

Small Talk by Bill Rettew Jr.: Students on a mission to save horseshoe crabs

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What middle school student doesn't enjoy working with technology — and especially — robots?

A group of more than a dozen students at G.A. Stetson Middle School have taken their love of technology to the next level.

The students conceptually designed an app for children to anonymously host petition drives. With it, they hope to save horseshoe crabs. As if that isn't enough, they have also entered a robot competition.

The Stetson students are participating in an extracurricular activity in conjunction with the University of Pennsylvania for a regional STEM competition.

As the first students to join the Ecological Research and Development Group's "Protecting Health" initiative, they will compete in the FIRST LEGO Team Robocolypse, at Penn in November.

When 13-year-old, seventh-grader Michael Vitullo discovered that three of four types of horseshoe crabs are being harvested at an alarming rate, he and his fellow students took action.

While manipulating robots on a student-designed course with the theme "Animal Allies" the students will present their message — crabs are unsustainably being bled to death.

Special proteins are extracted by pharmaceutical companies which are used to detect the presence of endotoxins, for use with vaccines and in implantable devices such as pacemakers and artificial joints.

Save the horseshoe crab!

The kids argue that synthetic compounds should instead be used to prevent a collapse that could impact Atlantic horseshoe crabs, which are not currently overharvested.

The petition has garnered almost 2,000 signatures. Pharmaceutical giant Eli Lilly and Company had already taken the lead as the only vested company to use the synthetic alternative. Team Robocolypse has also contacted eight pharmaceutical companies. In turn, two pharmaceutical companies reached out to Eli Lilly for additional information and one contacted the students.

Cindy Apostolico, team coach, talked about how students now live in a fast-paced world sparked by technology and how Team Robocolypse benefits.

"They're learning that they have a voice and that adults will listen to them if they organize together," she said. "Despite their age, pharmaceutical companies were receiving their petition with open minds and taking their request seriously."



Teamwork is stressed.

“These kids have to be organized with their time and figure out their different talents—who can do what,” Apostolico said. “A lot is accomplished in a short amount of time.”

Twelve-year old Maria Hromcenco said she is “motivated” to make a difference.

“When I wake up in the morning, I know I’m making a change,” said the 7th grader.

Middle schooler Jonah Edmonds talked about buying a live hermit crab, which is similar to a horseshoe crab.

“I now feel bad that people are doing this to horseshoe crabs in other countries — they’re bleeding them to death,” he said.

Overharvesting of horseshoe crabs in

Asia, where most are collected, could lead to a collapse and added pressure on the U.S. crab population.

Student Spencer Martynick and several others fear that horseshoe crabs might become extinct or over populate.

Several students said that with continued overharvesting, pharmaceutical firms might eventually need to turn to synthetic compounds anyway.

“Let’s ask before they collapse,” Apostolico said is the message students hope to give the pharmaceutical companies.

Students collected 550 signatures the “old fashioned way,” with paper petitions and through word of mouth. They saw the need to collect signatures faster and with less fuss.

But students are unable to use Facebook and several other online platforms because of their age, so they at first asked their parents for help getting the word out.

They then developed their own app, “Mission Petitions,” the first of its kind, which will allow a petition signer to quickly voice their opinions.

“The app allows kids the ability to create and share petitions about things they care about,” Apostolico said. “Kids share by scanning, that’s how they do things now with their phones, through innovative technology.

“Do it quickly, easily, that’s their whole generation.”

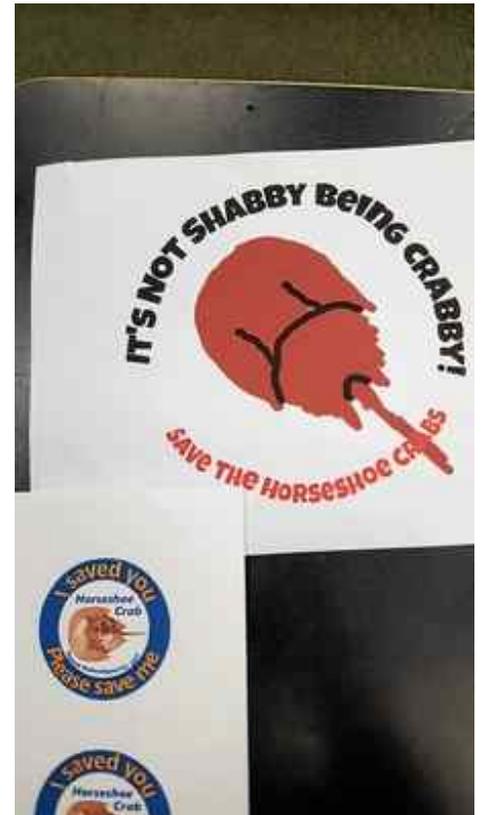
Student Ryan Apostolico agrees with his mother.

“We’re good at education and activism,” he said. “We found how we can make a change globally.”

Ryan said the petition creates interest.

“It motivates,” he said about his fellow petition signers. “If everyone else is signing this, I might want to help too.”

Changes. Stetson students are getting an education combining horseshoe crabs, robots and creating a new app, all



at once.

This is a real STEM education, while supporting young advocates for positive change, all as part of middle school and learning.

The students are helping to save the horseshoe crab, embracing technology and learning about so much.

Good luck at the completion at Penn but sounds like these students have already won.

To sign the petition, go to www.change.org and search for “conserve the world’s horseshoe crab species”

Bill Rettew Jr. is a weekly columnist and Chester County resident. When he wandered Stetson’s halls during the Seventies, a STEM was a thing on a cherry and an app was something you filled out at a job interview. He may be contacted at billrettew@gmail.com.