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Education

The JETS team goes to Washington

by Joyce Rossignol

Wethersfield High School's JETS team was charged with creating a product that filled a need.

The need was right there in the room.

The JETS (Junior Engineering Technical Society) Co-Captain Griffin Latulippe, who has muscular dystrophy, was sitting in his wheelchair. When he needed a particular notebook from his pack that was hanging on the back of his chair he had to ask his aide or a classmate to rummage around and get it for him.

What he needed was a way to bring his backpack around to the front so he could access it himself.

So as their entry in the JETS national competition, Wethersfield's team created an Easy Transport System they call E.A.T.S.

Griffin said: "I use it. The more I use it, the more I love it. It is universal so it fits many different types of wheelchairs and a variety of different chairs. The pack hooks on and swings around so you can reach in your pack." He can access the contents comfortably and independently.

At first it seemed easy to come up with a way to make that happen, but it took a lot of work. JETS' faculty advisor Susan Fennelly said "The device looks simple and isn't hard to use. But the process to get here was not simple. It took a lot of fine tuning, trying this, trying that."

When it was ready JETS Co-Captain Matt Thomas produced a short television presentation (that can be accessed by Googling JETS then accessing National Engineering Design Challenge NEDC).

The presentation begins with the selling points for E.A.T.S.

- Promotes independence and efficiency in the workplace
- Safe to use and easily attaches to most wheelchairs.
- Very affordable and nothing else like it currently on the market.
- Large potential market of 700,000 wheelchair users in the United States with 20,000 more users each year.
- Tested on both manual and electric wheelchairs.

There are scenes of Matt demonstrating the device and other team members playing hosts and announcers.

That video got them into the finals. Matt is the technical director of the Wethersfield school system's shows on Channel 14 called Our Wethersfield Schools an Inside Look and he used those skills.

The Wethersfield JETS flew in to D.C. the last Wednesday in February.

Griffin said he will remember the activity they did the first night they got there. "We split up in groups of three with kids from different schools. They gave us a packet of parts of artificial arms. We had to put it together. The arms are then sent to Third World Countries where people lose their limbs to land mines." A picture of the students who assembled the mechanical arms is included in the box so the amputees who receive them would know who helped make them usable. The JETS learned that an average of 24,000 people are killed or injured in land mine accidents every year, world-wide.

> ***"We've had a lot of success with our students going on to engineering."***
> Susan Fennelly, JETS faculty advisor

Mrs. Fennelly said it has been suggested that this project be brought to Wethersfield High School.

The next day the young engineers from Wethersfield showed off their E.A.T.S device with a video and a power point presentation. Each team had a booth where team members described their product to the judges and anyone who walked by.

Wethersfield was named one of the five national finalists and won Best Presentation.

Griffin said, "I think the biggest surprise is no one had thought of it yet."

So how about taking the next step and applying for a patent?

Mrs. Fennelly said that is a possibility but they aren't ready yet. "Bill Smyers (a Wethersfield inventor who has many patents) is coming to talk to the students about that. They are doing independent research now looking at similar devices that have patents. We have to see whether or not ours is patentable. We will put them in touch with an attorney who could give them some legal advice. We have no money so we can't hire anybody.

"There is really nothing like it on the market. When they first started trying to figure out what to do they did some research and they looked through catalogs to see what kinds of devices were already out there and there was nothing like this one."

Griffin said, "We are also thinking of motorizing it, making it even better. Instead of pulling it around you could just press a button." He's pushing for that.

The JETS in Washington: group at left, clockwise, Matthew Thomas, Andrew Braren, Andreanna Buccheri and Griffin Latulippe (seated); group at right, clockwise from left, Matthew Bolles, Jeffrey Epp and Paola Peshkepija, seated.

He joined the JETS, an after-school club open to anyone, because "I thought this is cool and it is."

They have been recognized by the board of education and their trophy is in a display school at the school.

WHS Principal Thomas Moore praised them and their advisor Mrs. Fennelly for their great accomplished and for being named one of five national finalists for the JETS Ability One National Engineering Design Challenge, which this year was to design and build an assistive technology device to help a person with severe disabilities in his or her workplace."

Mrs. Fennelly isn't new to JETS. She's been advising the club for about 25 years and "Many teams have distinguished themselves. This is the farthest they have gone. We won the state competition one year. There was no money to send us to Washington. Now they don't do individual state competitions anymore. We do an extensive report online to become semi-finalists. Then they had to produce a six-minute video which got us into the finals. Then they picked the five teams that got sent to Washington."

She said, "We have a lot of kids who get very involved and passionate about things. We have the engineering group. The science club. We have the environmental club; they've done recycling and conservation projects. That puts the kids in touch with real world situations."

The JETS team this year is: Matthew Thomas, Andrew Braren, Andreanna Buccheri, Griffin Latulippe, Matthew Bolles, Jeffrey Epp and Paola Peshkepija. Not all of them plan to become engineers, though some do.

Mrs. Fennelly said, "We've had a lot of success with our students going on to engineering. In fact John Wysmuller, who is serving as one of the engineering mentors for this team, was one of my first JETS students at Wethersfield High. He went to RPI and is now working as an engineer."

Mr. Wysmuller was a member of the JETS the first year the school participated in the design competition. Their charge was to design something called Bum Chum to help an elderly person out of a chair. Wethersfield came in third in the state.

"I think JETS is a great introduction into the world of engineering," he said. "Kids get hands on. Before that competition was all pencil and paper and not as interesting as making a real invention and we are able to help people more directly. The point of the contest is always to help someone. The spirit is to help someone find a better life through technology."

Other engineering coaches this year were: James Grise and Ken Trifiro. **WL**