



Chicago

Again this year students in physics classes at Streamwood High School participated in a weeklong investigation using the AWIM Glider project to explore the forces involved in flying. The students were functioning as test engineers to assess the performance of new airplane designs that had been created from the prototype gliders made in special education science classes.

Studying Newton's Laws of Motion and using some of the aspects of the original glider project helped students to learn these concepts in a more hands-on application of Newton's Laws.

As teacher, Greg Reiva stated, "Teaching while doing real science is such a rush for me and my students and I love it".



Distance is the key



Testing to assess performance



Teamwork is fun!

The following are A World In Motion® workshops/conferences/events for April/May:

April 2-3, 2007
GM Retiree Training
Phoenix, AZ
sheri.hickok@gm.com

May 23, 2007
Stevens Institute
Teacher Training
Challenge 3
http://www.k12science.org/designing_glid-ers1.html

SAE®

SAE FOUNDATION

for Science and Technology Education



National Conference on Science Education

Each year NSTA (National Science Teachers Association) hosts a national conference on science education. Once again the A World In Motion was exhibited at the 55th National Conference in St. Louis. Workshops were conducted by AWIM Program Developers to introduce elementary and middle school teachers to the Skimmer, JetToy, and Glider. Mark Holly from The Boeing Company volunteered his time training educators on the use of the Motorized Vehicle and the Electricity and Electronics in the classroom. Teachers attending the workshops had the opportunity to get acquainted with the AWIM curriculum hands-on.



– left, Mark Holly from The Boeing Company

A comment from an appreciative teacher

As a member of NSTA, I previously attended a national convention. The convention was great, but the best part was my connection with SAE. I completed the pertinent forms and proceeded to receive some absolutely fantastic free materials that I have used with an 8th grade Physical Science class. They have been invaluable in my student's understanding of the concepts of motion.

Joan Gaither,
Science Dept. Chair Girard College

Engineer puts science in motion

By Lisa Roose-Church

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Max E. Rumbaugh III learned to love math and science as he watched his engineer father, who served as executive vice president and general manager for Society of Automotive Engineers for 16 years, “play with toys.”

Today, the Howell engineer is helping to cultivate a love of math and science in Voyager Elementary School’s fourth- and fifth-grade students through “A World in Motion” challenges developed under the leadership of the Society of Automotive Engineers.

Rumbaugh says it seems like interest in math and science has waned since he was in school, and the program could go a ways toward turning the tide.

“It’s fun. It’s like a puzzle,” he said.

The program is designed to enable teachers — supported by engineers, scientists and other technical professionals — to give students in grades 4-8 hands-on experiences with certain physical principles.

Voyager’s fourth-graders are making a skimmer, or sailboat, to discover and understand friction and the forces of motion while the fifth-graders are creating JetToys, cardboard cars powered by a balloon, to discover speed, distance, weight carrying ability and time.

“I like to build and test,” said fifth-grader Kayla Marie Leach, who is assigned to test the finished project.

Rumbaugh, who visits the students about every other month, said the program allows kids to bridge the gap between science and the real world. He hopes that it instills a love of math and science in students just as he learned at the knee of his father.

“It’s really been a blast,” he said of teaching the students. “The highlight is seeing the kids’ creativity.”

Although he always had an interest in math and science, Rumbaugh once considered architecture as a career choice. To help him decide, his father made him research and prepare reports on the various professions in which he had an interest.

“I hated it, but it was really helpful,” Rumbaugh said.

“It was all math and science. I liked doing it. I liked understanding it. It was what I called ‘playing with toys.’”

At 15 years old, Rumbaugh was given an opportunity to travel to Colombia, in South America, to learn about the culture there. That experience, he said, solidified his growing desire to travel overseas and to work with foreign countries, something an engineering career would allow.

“I wanted a difficult culture and I wanted a difficult language,” Rumbaugh said.

He got it. Through the Rotary Youth Exchange program, Rumbaugh, who today is a Howell Rotarian, spent his senior year in high school in Japan. It was an experience, he said, that once again led him closer to the engineering field.

While attending Purdue University in Indiana, Rumbaugh began to study engineering, eventually earning a bachelor’s degree in mechanical engineering and technology. During his last two years in college, he began working for TRW, eventually accepting a full-time position with the company in its Knoxville, Tenn., office.

After nine years with TRW, Rumbaugh joined then-Simpsons Industries, which has since merged and become known as Metaldyne. While there, Rumbaugh was given an opportunity to return to Japan to open an office for Metaldyne.

After the successful completion of that assignment, Rumbaugh returned to the United States, settling in Howell with his wife, Cindy; and their daughter, Alexandra, 11, a fifth-grader at Voyager.

Rumbaugh now spends his time spearheading the startup of Chicago Powdered Metal Products Co.’s Asian business and sharing his love of math and science with Voyager’s fourth- and fifth-graders.

“I’m having a blast,” he said.

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In March SAE exhibited at the annual NCTM Conference (National Council Teachers of Mathematics) at The Georgia World Congress Center. Participants at the conference had the opportunity to learn more about the AWIM program and sign-up to receive free materials for their classroom. Attendance was reported to be almost 17,000 math teachers from across the US. Conference attendee, Steve Pelta from Stamford, Connecticut said, "Students need to understand the workings of technology, which involve both math and science."

Washington

Over 40 Washington state teachers attending the Association of Christian Schools International Seattle Convention shared in the joy of science through the A World in Motion program. On February 8-9, 2007, Skimmers and JetToy cars were racing and Gliders were being launched by enthusiastic teachers. With approximately 24 different schools represented, over 1500 students will have the opportunity to experience the AWIM program in their classrooms. The teachers were enthused to learn the materials are provided to their classroom free of charge

Florida

Michael Woodward, an engineer from Kimley-Horn and Associates in Orlando worked with sixth grade students from Teague Middle School to explore the forces involved in flying using Challenge 3. In science class students began by discussing what they wanted their glider to look like and what they wanted to achieve with their designs. Working in teams of two or three the activity challenged students to be innovative thinkers, problem solvers and team players. Excitement catches as gliders take off! Teacher, James Hall said, "SAE's continued support of teachers will make a difference our students need to be exposed to the field of engineering".

Michigan

"Science Out of the Box" was the theme for the Michigan Science Teacher Association (MSTA) annual conference in Grand Rapids. The conference held innovative presentations and hands-on workshops for the 2,800 attendees. Educators visiting the AWIM exhibit were excited to learn they could return to their classrooms with resources that will improve the quality of science and math education.

Sarasota was the venue for a huge training session which included 12 retired GM employees, 32 teachers, 3 principals and 30 other volunteers. In this session alone, AWIM has the ability to impact more than 2,310 students.

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

Any articles/photos for consideration in future issues should be sent to:

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