

MILFORD, PA.

# DV students invent ice melter for STEM contest

By Robert DeMono

For the Gazette

Students at Delaware Valley High School excelled at the Colonial Intermediate Unit 20 Regional Pennsylvania Governor's STEM Challenge last month, capturing first place for their prototype of the "Helios" hand-held ice-melting system.

The team of juniors and seniors consisted of John Moricone, Darian Dzirko, Matthew Madsen, Todd Evans and Brandon Haraldsen.

The engineering students were guided by their mentor, Bob Curtis, who teaches engineering and physics courses at Delaware Valley.

The main idea behind the competition was to have students design implements to improve the lives of the people of Pennsylvania.

The DV team brainstormed and thought about the problems the elderly face in the winter, particularly falling on the ice.

"They thought this was a problem they could do something about," Curtis said of his team.

The prototype that the team came up with melts ice. It is a handheld product that "looks similar to a weed-whacker," according to Curtis. Heat comes out of the bottom of the device and melts the ice. It also sprays environmentally friendly solution.

"We certainly had a lot of ice to test it on lately, and it works," Curtis said. "It was a great idea. The team put a ton of time into testing it and making sure it functions properly. When I first saw sketches of it, I thought the team could develop this into a viable idea and make some money off of it."

The competition, held at the CIU 20 Central Office in Easton, Pennsylvania, consisted of presenting the design developed by the team. Additionally, teams had to speak about engineering difficulties faced by the community, and there was a surprise design challenge as well. Judged on all three presentations, criteria included originality of their design, overall teamwork and collaboration, and how teams communicated their ideas.

DV senior John Moricone



From left, John Moricone, Darian Dzirko, Matthew Madsen, Todd Evans and teacher Bob Curtis. Not pictured: Brandon Haraldsen.

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is the president of the DVHS engineering club. "We have really bonded throughout this experience," Moricone said of his teammates. "We knew each other before starting the competition, but we were not that close. After spending all the hours that we did together

working on the project, we became brothers."

Curtis encouraged his team prior to the announcement that they were victorious. "I told them that no matter what happens to be proud," he said. "They did everything they could. They put the effort in

and it was nice to see that their hard work was rewarded. It was really neat."

"We were all ecstatic when we found out we won," said junior Darian Dzirko. "We were so happy that all the work that we put into the project paid off. We are all incredibly proud of ourselves and our accomplishments."

Moricone added that "it was a huge relief. It was a giant weight off our shoulders. We were able to step back and just be proud of what we did. It was extremely satisfying."

The team advances to state competition on May 29 at Thaddeus Stevens College of Technology in Lancaster, Pennsylvania. The DV crew was given a \$750 stipend by the state that will be used to rebuild and refine the prototype.

"We are going to be putting in a lot more work," Dzirko said.

"There is going to be a lot of fine-tuning to the prototype. We are going to remodel it and make it much more efficient. Our goal is to make it look like a professional product that we would be able to sell."