



Academy students make contacts

Entrepreneur Tony Cervone teaches Blackstone Academy students how their basic technology skills can forge a link to the developing world.

BY JOHN CASTELLUCI

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Steve Cobb, above, a student at the Blackstone Academy in Pawtucket, assembles a solar-powered flashlight, which will be distributed in undeveloped countries, where a lack of electricity is keeping people in the dark.

PAWTUCKET—It could have been a workbench in an electronics factory: Several people were huddled around a table assembling components that included batteries, wires and LEDs.

Instead, it was a lesson in how linking craft and technology can improve life in developing countries, and it was a possible first step in an effort to link a village in Africa with a charter school in the United States.

Tony Cervone of Barrington, founder and chief executive officer of a company that promotes the use of renewable energy, was showing students at Blackstone Academy how to make flashlights that run on batteries charged by solar energy. The flashlight design is the fruit of six months' labor by Cervone in the basement of his home -- the story of a man who left a lucrative position in corporate America to answer a calling.

"Has everyone connected the light and tested the module?" he asked, as the students passed around a hand drill, utility knife, screwdriver and pliers.

"Just imagine. A week from now, you'll be building a light in the dark."

Cervone's son Carl operates a business that makes small loans to entrepreneurs in a village in Tanzania. Cervone said he was shocked to discover during a visit to the village last year that, although it has a school, it lacks electricity. What light there is comes from kerosene lamps.

"I said, gee, there is so much potential here. Africa is full of sun. Solar technology is readily available. It's also a very exciting technology for young people to understand and study and use to help the community, to help the school."

His son's work in Tanzania helped inspire Cervone. So, on returning to the United States, Cervone, 55, retired from Cookson America, where he was an executive vice president for manufacturing, and founded Green Energies LLC, a small Barrington company that markets kits for manufacturing the flashlights.

The Cervones have lived in Barrington about 12 years and both children attended the town's highly regarded schools. Cervone said his son "could have taken a job in a comfortable corner of corporate America and yet he is in this remote village, moving soils and really working with the people and believing in the possibilities."

So Cervone stepped into the basement one day, to create. He tried one idea, building a flashlight from a piece of bendable plastic gutter. "I was very proud of it and then I said, 'OK, but they don't have plastic gutter. So I went back to a plastic bottle and, little by little, you really put together a product,'" he said.

Now he wants to bring such ideas to young people in the schools.

For more than an hour in Pawtucket a week ago, he led eight students at Blackstone Academy step-by-step through the process of making the flashlights out of materials readily available in underdeveloped countries: empty plastic soda bottles, rope lanyards and paper clips.



The flashlight is made from items available in those countries: a soda bottle, wood, wire and a battery.

The soda bottles had been cut in two - the bottom part to house the rechargeable battery, the top part a kind of lampshade to hold the LED module.

When students inverted the top part, they found that the bottle cap fit snugly into the small collar that had been fashioned out of wood and inserted into the bottom part. When the two parts were wired together, the finished product was a flashlight that could be taken apart and used as a lamp.

A small portable solar energy panel provides the power. The panel is plugged into the flashlight to recharge the battery. Cervone said a single charge will last a week when the device is used as a flashlight; three days when it's used as a lamp.

Assembling the flashlights provided a lesson in elementary electronics. Chemistry and physics teacher Dave Fasteson said parallel and serial circuits were being demonstrated.

It also offered a potential link between Blackstone Academy and Kambi ya Simba, the village in Tanzania where Cervone first got the idea of developing a flashlight that would be easy to manufacture in the developing world.

In his presentation at Blackstone Academy, he proposed that the students get in touch with the village and adopt its school.

"The intent, as a follow-up to these workshops, is to put together a group of students and teachers who would go there and do some development work," he said in an interview afterward.

The idea is still in the "dream stage," Fasteson said -- before anyone books a flight to Africa, some way is going to have to be found to raise the money.



Cervone

Denelle Moore, a 17-year-old junior, wasn't daunted. She said she was excited by the prospect of traveling to Tanzania and sharing the technology that Cervone has developed.

"If we have the means to improve our way of life by electricity and stuff, why wouldn't we share it with them?" Moore reasoned. "Especially if it's not that difficult for each student. It would be about \$1,100 to \$1,500 to take a long trip there and to provide these flashlights and teach them how to make their own."

For Marco Escalante, a junior planning to pursue a career in psychology, the motivation was simpler. "I love working with electronics," he said. "For now, I'm just enjoying the class and working with my hands."