machines cover all aspects of personal training, hitting all the body parts, including but not limited to quads, calves, biceps, triceps, traps, deltoids, pectorals and abdominals. The newly

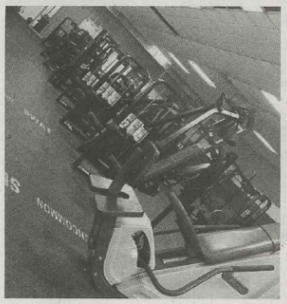

Photo Submitted

Cybex machines donated to Somerset's sports program to help improve strength and core workouts.

North Florida College reaches out to the community helping its youth

Mike Johnson
ECB Publishing, Inc.

North Florida College (NFC) has partnered with the surrounding counties offering their middle school students a chance to study and further their education in the STEM SEALs project. The STEM programs cover various subjects, including science, technology, engineering and mathematics, hence the name STEM. The SEALs part pays tribute to the Navy SEALs, and the program focuses on three disciplines: LAND, SEA and AIR. The program's purpose is to create collaborative partnerships between the school level, college level and STEM professionals to promote greater awareness of STEM pathways, increase readiness for STEM post-secondary study and generate student identity as STEM-able, STEM-skilled and STEM-belonging. The goal of the STEM SEALs project (a National Science Foundation-funded research project) is to provide quality STEM resources and experiences for rural middle school students.

Their grant creates a collaborative partnership with schools, colleges and STEM professionals. A big part of the STEM program is recruiting area educators to help design the learning modules and activities with their expert NFC team in the fall of the year and then have them review the modules in the spring before using them with students in NFC Summer Institute. All the educators for this year's camp have been with the program for a year and some over two years. Tri-County Electric also helped sponsor the program, and the Suwannee County School District helps provide transportation for some students.

It's a three-year program already in its third year, but only its second summer. The grant was awarded in April of 2019, and the first camp was held in July 2020. The first summer's camp was done mostly virtual due to the COVID pandemic. It focused on the LAND part of the program. The students were taught how to build, program and use land rovers in many different cases.

This summer, the second of three, introduced the SEA part of the course. The students built, programmed and learned how to operate a robotic boat that could navigate remotely or autonomously. At the end of the week-long program, students competed in five different events to showcase their skills of what they learned that week. Three of the events were held in a mobile pond where students used the remote-control feature. The three events included a speed challenge where they raced down and around a buoy, a figure-eight contest to show their maneuvering skills and a bumper boat derby. They tried to be the last boat to lose a ball balanced on a golf tee located on the bow in the derby.

The other two events were held at Lake Osceola on the NFC campus. The first race was a remote control race around two buoys and back to the dock. The final race held was students had to use the autonomous navigation feature of the boat. Students had to program their watercraft to travel around one buoy and then take a water sample. Once the boat returns, the student has to take the sample to a station and analyze it for analytes.

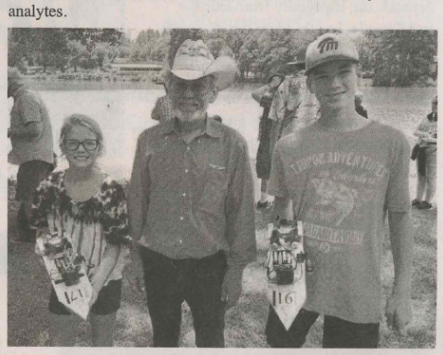

Photo Submitted

May McNeill is a rising sixth grader at Aucilla Christian Academy and Benjamin Faglie is a rising eighth grader at Aucilla Christian Academy. Here the students hold the boats they built and programmed during the six day course. Pictured, left to right, are; May McNeil, Dr. Guenter Maresch and Benjamin Faglie.

The students did their best all week long, working hard on their boats and taking pride and ownership. Over the week, students had to learn how to handle many different factors related to programming and designing a boat. It could have been as simple as changing low batteries or as complex as going through lines of codes.

Students took their boats out to the lake Friday with instructors for test runs and quickly found out things can change. Of course, they had the mentoring and coaching of the NFC expert team (Dr. Guenter Maresch, Dr. Chris Bacot and Bill Eustace) as well as area educators to guide them through this process. A few students' boats while testing became lost at sea and needed to be recovered by the instructors. While recovering the lost boats, the NFC expert team lost two of their own. The experts then took a page out of the student's handbook and learned and overcame the problems they were facing.

The STEM program's goals for its students would be to encourage students to reach out and experience new things, gain confidence to tackle things they have never experienced through problem-solving and critical thinking and discover and develop their talents and skills.

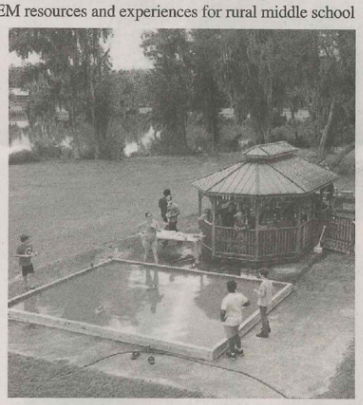

Photo Submitted

Students preparing for the competition, practiced in the mobile pond built for this years STEM sea program.