ODU Naval Engineering Marine Systems Institute Director Dr. Jennifer Michaeli. “We have unmanned vehicles, our Baja car, and we have underwater robotics that the students can drive out in the pool. This is a way for us to engage with the students and at this young age, maybe plant the seed for how exciting engineering can be. Sometimes, we are up against a perception that engineering isn’t fun and we want to show them just how awesome engineering is. Lastly, we want to show students that they can go from their school to ODU, find something they are passionate about in engineering, and then transition into a career with the Navy or the civilian workforce.”

In addition to ODU and private industry representation at the fair, MARMC had multiple booths on hand to demonstrate how STEAM impacts daily work life at the command. Safety,

Waterfront Operations and Non-Destructive Testing all had interactive booths for the students to visit and engage with.

MARMC Class Team Lead (Dock Landing Ships) Chris Dellinger and Project Manager Russell Tjepkema manned the tabletop display for the Waterfront Operations Department. There were interactive crane lifts for the students to try in order to move a mast onto a Lego replica destroyer.

Dellinger sees this fair as an opportunity to reach out to today's youth at an early age. He said this is a huge opportunity to spark interest in the students' minds early.

"We mentioned to the students that all those ships they passed by coming onto the base, we keep them floating -- doing the country's mission," said Dellinger. "The crane activity we have on hand today is a huge hit as we've had a lot of students try it out."

MARMC Commanding Officer Captain Steven Stancy was very happy with the level of engagement he saw from the middle school students.

"This was a great opportunity for the students to see how to apply what they learn in math and science class," said Stancy. "Here, they get a chance to not only see, but touch and investigate how the various interactive displays work. They can use what they learn in school and come here and design things for the future and potentially solve problems using their imagination and innovation. Science, technology, engineering, art and math -- they all can be fun and shape our future."