

transferable to any state university in Texas.

Some graduates have earned as many as 47 credit hours. One year, the mother of one of these students wrote the school a thank-you letter exclaiming, "You've literally saved us



thousands of dollars!" Argueta points out another benefit of earning college credit in high school: With most freshmen courses completed by enrollment, students have a jumpstart to begin focusing on their college major.

Staff believe that these advanced courses have a practical application. "In learning physics," said Scott Wiley, who made the foray into teaching six years ago after working as a computer consultant, "the students become problem solvers."

Schroll, who teaches a digital electronics course, added, "Tearing apart a problem, looking at its individual pieces, and then trying to be innovative about how you approach those things works in any job."

Schroll's course is one of six "required" electives comprising a program that has catapulted the school's already rigorous curriculum to higher levels of scholarship. Project Lead the Way, which the school implemented in 2000, is a national technology program whose engineering courses have provided a platform for

From left to right: Science teacher Betty Warrington with Principal Edward Argueta; physics teacher Scott Wiley with seniors Blas Quiroga, III, and Luis Larraga; technology teacher Mark Schroll; and senior Alex Hilmy. On the cover, junior Flor Rodriguez programs a robot. Photos by Gabe Hernandez.

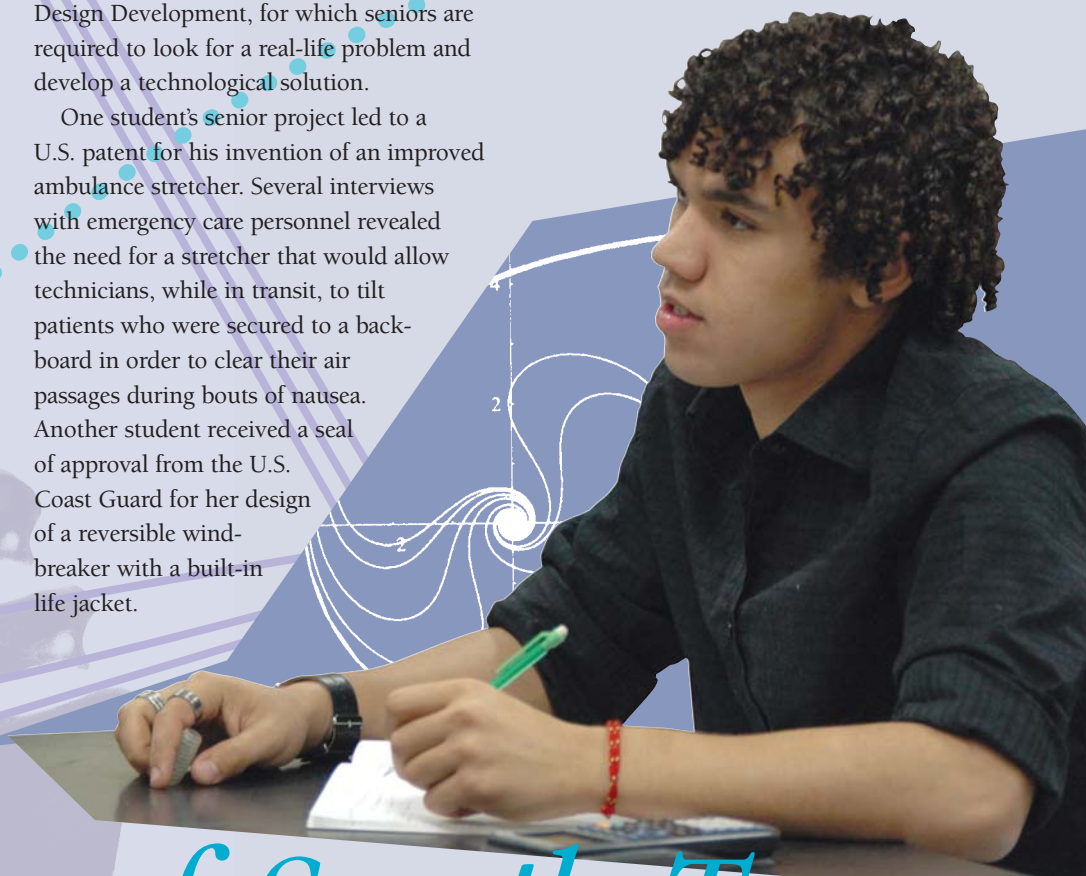
integrating other math and science classes at the Science Academy and has given students an enormous pathway for hands-on learning. Piloted in upstate New York, the nonprofit program was created by an engineer in search of a curriculum that prepares students for the rigors of a college engineering education.

Project Lead the Way requires students to take one course each year from a roster of offerings, most of which offer college credit through its partner, Rochester Institute of Technology. The four-year sequence of courses culminates with Engineering and Design Development, for which seniors are required to look for a real-life problem and develop a technological solution.

One student's senior project led to a U.S. patent for his invention of an improved ambulance stretcher. Several interviews with emergency care personnel revealed the need for a stretcher that would allow technicians, while in transit, to tilt patients who were secured to a backboard in order to clear their air passages during bouts of nausea. Another student received a seal of approval from the U.S. Coast Guard for her design of a reversible wind-breaker with a built-in life jacket.

From this project-based learning, senior Alex Hilmy feels he is getting the most out of his education. With 27 college credits already under his belt, Hilmy, who plans to pursue a career in either medicine or mechanical engineering, said, "I never felt like I was doing busy work at the Science Academy. I never felt like the teacher said, 'Here's a textbook, take a quiz on it.' I actually benefited from what I was learning ... because the staff here know what they're talking about—they're not just regurgitating something they've read."

—BY NICOLE ASHBY



Academy of South Texas



- > **Grade Span:** 9–12
- > **Locale:** Small city
- > **Total Students:** 623
- > **Race/Ethnicity Enrollment:** 66% Hispanic, 25% white, 8% Asian, 1% black
- > **Free or Reduced-Price Lunch Eligible:** 41%
- > **English Language Learners:** 2%
- > **Special Education Students:** 6%
- > **Percentage Proficient:** In English, 95%; in math, 94% (based on 2005 state exam results).
- > **Interesting Fact:** A former Science Academy student received a patent for his senior class project, a tiltable stretcher that allows the secure movement of emergency care patients.

April 2–8

National Library Week, an observance sponsored by the American Library Association since 1958. This year's theme, "Change Your World @ Your Library," is part of a public awareness campaign to promote the value of libraries and their staffs in the 21st century. For programming ideas, visit www.ala.org or call toll-free (800) 545-2433.

April 12

White House Faith-Based and Community Initiatives Conference, Jacksonville, Fla., sponsored by a consortium of federal agencies, including the U.S. Department of Education. Part of a series of regional conferences being held around the country, this meeting for grassroots leaders will provide information about federal grant opportunities. For more information, visit www.fbc.gov or call (202) 456-6718.

On the Horizon

This summer, the U.S. Department of Education will host a series of free professional development workshops for teachers across the country. As part of its Teacher-to-Teacher Initiative, the Department will partner with TechNet, a group of technology companies, to develop training opportunities that focus on math, science and technology. In addition, future workshops will focus on foreign languages, including Mandarin Chinese. To receive announcements on dates and locations, register for "Teacher Updates" at www.ed.gov by selecting the link "Teacher" and then "Teacher-to-Teacher Initiative."

Q & A GLOSSARY

Are my college expenses tax-deductible?

As the 2005 tax-filing season draws to a close on April 17, a record number of students attending college, including those receiving financial aid, are looking into the tax breaks available to make higher education more affordable. Following is a summary of some of these benefits.

> **Tax credits.** The Hope Credit and the Lifetime Learning Credit reduce federal income taxes based on qualifying education expenses, which include tuition and fees less any grants and scholarships received. The Hope Credit is available for only the first two years up to \$1,500 per student, while the Lifetime Learning Credit is unlimited in years for up to \$2,000 per tax return.

> **Tuition and fees deduction.** This deduction, capped at \$4,000, is based on qualified education expenses, including student activity fees and costs for supplies and

equipment, that must be paid to a postsecondary institution as a condition of attendance or enrollment. A student who does not qualify for either the Hope or Lifetime Learning credits because of his or her income level may take this deduction.

> **Student loan interest deductions.** The interest paid on student loans—Federal Stafford, PLUS and Perkins loans; federal and direct consolidation loans; federal loans for health care professionals; and private education loans issued by schools, banks and nonprofit associations—may be tax-deductible up to \$2,500.

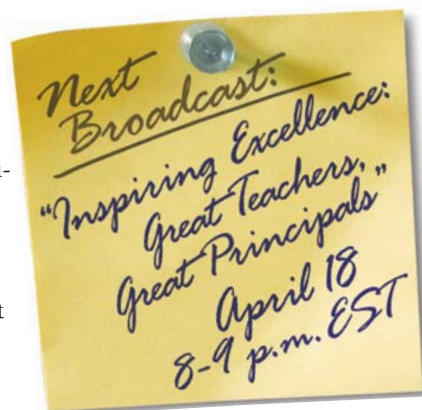
For more information about these tax benefits, visit www.irs.gov or call (800) 829-1040 for a copy of the Internal Revenue Service's *Publication 970: Tax Benefits for Education*.

tax-deductible: an item or expense subtracted from adjusted gross income to reduce the amount of income subject to tax.

News Shows: At-Risk Youths, Great Leaders

The March edition of *Education News Parents Can Use*, the U.S. Department of Education's monthly television program, focused on Helping America's Youth, a national initiative led by First Lady Laura Bush that encourages youths to take action in three key areas: family, school and community. The show featured best practices in positive youth development and tips for parents on keeping children safe and on the right track.

In April, the broadcast will showcase exceptional teachers and principals and examine the ways in which innovative routes to teaching, school leadership and compensation systems impact student achievement. The show will also explore



recent Department efforts to expand the number of highly qualified teachers—especially in critical foreign languages, math and science—along with tips to assist parents in identifying effective teachers and principals.

Each month, *Education News Parents Can Use* showcases: schools from across the country; conversations with school officials, parents and education experts; and advice and free resources for parents.

To learn about viewing options, including live and archived webcasts, visit www.ed.gov and click on "Parents," then "News Parents Can Use," or call toll-free (800) USA-LEARN.



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New Resources at the FREE Web Site

The human cell, the stock exchange and the environment are among the topics of new resources just added to the federally supported Web site www.ed.gov/free. A one-stop shop for hundreds of teaching and learning resources from more than 35 federal organizations, the FREE (Federal Resources for Educational Excellence) site includes the following additions, which focus on math and science literacy:

- > **Inside the Cell**, an 84-page booklet from the National Institutes of Health, provides an illustrative tour of the roles that cells play in the human body, such as covering the skeletal frame, purging

the body of toxins, enabling learning and producing hormones.

- > **U.S. Securities and Exchange Commission: Teachers and Students** is a Web site that includes a guide for educators and parents to help young people learn about saving and investing, as well as an interactive quiz that tests one's "money smarts."
- > **Exploring the Environment**, funded by the National Aeronautics and Space Administration, is an online program featuring modules and activities that put students in problem-based learning scenarios to investigate such topics as population growth, water pollution and global warming.
- > **Five Lessons: A Taste of the Future**, Today is a Web site that offers interactive software for students to explore key math and science concepts, such as a lesson on designing molecules and watching them self-assemble, created by the Concord Consortium, with support from the U.S. Department of Education and the National Science Foundation.



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