

The Washington Post

Contest Helps Boost Math, Science Skills

By LISA RATHKE
The Associated Press
Sunday, May 20, 2007; 9:36 PM

MONTPELIER, Vt. -- Chris Fitzhugh spent spring break building a copper and PVC-pipe model to show how temperature differences in the ocean can be used to generate electricity. It's not just a personal quest.

The 17-year-old junior from Peacham and his teammates _ two in Mexico, one at St. Johnsbury Academy _ were competing in the Global Challenge, a Vermont-based contest aimed at improving American high school students' math and science skills.

During the school year, 58 teams of American students coupled with students from China, India and Japan tackled technological solutions to global warming. They chatted online, divided jobs based on skill, consulted with advisers, and in the final grueling weeks, wrote a professional business plan.

"The most important goal is to engage U.S. students in international collaboration using science and technology," said David Gibson, executive director of the Global Challenge and a research assistant professor in computer sciences at the University of Vermont.

The idea for the contest came to management consultant Craig DeLuca two years ago as one of his clients planned to outsource design and manufacturing, and his community in Stowe considered putting off buying science textbooks.

"I've got to do something so that our kids have a shot in the global economy," he said then.

He launched the contest in Vermont, and last fall it was awarded a \$900,000 National Science Foundation Grant and expanded worldwide. Winners will be announced in June.

Not only does the contest encourage interaction between students across the globe to solve problems, it also exposes them to opportunities in science, technology, engineering and math, Gibson said. "We need projects like this across the nation, so we can scoop these kids up because schools don't do it for them," he said.

With strong corporate support he could envision a million students worldwide taking part.

Fitzhugh and a fellow St. Johnsbury Academy student started out with two partners from China but they dropped out early in the contest. That's not uncommon.

"The work is pretty darn hard, and some teams can fall apart," Gibson said.

So two students from Puerto Vallarta, Mexico, joined the team. They needed to stick together to be

); } //-->

Advertisement

One Question Site Survey
IT TAKES ONLY SECONDS TO ANSWER BELOW

Which of the following brands would you consider for mid-sized business telecommunication solutions?

SELECT ONE ANSWER

T-Mobile

AT&T

Verizon Wireless

Sprint

None of the above

[VOTE TO SEE RESULTS](#)

POWERED BY VIZUSAFE & ANONYMOUS

eligible to win the competition, earning at least \$2,500 each in scholarship money.

Fitzhugh pecked away at the ocean thermal energy conversion project daily, in between his other classes and homework.

Across the globe, Pan Yi of Shanghai completed the last pages of a business plan for intelligent electrical management before the April 30 deadline. The system would route power through a building based on the temperature, time of day and cost, using artificial intelligence to enter the most important sections of the building first.

The system "responds to internal and external variables in building power management, allowing businesses to save money and power on a day-to-day basis," he said.

Another team worked on a car that will run on electricity, hydrogen, bio-fuel and fossil fuels.

"We realized that being high school students, major technology breakthrough is basically impossible and infeasible, so we decided to use the principles of economics and geopolitics," wrote Kun She of Shanghai, known as Kevin, in a computer message.

"In one sentence, our car is updateable," he said.

Originality was a constant challenge.

Colin Santangelo, 17, of West Roxbury, Mass., was keen on a regenerative braking system for subway trains. "This would reduce their total electricity usage as it would return energy to the electrical grid when the trains braked," he said.

When he checked online, he found a number of train manufacturers already using it.

Still, the Global Challenge has changed his thinking.

"I've been stopping to think about things I take for granted everyday ... Can I make it more environmentally sound?" he said via e-mail.

Fitzhugh said the project has helped narrow his goals.

He wants to go into green energy, "helping the world break its fix of oil, helping the world break its fix of coal."

But the best part is existing in a global environment.

"Knowing that at any time you wish, you can reach out and touch anyone in the world with a couple clicks of a mouse is absolutely breathtaking," he said. "No longer are we bound by our county, state, or even national borders. We can work with the world and the world can work with us. Isn't that cool?"

On the Net:

Global Challenge: <http://www.globalchallengeaward.org>