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## Students learn science concepts

Nearly four years ago, renovations to South Fayette Middle School, located in western Pennsylvania, allowed the industrial arts program to be expanded and updated. Mr. Kruth, a technology education teacher, designed the entire program. Formerly the owner of a construction company, he became a teacher seven years ago after he found himself showing his employees how to apply in practical terms, science and math concepts. "If we would have learned these things when we were younger, I think we'd be better off," said Kruth.



Mr. Kruth introduces students to math concepts and encourages them to apply the ideas by designing, assembling and optimizing the performance of their Gliders.

During class, student Erika Levin's model airplane soared through the room, veered left and crashed into a table. "What do you need to adjust?" asked Mr. Kruth. "The rudder," Erika answered. She returned to her teammates and slid the foam rudder to the left to make the Glider fly straight to the back wall; a distance of about 30 feet. This engineering feat is an example of what students are accomplishing in the Technology in Motion course that enhances technology education in the South Fayette Middle School.

After recording the test results to be charted in a graph, Sydney Dorley's team increased thrust. By pulling back the Glider 80 centimeters the team saw a slightly different outcome;



the nose turned up and the plane dropped to the ground before hitting its mark. "Why did it do that... more thrust equals what?" Mr. Kruth asked. "More drag," Sydney answered.

The A World In Motion® curriculum designed by SAE International promotes critical thinking by getting students to apply a combination of science, technology, engineering and math (STEM) concepts.

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Becky Rose

## Awards for Teaching Excellence

**Shawn Lent, Becky Rose and Yvonne Yancey-Stroud** shared the 2008 Gary Dickinson Award for Teaching Excellence. The team of teachers made the *A World In Motion®* program happen at Western Peaks School in the Dysart Unified School District in Surprise, Arizona.

**Lent** has been the recipient of the Arizona-Nevada Excellence in Science Education Award and holds an Associate of Arts

degree in Sign Language and a Bachelor of Arts degree in Elementary Education. He also holds a Master's degree in Bilingual and Multicultural Education and an ADE Endorsement for English as a Second Language. During his 11 years of teaching in Arizona, he has taught 1st and 3rd grade self-contained and 7th and 8th grade science.



Shawn Lent



Yvonne Yancey-Stroud

**Rose** has been a teacher for 12 years and holds a Bachelor of Arts degree in Elementary Education with a minor in English. She also holds a Master's degree in Bilingual and Multicultural Education, an ADE Endorsement in English as a Second Language and ADE Endorsements in both English and Middle School Mathematics.

**Yvonne Yancey-Stroud** having passed away recently was honored posthumously. Her husband accepted the award on her behalf. She had taught for four years and held a Bachelor's degree in History from Columbia College of Missouri.

**Lauren Santeiu**, a 5th grade teacher at St. Edith Catholic School in Livonia, Michigan has been selected to receive the 2008 Lloyd Reuss Award for Teaching Excellence in Education. After being introduced to AWIM® by Mark Herman, a volunteer who started the program at St. Edith, Lauren has been using the program for three years. "My students' enthusiasm for the program never ceases to amaze me," stated Santeiu. She received her Elementary Education degree from Michigan State University and is currently attending MSU to finish her Master's degree in School Counseling.



Lauren Santeiu

The recipient of each award receives \$2,000.00 divided equally between the school where the *A World In Motion®* Challenge was implemented and the teacher. Elementary and middle school teachers are encouraged to apply for the awards. The deadline to apply for either award is July 31st. The application is available online at:

<http://www.sae.org/news/awards/list/reuss>

<http://www.sae.org/news/awards/list/dickinson>

The awards are funded through the SAE Foundation. The SAE Foundation develops and funds programs and incentives that foster student interest in engineering, scientific and technical education in addition to supporting awards, recognition and scholarship programs.

Both awards recognize the creative use of the AWIM program to further develop students' understanding of the principles of motion in a way that brings to light the excitement of science and math.

## Spotlight on SAE Section Activities Arizona



Dr. James Smith with students during a visit to the Gila Crossing Reservation School



Student demonstrating vehicle climbing for an AWIM volunteer

## SAE President inspires students during visit

Dr. James E. Smith, 2009 SAE International President, and Josh Rudin, SAE Arizona and Nevada Section Chair, visited Gila Crossing Community School on the Gila River Indian Reservation in Arizona on February 19th. They had the opportunity to meet the 7th grade class which is in its fifth week of the AWIM® Motorized Toy Car project. The students talked about their designs and demonstrated the performance of their cars on their "proving ground." They proudly tested their vehicles on a three meter straightaway, a 15 degree grade and a 30 degree grade.

Dr. Smith spoke with the students about the importance of math and science. He then answered questions from the students. *The A World In Motion®* program at the school is supported by several talented retirees who volunteer their time.

### The following are A World In Motion workshops/conferences/events for March and April:

**March 2, 2009**

Spring Hill, TN  
Web Ex Training

Motorized Toy Car Challenge  
8:30 a.m. – 11:30 a.m.  
gena.ghiardi@gm.com

**March 10, 2009**

Plymouth, MI  
Johnson Controls  
Skimmer Challenge  
7:30 a.m. – 9:00 a.m.

JetToy Challenge  
9:00 a.m. – 10:30 a.m.  
russ.j.burgei@jci.com

**March 12, 2009**

Toledo, OH  
Web Ex Training

Skimmer/JetToy Challenge  
8:00 a.m. – 10:00 a.m.  
nalducci@sae.org

**March 19, 2009**

NSTA Conference  
New Orleans, LA  
All workshops in Rm 211  
No pre-registration required  
to attend any of the workshops  
JetToy Challenge  
7:30 a.m. – 9:00 a.m.

Skimmer Challenge  
9:30 a.m. – 11:00 a.m.

JetToy Challenge  
11:30 a.m. – 1:00 p.m.

Skimmer Challenge  
1:30 p.m. – 3:00 p.m.

Glider Challenge  
3:30 p.m. – 4:30 p.m.  
nalducci@sae.org

**March 19-21, 2009**

NSTA Conference  
New Orleans, LA  
Visit AWIM Booth #1413

**April 22, 2009**

Detroit, MI  
JetToy Olympics  
cciuca@sae.org

## Science Fair Project Excites Students

There was something for everyone at Emerson Middle School's toy fair. A motorized toy that climbs a 30 degree ramp and moves quickly on a flat surface or one topped off by a red snowman with pipe cleaner arms.

Seventh graders learned engineering, teamwork and consumer research skills while taking part in the Motorized Toy Car project in Kim DuSablón's science classes.

Alejandro Castillo and his teammates had the idea for their vehicle, named The High Flyer. It could climb a steep



ramp and looked like a spacecraft. "We wanted something different," said Castillo. "We interviewed 10 kids and they all wanted something that would go fast. But that's only 10 and we have a whole nation to think about." Of course, their toy did have a few glitches. "If we had been prepared, we could have won," said teammate Ryan Pace.

Representatives from Honeywell and other volunteers worked with the students for nine weeks. Honeywell technical manager, Mustafa Ullahkhan said, "Their experiences are very similar to what is happening in real life. That gives them an idea of what it is like to be an engineer. But their imagination is far more advanced than mine."

### AWIM Program Staff

**Matthew Miller**  
Manager

K-12 Education Programs

**Kenneth Francis**  
Program Developer  
K-12 Education Programs

**Chris Ciuca**  
Program Developer  
K-12 Education Programs

**Julie Nalducci**  
Associate Program Developer  
K-12 Education Programs

**Linda Cavanaugh**  
K-12 Administrative Assistant

## Pennies Add Up

How many times a day do you search the Internet? What if something you do everyday could become a donation to the SAE Foundation and *A World In Motion*? Now it can.

Just go to the GoodSearch homepage, [www.goodsearch.com](http://www.goodsearch.com) and type "SAE Foundation" into the 'WHO DO YOU GOODSEARCH FOR?' box, click verify, and scroll through the list of charities to select SAE Foundation. After the first time, each time you return to the home page, SAE Foundation will appear as your designated charity. There is also a button you can click to see the number of searches and the amount raised. To make it even easier to use, you can add a GoodSearch toolbar to your browser and search directly from there. Once you select the SAE Foundation as your charity, GoodSearch will donate about a penny per search to the SAE Foundation. Your support enables us to continue to expand quality educational experiences for K-12 students through the *A World In Motion* program.



To make a contribution to the SAE Foundation, visit their website at <http://www.sae.org>

For consideration in a future issue please tell us what you are doing with AWIM in your classroom. Articles/photos should be sent to:

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