




Cluster	District or Education Service Center	AchieveTexas Best Practice Examples for Local Implementation
	<p>Region VIII Education Service Center Mt. Pleasant, TX http://www.reg8.net/</p>	<p>The Education Service Center in Region VIII in Mt. Pleasant noticed a few years ago that a large percentage of 8th graders in its region, which covers the northeastern corner of Texas, were failing the math section of the TAKS exam.</p> <p>To give the incoming 9th graders a boost, the ESC developed Agricultural/Algebraic Extensive Exploration—or A2E2—an innovative course that explores agricultural issues in algebraic terms, allowing students to apply classroom lessons in a real-world context. The class is an example of how AchieveTexas implementation can integrate academic and technical knowledge and skills.</p> <p>“Our students use algebra in a number of agricultural areas from animal science to horticulture,” says Sharon Derricks, Career and Technical Education Specialist at the Region VIII Service Center. “Overall, we cover 17 agricultural projects, but we also introduce the students to algebra applications in a few other areas, such as automotive repair and welding.”</p> <p>Projects are the cornerstone of the course and lecture time is limited to provide as many hands-on activities as possible. One class project brings students to an area horse farm where they measure and compare Shetland ponies and regular-sized horses.</p> <p>A2E2 is designed for students concurrently enrolled in Algebra I, and it requires two teachers: a secondary teacher certified in mathematics or science and a certified agricultural science teacher. The expertise of each teacher strengthens the students’ understanding of both the mathematics and its application in the agricultural world. The ESC hopes the introduction of agricultural topics will motivate students to later enroll in related classes such as Forestry and Wood Technology.</p> <p>A2E2 takes the place of the state’s mandated tutorials for 9th graders struggling in math, and, according to the ESC, is an improvement strategy that works.</p> <p>“A2E2 is doing a good job because the students get it,” Derricks says. “Kids will need algebra in everything they do, and we give them specific examples to illustrate that.”</p> <p>With a nearly 100% success rate of students passing 9th grade algebra, A2E2 is rapidly expanding. Beginning in 2003 with just three pilot schools, the program is presently offered in 32 of the region’s 48 districts, and is being considered in some areas in the western part of the state.</p> <p>Derricks says that teacher professional development is the largest factor in the program’s success. Interested agricultural, math, and science teachers have four opportunities throughout the school year to attend a three-day training course, during which they complete an entire year’s worth of projects. “It really is fun to watch teachers get excited during the training, and then see the students get excited during class,” says Derricks. “They all put in a lot of work, and you can see that they recognize students’ progress.”</p>
	<p>Childress High School Childress ISD Childress, TX http://www.childressisd.net/</p>	<p>Russell Graves’s students can’t wait to get to class each day. But you won’t necessarily find them sitting in neat rows of desks, reading from textbooks or watching instructional videos. Their favorite classroom is a 90-acre land lab purchased with a grant from the National Fish and Wildlife Foundation.</p> <p>“One section is a controlled research area with an 8-foot-tall fence where students do genetic and nutritional research with our own herd of white-tailed deer,” explains Graves, an agricultural science instructor at Childress High School in Childress.</p> <p>“They look at things like whether feeding the deer supplemental protein will increase antler growth. Some of the land is open range, where students research topics such as prescribed burning, planting food plots with winter-hardy plants, or creating a wetland for waterfowl.”</p>

	<p>James Madison High School Northeast ISD San Antonio, TX http://www.neisd.net/madison/</p>	<p>The Aquaculture program at James Madison High School in San Antonio gives students a chance to get their feet wet in Agriculture, Food & Natural Resources.</p> <p>“We have five courses in that program of study,” notes Northeast Agriscience Magnet Program Director John Mack, “and they provide students with an opportunity to study fish in every stage from egg to plate. We use everything from large 500-gallon tanks in a converted greenhouse to big outdoor ponds to breed the fish, to grow them from eggs to maturity, and then to harvest them.”</p> <p>For the first time this fall, students will actually be selling the catfish and tilapia they raise in the meat science lab’s retail market. Students will begin working with saltwater tanks to grow coral for use in aquariums.</p> <p>Although still a relatively small industry, aquaculture is the fastest-growing segment of agriculture, Mack points out. “It’s definitely up-and-coming,” he says. “Just about all of the fish you buy in stores or eat in restaurants are now farm-raised.”</p> <p>In addition to raising fish, students in aquaculture courses research water quality and availability issues. Students learn about conservation and environmental technology through projects covering subjects like erosion control and pesticide runoff.</p> <p>One senior has received three national awards for her aquaculture research, which involved testing which water-filtering systems are the most efficient for filtering out fish waste.</p> <p>“She’s won \$20,000 so far just from competitions,” Mack says, “and she has more opportunities for scholarships, as well. This research is her ticket to college.”</p>
	<p>Skyline High School Dallas Independent School District Dallas, TX www.dallasisd.org</p>	<p>Seniors at Skyline High are building brighter futures thanks to mentors from the ACE Mentor Program of Dallas-Fort Worth.</p> <p>They are introduced to architectural, construction, and engineering (ACE) career fields through a unique program that brings together professionals from these industries and offers students access to networking and scholarship opportunities.</p> <p>ACE Mentors from 16 organizations adopt students from Skyline’s architecture magnet program to create mentoring teams. Industry leaders included in the program are HKS Architects; Thornton-Tomasetti Group; Lopez Garcia Group; the University of Texas at Arlington; and Hospital Corporation of America; among others. The firms focus on introducing students to the real-world challenges and rewards of design and building careers.</p> <p>The partnerships take shape at a time of growth in the construction industry. The number of construction workers nationally increased from 5 million in 1994 to 6.7 million in 2003, according to the U.S. Bureau of Labor Statistics. Job growth projections indicate construction employment will increase more than 15 percent in the next few years.</p> <p>Tom Cox, ACE Mentor board member and Architecture & Construction Cluster Coordinator for Skyline, says the 16 firms work together to develop a program that includes hands-on activities, tours, video presentations, and site visits.</p> <p>As part of the curriculum, students are given a design challenge in which they are guided through each stage of the assignment by ACE Mentors teaching the principles and skills of architectural design.</p> <p>“It’s great to give the students exposure to the entire design and construction process,” says Cox. “The seniors are going to be making some big decisions about their future careers, so this experience will prove invaluable for them.”</p> <p>Along with experience planning, designing, and executing a construction project, Cox notes that students are also given the chance to network with future employers. Another benefit for the Skyline seniors is the opportunity to earn the \$2,000 Humphries Scholarship to the University of Texas School of Architecture from the Dallas Architecture Foundation and HKS Architects.</p> <p>The one-year program culminates each spring in an end-of-year presentation of team projects</p>

		<p>to family members, friends, and educators. Students present their projects through models, drawings, electronic graphics, and other materials as well as explain their approach, challenges, and solutions.</p> <p>Steve Milner, president of the ACE Mentor Board of Directors, credits the program's success to the commitment of the Dallas Independent School District, Skyline students, and the volunteer mentors.</p> <p>"The focus of all involved has remained on positively introducing students to the fields of architecture, construction, and engineering in a way that facilitates true career opportunity and potential," he says. "I look forward to the great things that this organization will accomplish as it supports the growth of students discovering ACE-related careers."</p>
	<p>Dale Jackson Career Center, Lewisville ISD Lewisville, TX http://djcc.lisd.net/index.htm</p>	<p>In 2005, Denise Harman's students at the Dale Jackson Career Center in the Lewisville Independent School District staged a rock concert. They found a venue, booked 12 bands, created T-shirts and had them silk-screened, made posters, promoted the event, rounded up sound equipment and audio engineers, and got food from a local vendor to serve at the snack bars.</p> <p>"They did every bit of the legwork," Harman, an advertising design instructor in Lewisville, says proudly. "They did all the promotional work. They were responsible for the budget."</p> <p>Students put their advertising and design skills into action for a good cause. They were able to donate several thousand dollars to the Second Chance SPCA animal shelter.</p> <p>Harman looks for charities that could benefit from free ad campaigns created by her students. "I try to get students to do work that serves the community," she explains. "I could open a really competitive advertising agency using these students."</p> <p>Mark Harman, who works with his wife, Denise, at the Dale Jackson Career Center, teaches Animation. His students learn 2-D and 3-D techniques used in <i>Shrek</i>, <i>The Simpsons</i>, and <i>Toy Story</i>. Media Technology I at the school includes up-to-date training for employment in motion picture, video, audio, and TV production. Students learn to operate different types of cameras. They experiment with electronic editing, signal control, and monitoring equipment.</p> <p>Denise Harman's advertising design students also utilize technology. They learn digital photography and software programs such as Adobe Photoshop, Illustrator, and InDesign.</p> <p>"Most of the students have an online portfolio, a digital portfolio on DVD or CD, and a print portfolio," she says. "I try to have the students portfolio-ready before they leave high school so they can secure a job or go to college or design school."</p>
	<p>Booker T. Washington High School for the Performing and Visual Arts Dallas ISD Dallas, TX http://www.dallasisd.org/btw/</p>	<p>Imagine a high school where you could take Mime and Music Synthesis, Jazz and Jewelry-Making, African Dance and Art History, Costume Design and Composition, Piano and Playwriting, Sculpture and Stage Management, and Drawing and Directing.</p> <p>There is such a place in the Arts District, Dallas's downtown mecca for the arts. It's called Booker T. Washington High School for the Performing and Visual Arts. The multiethnic student body includes about 700 high school students who enroll in a full range of arts and academic classes.</p> <p>Acknowledges Principal Ruth Woodward: "We have some famous alums. There are authors, professional musicians, visual artists, dancers, and people working in theater and film on the front side of the curtain as well as on the technical side."</p> <p>Students must apply for admission, and an audition is a major part of the process, says Woodward. She notes that while the unique classes look like fun, they're also challenging. Students take all the academic courses required for graduation, from English and math to science and social studies.</p> <p>"Plus every year students have three courses in their fine arts area," says Woodward. "They get to really explore the depth of their interest and talent and gain some professional-level instruction."</p> <p>More than 99 percent of the school's graduating seniors attend college. "My observation is that hard work is more important than being a prodigy," Woodward says.</p>



Sidney Lanier International
Banking and Business Magnet
High School
San Antonio ISD
San Antonio, TX
<http://www.saisd.net>

Imagine filling out your parents' or neighbors' tax returns and filing them electronically with the Internal Revenue Service. That's what sophomores do every year at the Sidney Lanier International Banking and Business Magnet High School in San Antonio. These students help people in the community whose income qualifies them for free service.

"We are the only high school in Texas that does this," magnet coordinator Blanca Ramirez declares proudly.

Sidney Lanier teachers trained by the IRS show the accounting students how to prepare tax returns, but the teachers don't do the actual processing—they just supervise.

One of nine magnet schools around San Antonio, Sidney Lanier caters to students interested in international banking, marketing, and entrepreneurship. Operating as a school within a school, the magnet program started in 1996 to help students learn from the trend toward a global market economy. They take business classes and rigorous academic subjects such as English and social studies.

Nearly 270 students out of 1,500 attending the inner-city high school are part of the international banking and business program. They enhance their studies with senior year job shadowing and internships. An on-site financial service center doubles as a classroom to provide business experience. Students also manage a restaurant as well as several shops—beauty, auto and body repair, and print—that serve the community.

Some students will go on to operate their own businesses. Others attend college and then begin careers in areas as varied as public relations and human resources.

"I am proud of these students," says Ramirez, who adds that the Sidney Lanier magnet program reaches students in ways traditional programs can't. "If you have a smaller community," she says, "you can nurture the students. These students know someone cares about them. I think that's why the program has been successful."



Clements High School
Fort Bend ISD
Sugar Land, TX
www.fortbend.k12.tx.us

"There's a difference between loving to learn, and loving to teach," says Linda Aiello, who leads the *Ready, Set, Teach!* Program at Clements High School in Sugar Land.

"Many students enjoy school and just assume they'll equally enjoy teaching. Some students start in our education courses and realize they're not meant to teach. They're usually grateful to have discovered that before making it halfway through college."


Ready, Set, Teach! is a two-pronged initiative in the Fort Bend Independent School District. The program consists of a lab course and a career preparation course. It is designed to give juniors and seniors both the classroom instruction and real-world experience to decide if a career in education is right for them.


During the Educational Assistant course, students explore the field of teaching through observation, analyzing current issues, and using technology for research and presentations. Students shadow teachers, principals, and counselors, and assist with instruction, preparation of materials, and group activities. Students join the Texas Association of Future Educators (TAFE), a semi-professional organization, and complete a career development package for college admission, which includes taking the SAT and/or ACT.


The second part of the program is the Educational Assistant Work-Based Learning. Each school day, students attend their regular high school classes, followed by off-site field experience that sends them into district classrooms to teach their favorite subjects—while earning a salary. Primarily at area elementary schools, students assist with instruction and are given the opportunity to develop plans and teach lessons. The work-based learning course requires 270 hours per semester (or 540 accumulated hours for the year) and is considered the honors portion of the program.


Student participants get more than experience. Fort Bend has an agreement with Texas A&M University that grants students one semester of paid tuition for each year spent in *Ready, Set, Teach!* instruction.

"When our students go to college," says Aiello, "they know what they're doing. At most schools,

		<p>students don't enter the college of education until their junior year, but these students enter as freshmen having already taught in a classroom.”</p> <p>The “free” semesters are paying off already, as many of Aiello’s former students have returned to Fort Bend ISD to teach and to mentor a new class of students. Another part of the program guarantees district teaching positions to <i>Ready, Set, Teach!</i> graduates once they are certified to teach.</p> <p>“The best advantage of <i>Ready, Set, Teach!</i>” says Aiello, “is that it gives students the chance to learn in areas of personal interest. They get to do their own discoveries and find out a lot about themselves. They gain a real sense of self.”</p>
	<p>Cleveland High School Cleveland ISD Cleveland, TX http://www.clevelandisd.org</p>	<p>Elizabeth Hernandez was told her <i>Ready, Set, Teach!</i> (RST) experience in Cleveland, Texas, would be fun. Little did she know that it would also be an important factor in her acceptance to Sam Houston State University.</p> <p>“I took the portfolio I developed in the class to my college interview and received a full scholarship,” says Hernandez, a 2001 graduate of Cleveland High School. She is currently a second grade bilingual teacher at Northside Elementary in the Cleveland Independent School District.</p> <p>During her RST experience, Hernandez worked with second graders measuring their accuracy in reading. Now employed at Northside Elementary, Hernandez teaches alongside teachers who helped her gain experience in the program. She says RS T helped her realize that teachers must practice patience.</p> <p>“You must have a passion to motivate students even when they’re not motivated to learn,” Hernandez says. “You do it because you love kids and you want to make a difference in their lives.”</p>
	<p>Wheatley High School Houston ISD Houston, TX www.houstonisd.org</p>	<p>Students at Wheatley High School in Houston are taking their education to the bank as part of a local partnership with PrimeWay Federal Credit Union that will soon bring a financial institution to campus.</p> <p>“We’re moving into our new school building this summer, and our plan is to develop a fully operational credit union within the school,” says Wiley Johnson, principal of Wheatley.</p> <p>Johnson started at Wheatley in the fall of 2005. It didn’t take him long to learn that the school’s previous administration had been in contact with PrimeWay about a finance course. Johnson was aggressive about expanding the idea to a full finance curriculum. He says that Wheatley already has several career cluster programs that provide hands-on real-world experience, and that adding finance was a natural progression.</p> <p>The finance curriculum is in its pilot stage. Students use PrimeWay’s mobile banking unit as a classroom where they study concepts ranging from managing their own bank accounts to standard banking regulations and business management.</p> <p>Students also have the opportunity to become certified bank tellers, which gives them a marketable skill upon graduation. In addition, PrimeWay, which has seven branches across Houston, provides guest instructors for classes and participates in curriculum development and assessment. “Some of my students are sitting in class saying, ‘Yeah, I can use this when I enter the job market,’” Johnson says. “But I’m telling them that they already are in the job market. PrimeWay is really assisting us in making that link with the career, and helping students to understand the reality of it.” Wheatley’s long-term vision for the program is that students will be able to service customers at its branch office at the school and learn about banking practices.</p> <p>The program is also looking towards an articulation agreement that will award college business credit to PrimeWay students at some Texas colleges and universities. One of Johnson’s goals as Wheatley’s principal is to foster a college culture on his campus that gives students a range of options to make connections from the classroom to the outside world. He hopes to include many more partnerships with local businesses.</p>

		<p>"I would like to see defined programs of study that assist students on their way, and enable them to tweak their educations as they see fit," Johnson says. "The big picture is that no matter what students' plans are after high school, I want to see them graduating with skills and abilities that make them desirable to employers."</p>
	<p>John B. Alexander High School United ISD Laredo, TX http://www.uisd.net/high/ahs/</p>	<p>In Laredo, there's a place where people study the financial news as it comes in, wondering how the latest statements from the secretary of the treasury may affect the hundreds of thousands of dollars they have invested in the stock market. A stock ticker streams an endless series of numbers on a television overhead, tracing the upward or downward movement of the day's most active stocks on the New York Stock Exchange. This isn't a trading floor or a stockbroker's office, however—it's a classroom at John B. Alexander High School.</p> <p>Cecilia Santos teaches at John B. Alexander. "It's an innovative class open to juniors and seniors from all four high schools in our district," she explains. "Students learn about banking and investing—the history of money, the role of the Federal Reserve Bank, and annual reports."</p> <p>The centerpiece of the course, though, is the Stock Market Game, a program sponsored by the Foundation for Investor Education. The game simulates an online investment account, teaching students the basics of investing by asking them to put "virtual" dollars into real stocks, and to follow their progress. "At the end of the course, the students prepare a PowerPoint presentation, a report, and present to a panel of businesspeople from the local community—bankers, accountants, stockbrokers—and defend their investment strategies," Santos says.</p> <p>"We've had outstanding results with the Stock Market Game," says Santos. "We've had quite a few students who have been offered positions based on their performance. A bank officer saw one senior student's presentation and told me, 'Give her my business card. I want to hire her.'</p> <p>"I've had other students who were offered internships and positions with investment firms," Santos continues. "They tell students, 'We'll work around your college schedule and help you with tuition and books.' They're very interested in helping students get their foot in the door."</p>
	<p>Magnet Center for Public Service: Government, Law, and Law Enforcement at the Yvonne A. Ewell Townview Center Dallas ISD Dallas, TX http://www.dallasisd.org/schools/realtor_new.cfm?id_con=165</p>	<p>Imagine attending a U.S. Supreme Court session in Washington, D.C. Could a high school student understand the public policy issues and legal cases the justices discuss?</p> <p>Sonia Ramirez did. "I understood everything. It blew my mind," says the high school senior at the Magnet Center for Public Service: Government, Law, and Law Enforcement at the Yvonne A. Ewell Townview Center in Dallas.</p> <p>Ramirez's elective hours at the magnet school were spent studying government and law. As part of that program, she had researched the very issue the U.S. Supreme Court justices were discussing the day she visited the court.</p> <p>It was that day in the U.S. Supreme Court that Ramirez knew she could achieve her dream of being a politician or Supreme Court justice. "It let me know I could do this; this is something I can make my life's work."</p> <p>The governments of Dallas County and the city of Dallas are the 'living laboratories' where students do experiments in governmental process," says Robert L. Giesler, principal.</p> <p>This college-preparatory magnet school is part of the Dallas Independent School District's Yvonne A. Ewell Townview Center, a collection of six separate magnet programs under one roof. Students from the different programs take their academic courses together. Elective hours are spent in the various magnet schools.</p> <p>The program for public service, government, and law focuses on real-life experience, what Giesler calls "exposure and practice." In addition to the city and county governments, its laboratories include courts, law firms, and state and federal government offices.</p> <p>As freshmen, students spend their elective hours in Introduction to Public Service. One day a week, they visit federal, district, county, and city courts. Afterward, Giesler says, "students write legal</p>

		<p>briefs on the court cases they've observed" using the Texas Penal Code and research they conduct with Lexis/Nexis, the database used by real law firms. During the other four days, students explore topics including international studies and legislative processes. Five weeks is spent conducting a mock legislature. "Students write their bills, argue the pros and cons, get them out of committee, and present them to the 'legislature,'" says Giesler.</p> <p>As sophomores, students take a class called Law. They visit many government offices, interview people working at various levels of government, and conduct research at the law library of Southern Methodist University.</p> <p>An unpaid internship with a government office, judge, or law firm is the focus of the program's junior year. "Every three weeks the students have seminars where they present what they have learned to each other," says Giesler.</p> <p>Seniors spend their elective hours in paid internships. Most of the internships are at law firms "because they're the ones who can most afford to pay interns," says Giesler, although he notes there are some positions in government offices.</p>
	<p>Ben Barber Career and Technology Academy, Mansfield ISD www.mansfieldisd.org</p>	<p>Ben Barber Career and Technology Academy in Mansfield is stepping up to solve the shortage of healthcare workers in Texas.</p> <p>Ed Foster, Career and Technical Education Director for the Mansfield School District, cites an aging population of healthcare workers and growing health-related problems such as obesity and diabetes for the substantial staffing shortfalls in many healthcare facilities. The innovative National Biomedical and Health Sciences (NBHS) secondary program is intended to help alleviate the current and projected deficit.</p> <p>"The array of classes we offer serves students with interests varying from a career as a lab technician to aspirations for medical school," says Foster. "This program attracts the best and the brightest."</p> <p>The National Biomedical and Health Sciences program is the result of a partnership between two national organizations that focus on curriculum design, professional development, program evaluation, and healthcare workforce demands. MPR Associates and the National Consortium on Health Science and Technology Education (NCHSTE) have partnered to create a course framework that integrates a health sciences core with traditional academic classes and provides project-based instruction related to health care.</p> <p>Most students in the NBHS program spend only half of each school day at their home high school campuses. Following a nine-week introduction to health science, students participate in clinical rotations at area hospitals, doctor's offices, and clinics, observing and gaining hands-on experience in a variety of healthcare fields. Foster says the clinical experiences have been a big hit with students interested in pursuing a pre-medical college program, and that giving the courses weighted credit allows students to improve their grade point averages as they head into the competitive process of applying for postsecondary education.</p> <p>Barber was one of eight high schools in the country selected to implement the NBHS curriculum in the fall of 2005. Success has come even in the program's first year, as students are enrolling in the courses for next year with plans to seek certification. The certification option is the crown jewel of Barber's NBHS program. It allows students to graduate as pharmacy technicians or certified nurse's assistants. Because of Barber's accelerated block schedule of four classes each semester, students are able to take more health science electives each year. "A student may take pharmacology and pharmacy tech during their junior year, and then take pharmacy tech again their senior year and sit for the certification exam," Foster says.</p> <p>The Ben Barber Career and Technology Academy is fed by the four high schools in the Mansfield area and serves 2,500 students every year. Foster says the school is preparing for an influx of students interested in enrolling in health science courses. An Emergency Medical Technician (EMT) certification program is being added for the 2006–2007 school year, and the school has built a state-of-the-art biomedical lab.</p>

	<p>South Texas High School for Health Professions South Texas ISD Mercedes, TX http://medhigh.stisd.net/</p>	<p>When she's at the doctor's office or pharmacy, Barbara Heater takes comfort in knowing that the staff is well trained. That's because as the principal at the South Texas High School for Health Professions, she helped educate them.</p> <p>"I always run into our graduates," says Heater. "It's comforting because any time you're in for medical treatment it's frightening, and here's someone you know and they're very well trained."</p> <p>The magnet school, known locally as "Med High," has been ranked 91st by <i>Newsweek</i> on its Top 1,200 High Schools list. Located in Mercedes, the school was started in 1984 to help address the shortage of healthcare professionals in the Rio Grande Valley.</p> <p>More than 95 percent of Med High students go on to college, often to prepare for careers in health care. Students are given the opportunity to earn certifications to enter health science careers right out of high school, says Heater, "if students need to work while going to college, they can work in more than an entry-level, minimum-wage position."</p> <p>Academic rigor is stressed at Med High, says Heater, with many advanced placement classes offered. Solid academic skills are especially important in medicine, she adds.</p> <p>"We don't want the students to settle for average. Do you want a doctor taking care of you who's only right 70 percent of the time?" she asks. "We hope by giving them a rigorous academic background, it prepares them for what they're going to face in medical school, nursing school, pharmacy school, or whatever career they choose."</p>
	<p>Westside High School, Houston ISD Houston, TX http://hs.houstonisd.org/westsidehs/welcome.htm</p> <p>Del Valle High School Del Valle ISD Del Valle, TX http://www.del-valle.k12.tx.us/</p> <p>Emmett J. Conrad High School Dallas ISD Dallas, TX http://www.dallasisd.org/</p>	<p>An innovative program in Texas has students saying "bon appetit!" while they learn to run small businesses.</p> <p>The Texas Restaurant Association is in its fifth year of implementing Entrepreneur 101, which links academics and career preparation for students interested in owning and operating a business.</p> <p>The high school curriculum uses a school-based restaurant to teach students entrepreneurial skills. As part of the program, students undertake responsibilities as the owners and operators of the restaurant, with the assistance of experienced business professionals and educators. The program is currently operating an Outback Steakhouse located in Westside High School in Houston and a Carmelo's Ristorante at Del Valle High School in Austin. A second Outback Steakhouse opened at Emmett Conrad High School in Dallas in the spring of 2007.</p> <p>"The program teaches students how to run and own a successful business," says Yvonne Loya, Director of Programs & Events for the Texas Restaurant Association. "The example we use just happens to be a restaurant."</p> <p>Loya says that through Entrepreneur 101 extended learning, students develop technical and entrepreneurial skills necessary to manage an enterprise. Additional curriculum segments have also been created to integrate other courses into the experience, such as accounting, math, chemistry, art, English, languages other than English, government, layout and design, merchandising, and marketing.</p> <p>This ensures that students are exposed to all aspects of an industry, from keeping the books and designing the menu to legal and sanitation requirements.</p> <p>Students are also offered the chance to obtain ServSafe® certification. ServSafe® is a comprehensive food service sanitation program that is accepted as the national standard by more than 95 percent of state and local jurisdictions. After passing the 80-question exam, students qualify for a food handler card from the United States Department of Health.</p> <p>Entrepreneur 101 requires support from local communities to get restaurants running. Loya estimates that the total cost of the program is near \$1 million per location. To offer the program, schools must have an unbranded restaurant or dining area on campus, or they must hold a bond election for Entrepreneur 101 that provides for building and branding the restaurant as they go.</p> <p>"We're learning with experience, and as we continue to do so, we can begin to evaluate and improve our progress and success," Loya says.</p>



Denton Independent School District Advanced Technology Complex
 Denton ISD
 Denton, TX
<http://www.dentonisd.org/>

Students who participate in a two-year cosmetology program in high school and pass the state exam, for example, can graduate with a cosmetology license from the Texas Department of Licensing and Regulation. The Texas manicurist licensing program is even faster. It only takes a year.
 “The students graduate not only with a high school diploma,” says Brenda Buster, cosmetology instructor at the Denton Independent School District Advanced Technology Complex, “but with a professional license to start a career or support their way through college.”


Karen Wagner High School in San Antonio
 Judson ISD
 San Antonio, TX
<http://sc.judsonisd.org/education/school/school.php?sectionid=3312>



A person pursues a career in early childhood education to make a difference in a child’s life, and nothing could be more rewarding,” says Yolanda Chapa, a teacher at Karen Wagner High School in San Antonio.
 Students in Chapa’s early childhood professions program receive instruction in teaching. “Students now also have the opportunity to do rotation internships at the Wagner Early Childhood Center, where they work with children ages 3 to 5 years old,” says Chapa, also director of the center. “Early childhood professions students help elementary school teachers with all classroom procedures. The program could be called ‘growing our own future teachers.’”
 The program is an unpaid internship program for high school juniors and seniors who want to explore careers working with children. Graduates of the program may take positions in teaching, social work, pediatrics, and other occupations that serve the needs of the young.
 “Students enrolled in this program receive two years of field experience,” says Chapa. “This allows students to decide which age group they prefer or if this field is really what they want to pursue.”
 Early childhood professions is an articulated Tech Prep course, which means that, in addition to directly preparing students for a career, the courses offer students the opportunity to earn college credit. Students taking early childhood professions courses at Wagner can earn up to seven college credit hours while they are still in high school.
 The most important part of the program, however, is the hands-on experience. Students entering the program as juniors receive two full years of experience in working classrooms. This enables them to not only decide whether they really want to teach children, but narrow down their preferences to particular age groups.
 Chapa herself relishes her work with high school students and young children. “Nothing is more rewarding than hearing from some of my ex-students and learning that something I said or did was an influential part of their success,” she says.





Connally High School
 Hendrickson High School
 Pflugerville ISD
 Pflugerville, TX
<http://www.pflugervilleisd.net/>

Two of the three high school campuses in Pflugerville Independent School District offer specialized IT programs.
 Connally High School features classes in Computer Maintenance and Repair, along with Fundamentals of Networking and Networking Essentials. These courses prepare students for careers as communications analysts, communications engineers, electronics technicians, or telecommunications repairers.
 Hendrickson High School offers business database programming. Students attracted to programming might consider careers as operating systems engineers, programmer/applications specialists, or software testers. Business Computer Programming I and Computer Science II are also offered for those pursuing these careers. Students who enjoy designing, editing, and marketing websites may consider taking Animation Technology, Business Image Management and Multimedia, or Media Technology II.
 “The opportunities are there for students,” says Geralyn Elmore, director of career and technical education for the Pflugerville Independent School District. “The classes are exciting and

		<p>filled with real-world applications. Students just need to know what they can do while in high school to prepare for their futures. Parents also need to know the opportunities and how the career clusters prepare their children for college and career success.”</p>
	<p>Burleson High School Burleson ISD Burleson, TX http://www.burlesonisd.net/</p>	<p>Fewer than 10 years ago, Burleson High School’s Information Technology program consisted of just one course, Business Computer Information Systems. Now, the school features Cisco Networking Academy, which allows students to earn certifications in networking technology and, in some cases, income.</p> <p>In 2006, three of Burleson’s students started their own Internet company, bid on a number of jobs, and earned more than \$30,000 for each job.</p> <p>“Part of the business was a web company,” says Scott Stephenson, an instructor for the Cisco academy at Burleson. “It’s not a fly-by-night company. In fact, it’s still in business.” Stephenson is proud to say the three young men made more money last year than he did.</p> <p>Cisco Systems, which manufactures and sells computer networking equipment, began its academy program in 1977 to educate Information Technology teachers on how to better equip and encourage students to enter IT careers. The program got off the ground in 1999. “Cisco Systems has made a significant investment in the academy program, and I am continually amazed at the resources they provide,” says Cisco Networking Academy Training Center Co-director Gay Berryman.</p> <p>Participating schools invest \$3,500 for Cisco’s instructor training. Once certified, teachers bring the online courses to the classroom, where the students can take as many as four Cisco Certified Network Associate (CCNA) courses.</p> <p>Stephenson encourages students to earn the Cisco Systems networking certification and others that are available to them. “We really encourage certifications,” says Stephenson, who also teaches Cisco classes at Tarrant County Community College in Fort Worth. “Most companies want to see certifications more than anything else.”</p>
	<p>Dale Jackson Career Center, Lewisville ISD Lewisville, TX http://djcc.lisd.net/index.htm</p>	<p>At the beginning of each school year at Dale Jackson Career Center in Lewisville, criminal justice teacher Chris Thompson opens his class by asking students one question: “Why are you here?”</p> <p>Thompson says he asks the question because high school students can come into the program for the wrong reasons. “A lot of students think criminal justice is what they see on television,” says Thompson. “This program gives them practical insight into the system. They come to class and realize it’s more difficult than what they see on TV.”</p> <p>With firsthand experience in the FBI, CIA, and Drug Enforcement Agency (DEA), Thompson knows the ins and outs of law enforcement. He came to Dale Jackson Career Center to train students in the skills needed to succeed in criminal justice. The program balances technical training with rigorous academic preparation, emphasizing the development of communication skills. “A police officer may spend up to three hours a day writing reports about his or her activities,” Thompson notes.</p> <p>He teaches four courses based on curriculum developed at Texas A&M University. “These courses are at the college level,” he says. “In fact, one of our graduates was able to opt out of a college course after only four weeks because he had already covered the material.”</p> <p>Thompson says his greatest reward is hearing the success his students achieve after high school. One Jackson student interested in law enforcement is working as a jailer, attending community college, and preparing to become a deputy in the sheriff’s office. Another graduated from the University of Texas and received a full scholarship to Harvard Law School.</p>

	<p>Estacado High School Lubbock ISD Lubbock, TX http://www.lubbockisd.org/ehs/</p>	<p>Rishanda Johnson, a senior in Estacado High School in Lubbock, always wanted to be a nurse—that is, until she followed a personal interest in law into Estacado's Justice and Law Magnet Program.</p> <p>The program combines in-class training in legal principles and procedures with experience working in legal settings. Estacado students rotate through the U.S. Marshal's office, the Lubbock Police Academy, and the District Attorney's office, observing real professionals on the job. Johnson watched police officers write reports and paralegals develop cases. She attended lectures at the Texas Tech School of Law and reported to her fellow students at Estacado.</p> <p>"I even met the law school dean," she says. "Because I went to Texas Tech and then shared the information with other students, I know about the university. I'm no longer worried about studying law or going to college. I know I can learn this."</p>
	<p>Mission Consolidated Independent School District Mission, TX http://www.mission-cons.k12.tx.us/</p>	<p>In South Texas students from the Mission Consolidated Independent School District learn about precision manufacturing by taking coursework at South Texas College (STC). This two-year program prepares high school juniors and seniors for careers in areas such as tool and die making, industrial maintenance, plastics processing, and quality assurance.</p> <p>Students in the program learn to use machining equipment, computerized mill and lathe machines, and drafting software, and take courses in machining mathematics and blueprint reading. They get practical experience both in high school courses and at STC's Technology Center, earning up to 39 hours of college credit at no cost, and receive a precision manufacturing certificate upon high school graduation.</p> <p>The program was created with help from area manufacturers. "We got a lot of companies calling, saying that they needed employees for this area," says Raul Ruiz, a project training specialist at STC. "The curriculum was designed by the manufacturing companies in the community." Firms involved in the project include General Electric, Black and Decker, and Panasonic.</p> <p>In the summer, the program really pays off for students. "We have a paid internship program for the students during the summer," Ruiz says. "We place them with a manufacturing company. They can earn as much as \$1,400 for the six weeks, and some students get hired after the internship."</p> <p>Students who choose to continue coursework at STC after graduating from high school can continue at STC to earn an associate's degree in precision manufacturing and a bachelor's degree in applied technology or engineering.</p>
	<p>Clements High School Fort Bend ISD Sugar Land, TX www.fortbend.k12.tx.us</p>	<p>At Pet Country in Missouri City, Christine Birdina deals with pet owners, runs the cash register, bathes dogs, feeds mice and gerbils, and earns college credit while doing so. It's part of a deal her future college, Texas Tech, has arranged with Clements High School, Birdina's school in nearby Sugar Land.</p> <p>The university and Birdina's high school recognize how real-world work experience can help her reach her career goals. After studying marketing in classes at school in the morning, she gets an education in retail marketing at work in the afternoon. Even in a pet store, marketing is all about doing whatever it takes to sell the customer your product.</p> <p>"I leave school at 12:15, then go to work," Birdina says. "It's not a behind-the-desk job. It's always different, always fun. I pretty much run the whole business if no one else is in. I'm a cashier, I take in shipments, and I feed and walk all the animals."</p> <p>Clements High School offers seven marketing courses in addition to numerous career-building activities in partnership with DECA, an in-school organization of students exploring marketing as a career.</p> <p>"We have more than 300 students in our program," says Ken Kaser, marketing teacher at Clements. "It's important to get experience in the field as early as possible, because it makes it easier</p>

		<p>later on.”</p> <p>Students are given plenty of opportunity to earn college credit while still in high school, as Birdina does. One-semester courses count for a half credit, full-year courses count for one credit, and students may earn as many as three credits through the school’s co-op internship program, which often allows students to work while they are completing their high school studies.</p>
	<p>McNeil High School, Round Rock ISD, Round Rock, TX www.roundrockisd.org</p>	<p>Under the guidance of experienced professionals, future engineers are on their way to becoming high-tech professionals at McNeil High School in the Round Rock Independent School District.</p> <p>McNeil is home to the only engineering academy in the district. The academy features curriculum from Project Lead The Way (PLTW), a nationwide program aimed at solving the United States’ engineer shortage.</p> <p>The not-for-profit organization provides engineering curriculum to more than 1,750 schools in 46 states and the District of Columbia. The curriculum is free, but schools must provide software, hardware, and other supplies for the program.</p> <p>“When McNeil began implementing Project Lead The Way in 2001,” says Lisa Windolf, the Academy Coordinator, “the school wanted experienced engineers to teach. And, so far, the entire faculty consists of former engineers.”</p> <p>Windolf, who was a chemical engineer for more than 14 years, adds that the engineers’ professional contacts and experience pay off for students.</p> <p>“There are local firms who come recruiting our students,” she says. These calls often translate into summer jobs and work-based learning opportunities. “Nothing is more valuable to them than seeing the things they’re learning come to life.”</p> <p>Such experiences have led to significant student achievement, as almost 25 percent of the 2005–2006 engineering academy seniors have been offered early acceptance to postsecondary engineering or computer science programs. More than 40 percent of the previous year’s academy seniors went on to study engineering and related fields after high school.</p> <p>Windolf says one reason for the engineering academy’s success is that it is not selective. Any student in the Round Rock ISD who is interested in engineering is encouraged to transfer to the academy at McNeil. “We’ll take everyone,” she says. “Part of my job is to get students excited about engineering; another part is to help some students find out that engineering is not for them. But by giving every student a chance to participate, we draw a variety of skills and talents for different aspects of engineering.”</p> <p>McNeil’s engineering academy offers four out of the eight possible PLTW secondary courses. The classes—Introduction to Engineering Design, Principles of Engineering, Digital Electronics, and Engineering Design and Development—are integrated with math, computer science, and engineering graphics courses to offer students a comprehensive four-year pre-engineering education series. Only the first two PLTW courses are required for all students in the academy.</p> <p>The academy is enjoying a boom in popularity. From about 160 academy students in the 2005–2006 school year, the 2007-2008 enrollment was more than 200 students.</p>
	<p>Science Academy of South Texas South Texas ISD Mercedes, TX http://scitech.stisd.net/</p>	<p>The Science Academy of South Texas (SciTech) in Mercedes is ranked as one of “America’s Best High Schools” by <i>Newsweek</i> magazine. It focuses on Science, Technology, Engineering & Mathematics and offers students a head start on college.</p> <p>SciTech features the national Project Lead The Way curriculum—a series of courses that prepares students for rigorous college engineering programs and gives them practical experience working on real-world projects. Mark Schroll, a SciTech technology teacher, says the curriculum is unique—students graduate with a minimum of five pre-engineering courses and twice the math and science courses required by the State.</p>

		<p>“Though SciTech is a public magnet high school, we have no entrance requirements for the students,” Schroll said. “We get interested students from all walks of life and all skill levels. We draw students from many different school districts that stretch from one end of the Rio Grande Valley to the other.”</p> <p>“The idea is to introduce engineering to high school students from an early age,” said Ben Salinas, a SciTech alumnus. “That way they’ll get excited about engineering and they’ll be more likely to study it in college.”</p> <p>SciTech’s engineering, math, and science classes are an effective college initiation. “I was very well prepared even though I came from an economically disadvantaged area,” says Salinas, who goes to the Franklin W. Olin College of Engineering in Needham, Massachusetts, “and I attend a top-ranked, very selective engineering school.”</p> <p>When students come to SciTech they expect it to be challenging. “They may not always like that part when they are knee-deep in their work, but they see the payoff at the end,” Schroll says. “They watch as upperclassmen receive scholarships and go on to world-class colleges.”</p>
	<p>Paris High School Paris ISD Paris, TX http://www.parisisd.net/</p>	<p>Paris High School in Paris, Texas, boasts an award-winning Automotive Technologies program. In 2006, Paris High School Auto Tech competitors were the SkillsUSA Texas state champions in the Auto Service and Power Equipment competitive events and placed third in Diesel Equipment. In June 2006, Paris seniors Bradley Bolton and Aaron Clay became the Ford/AAA Student Auto Skills national champions. This competition tests students’ written knowledge and hands-on skills in auto repair.</p> <p>Asked the secret to his program’s success, Paris High School’s Automotive Technologies instructor Michael Schmidt replied, “There’s no secret. We just worked really hard.”</p> <p>The Paris Auto Tech program has approximately 50 students. Most students spend about two hours a day in class, but, as contest time nears, the most dedicated return to the school at 6 p.m. and often stay as late as 11 p.m.</p> <p>Scholarships awarded by the Ford/AAA competition made the effort worthwhile for the two national champions. “Both got full scholarships,” says Schmidt. “That’s why I try to motivate and encourage my students.”</p> <p>Paris Auto Tech also helps all interested students prepare for certification testing. “We work toward ASE [National Institute for Automotive Service Excellence] certification,” says Schmidt.</p> <p>ASE certifications require at least two years of employment experience, so, although students rarely complete the certification in high school, they are fully prepared for certification once they have met the work experience requirements.</p> <p>Schmidt believes that careers in automotive service can benefit a student, whether a student wins competitions or not. “It’s really a field that pays off,” he says. “There are so many opportunities with auto tech. A student can be a mechanic, a service tech, a teacher, and a lot more.”</p>
	<p>Byron Martin Advanced Technology Center Lubbock ISD Lubbock, TX http://www.lubbockisd.org/ATC</p>	<p>The need for capable automotive technicians and engineers led to a new educational model in which the essential concepts are an implicit integration of math and science with applied learning activities and career path flexibility for students. The teaching of fundamental math and science concepts in applied learning activities promotes student comprehension, accentuates the linkage of theory to the physical world, demonstrates the importance of understanding science and math concepts, and provides an exciting venue to increase student interest. Students need the flexibility to exit the process at various points to join the workforce with the knowledge and skills needed to be competitive or continue to higher educational levels.</p> <p>The Texas Tech University College of Engineering, South Plains College, the Lubbock Independent School District and the Lubbock Economic Development Alliance have partnered to develop a Seamless Automotive Technology Curriculum based on this new educational model. The</p>

educational pathways provided by the Seamless Automotive Technology Curriculum allow high school students to participate in automotive programs without limiting their opportunities for college careers. The Seamless Automotive Technology Curriculum is designed to provide pathways for students completing the Lubbock Independent School District programs to continue their education at South Plains College and Texas Tech University with several exit and reentry points which provide students substantial flexibility and options.

The high school level of the process provides students the skills and capabilities needed to enter the workforce immediately as certified automotive technicians who can be very competitive in the job market. However, the high school program is also designed to be a college preparatory curriculum with some course work being accepted by South Plains College. Students continuing on to South Plains College may obtain a one year Certificate or an Associate of Applied Science degree in Automotive Service Technology. On completing their work at South Plains College, students again have the choice of entering the workforce — as a higher level technician — or continuing their education by transferring into the Mechanical Engineering program at Texas Tech University. On completion of Bachelor of Science in Mechanical Engineering, students once again have the option of joining the automotive industry as an engineer or continuing at Texas Tech University or another university for a Masters or Doctoral engineering degree. Finally students may elect at any transition point to enter the workforce for a year or two and then reenter the education pathway for additional training and education.

This curriculum provides much flexibility and many options for the student, To take full advantage of the flexibility and opportunities provided by the Seamless Automotive Technology Curriculum, students with help from their parents should begin planning their educational goals and pathways as early as the eighth grade. Students and parents are urged to explore the opportunities with faculty and advisors at the Byron Martin Advanced Technology Center, the South Plains College Technical Educational Division and the Texas Tech University College of Engineering.

The program also provides further enhancements to current educational endeavors including the coordination of laboratory experiences at all three levels to directly support and reinforce classroom studies and generate student enthusiasm. Such activities include involving Lubbock Independent School District students in dual credit laboratories at South Plains College and Texas Tech University; allowing Lubbock Independent School District and South Plains College students and faculty to participate in Texas Tech University vehicle research projects; and by specifically emphasizing creativity, critical thinking, and team work.