



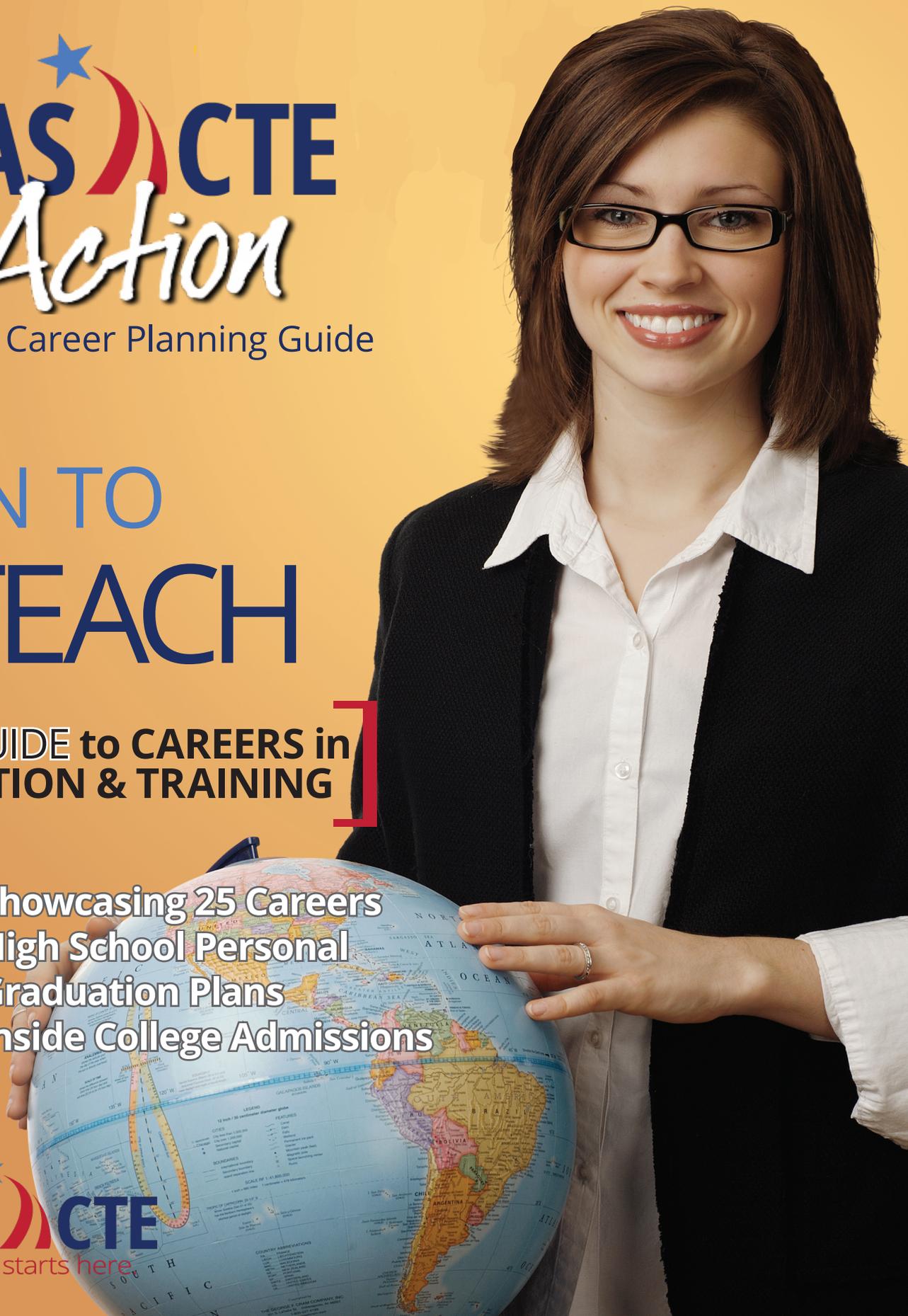
# TEXAS CTE *In Action*

A College and Career Planning Guide

## LEARN TO TEACH

**YOUR GUIDE to CAREERS in  
EDUCATION & TRAINING**

- Showcasing 25 Careers
- High School Personal Graduation Plans
- Inside College Admissions



# Dear Texas Student,

**Y**ou are probably tired of people asking, “What do you want to be when you grow up?” Some students know exactly what they want to do, but most haven’t got a clue. The idea of choosing a career is intimidating, and it feels like it’s far in the future. There’s little time in the commotion of classes, activities, sports, work, and fun to think about what career you want to pursue after graduation from high school or college.

It pays, though, to take the time to think about your future career. The truth is that you’ll save a lot of time and money if you have a direction in life, as opposed to just finishing high school and worrying about it later. It’s really a matter of dollars and sense. If you choose a career direction now, you can select classes and activities that will make you highly marketable—and highly paid—when you look for work. And it only makes sense to have an idea of what you want to do rather than just wandering aimlessly through school.

Nobody wants that. Not your parents. Not your teachers. Not your friends. They want you to be somebody. They want you to use your talents, follow your interests, and pursue your ambitions to become great at what you love to do in life. That’s what you should want, too.

So the time is right to take charge of your life and think about the future. You need a plan of action for how to get from where you are today to where you want to be in a few years: starting out on a personally and professionally rewarding career.

That’s what Texas CTE is all about. The guide you are holding is one of 16 guides to different career clusters. It is designed to help you make smarter decisions about your education and career options.

You’ve heard the phrase, “Information is power.” Well, this guide is power. It puts you squarely in charge of your future, from creating High School Personal Graduation Plans (see page 5) to choosing college or some other form of education or training after high school. Work with your parents, teachers, and counselors to make decisions, but remind everyone that it is your future at stake and that you are taking charge of it.

Get information. Get a plan. Get a clue about your career direction. It’s alright if that direction changes; choosing a direction now is better than having no direction at all. Just promise yourself that you’ll make smart choices about where to focus your time, energy, and passion.

We’re proud that you are taking steps to plan your career direction, and we pledge that your school, teachers, and counselors will do all they can to help you make wise choices on your plans for success. We wish you the best of luck on your journey.

**YOU’VE HEARD**  
THAT ‘INFORMATION  
IS POWER.’ WELL,  
THIS GUIDE IS  
POWER. IT PUTS YOU  
IN CHARGE OF YOUR  
FUTURE.



# Get Schooled

TEACHING, THEY SAY, IS THE PROFESSION THAT MAKES ALL OTHER PROFESSIONS POSSIBLE. The people who work in Education & Training instill the knowledge and skills everyone from preschoolers to adult learners needs to succeed. These caring, capable, and committed professionals help prepare their students for the many rewards and challenges that personal, professional, and civic life brings. If you yearn to learn, feel a calling to teach, or would like to work in a favorite subject area, then Education & Training could be the right career cluster for you.



## HOT Career Areas

Texas has launched a strategic plan that targets state efforts on six industry clusters that economists say will be the engines of economic growth in Texas. As you plan your future, think about a career in one of these new and emerging sectors.

- Advanced Technologies & Manufacturing
  - Molecular technologist
  - Sensor/robotics engineer
- Aerospace & Defense
  - Aerospace engineer
  - Unmanned autonomous vehicle engineer
- Biotechnology & Life Sciences
  - Bioinformatics specialist
  - Biocontainment technician
- Information & Computer Technology
  - System integrator
  - Computer game developer
- Petroleum Refining & Chemical Products
  - Petrochemical engineer
  - Refinery process design engineer
- Energy
  - Wind/solar energy engineer
  - Geophysical (oil and gas) prospector



THE FIRST STEP toward success is making smart decisions about your education and career options.

# Plan for Success

When I was in high school," says Sheryl Kovach, human resources director of environmental services at Philips Services Corporation in Houston, "the only job that I even knew about was receptionist work. I didn't aspire to be a manager or entrepreneur because I really didn't know about those disciplines. I was just looking forward to graduating. That was it. I really didn't know what it was I wanted to do."

Sound familiar? You, too, may not have a clue about what to do with your life.

Don't worry, though. Help is right here in your hands. This is your guide to education and career choices that

can shape your future. It's one of 16 career cluster guides published by Texas CTE ([www.txcte.org](http://www.txcte.org)). This edition is all about Education & Training.

Let's start with some basic steps you should take to get organized, plan for the future, and start on the road to success.

## Assess Your Talents and Abilities

First, you need to figure out some things about yourself. This step can be as simple as writing down a list of your interests (like video games or rock climbing), your hopes and dreams (like helping others), your talents (like writing or math ability), and your weaknesses (if you're squeamish at the

sight of blood, for example, you might not want to be a doctor).

Follow up on this informal exercise by taking some formal assessments to determine your interests and abilities. Common assessments include Texas Genuine ([www.texasgenuine.org](http://www.texasgenuine.org)) and CareerTech ([www.careertech.org](http://www.careertech.org)).

Ask your principal or counselor about the career assessments available at your school.

## Research Your Career Options

Once you've learned about yourself, learn more about your career options. There are thousands of occupations out there of which you may never have heard, including some that do not exist because the technologies have not yet been developed. Fortunately, there are plenty of resources (see inside back cover) for you, and they are as close as the nearest computer.

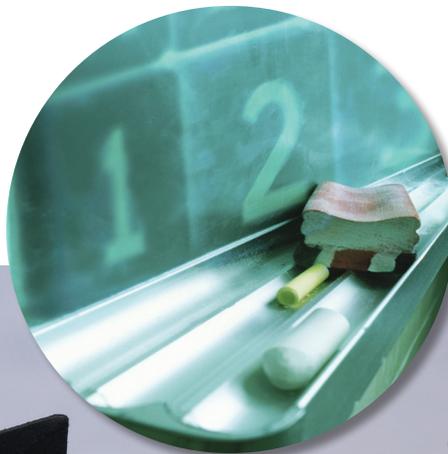
One of the most helpful is the Texas Career Check from the Texas Workforce Commission. It is a vast database of information about hundreds of professions. You can find Texas Career Check at [www.texascareercheck.com](http://www.texascareercheck.com). Another good place to start is O\*NET ([www.onetcenter.org](http://www.onetcenter.org)).

Gather information about what you can earn in the careers in which you are interested. Find out whether the careers you are considering have a promising future—are they adding or losing jobs? Check out the education you'll need to enter those careers.

The chart on pages 10–11 presents data on 25 possible professions. Remember, though, that these are just a sampling of careers available in the cluster. Go to Texas Career Check, O\*NET, or another resource to investigate other careers.

## TEACH FOR TEXAS

IS A STATE-SPONSORED  
CONDITIONAL GRANT  
PROGRAM THAT HELPS  
FUTURE TEACHERS WITH  
COLLEGE EXPENSES.





### Create Your High School Personal Graduation Plan

Once you have a better idea of your interests and abilities, you are ready to plan for high school and beyond. The High School Personal Graduation Plan, or 4-year plan, is your plan for preparing for the career of your choice.

The first step is for students to choose a career cluster of interest. In the eighth grade a student might choose Education and Training leading to a Public Service Endorsement and then later become interested in a narrower field such as school counseling or teaching or education administration.

The program of study you choose—your plan—does not stop with graduation from high school. A student could then pursue a two-year degree as a teacher’s assistant or a four-year and graduate degree as a high school principal.

You should set up a 4-year plan that takes you through career preparation after high school, revising your blueprint as needed as you go along. If your career plans include college study, ask your counselor about tests required for admission to college, such as the PSAT, SAT, or ACT.

### Seek Out Special Programs

Many Texas schools offer innovative programs to prepare students for specific career areas. These include career and technical education (CTE) programs, academies, and magnet schools. Once you’ve decided on a career direction, ask your counselor about special programs in your area that may provide related experiences in your chosen career.

Samuel Odamah enrolled in the undergraduate architecture program at the University of Texas at Arlington, having found his career calling at Dallas’s Skyline Career Development Center, a high school with career programs in a number of different fields.

“Skyline is one of the few schools in the country that offer programs in architecture,” Odamah says. “In some careers, Skyline students could even get professional certifications or licenses right in high school. It was a great place because you could find out whether you really wanted to enter a career.”

Odamah says that the career cluster system at Skyline taught him the value of planning for his career and his life. “We learned about planning ahead,” he says. “Those who plan things ahead of time don’t have to catch up. It’s just a matter of what a person wants out of life. Planning gives you a better platform for success.”

DEMAND FOR  
SPANISH-SPEAKING  
TEACHERS CONTINUES  
TO GROW IN TEXAS.

## Education & Training CTSOs

One of the best ways to acquire experience in your chosen career is by joining a career and technical student organization (CTSO). In Education & Training, the most helpful CTSO is:

- Family, Career and Community Leaders of America (FCCLA)  
[www.texasfccla.org](http://www.texasfccla.org)
- Texas Association of Future Educators (TAFE)  
[www.tafeonline.org](http://www.tafeonline.org)



WHAT ARE

# Career Clusters & Programs of Study



In Texas, High School Personal Graduation Plans will guide students' high school and college experiences (see next page). As part of this process, students focus their studies within a chosen career cluster and program of study that lead to an endorsement.

A career cluster is a group of occupations and broad industries that share certain features. The Education and Training cluster, for example, includes education counselor or educator administrator. Texas has adopted 16 Career Clusters (see back cover), the same ones designated and developed by the U.S. Department of Education.

As the graphic below shows, within each cluster are programs of study, which are more specific groupings of similar occupations. Think of a program of study as being like a college major. In Education and Training, you might choose to focus on Administration and Administrative Support in high school and college.

**Related Occupations**

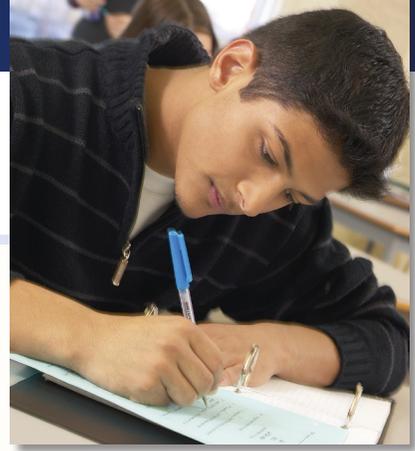
Each career pathway in a particular cluster includes a range of related occupations; education administrator is an example of an occupation that falls within Administration and Administrative Support.

Choosing a career cluster and career pathway will help you acquire the knowledge and skills you'll need to enter your chosen career. It will allow you to follow a seamless course of study from high school into college or other postsecondary education or training. The electives you choose can complement your core academic classes to prepare you for the challenges of the real world of work

**Review Your High School Personal Graduation Plan Each Year**

Don't get locked into a cluster and program of study you don't like. You should reexamine your 4-year plan at least once a year and change programs or clusters if your interests have changed. Choosing a cluster and program of study, even if it changes later, means that you'll have a direction in life. The idea is to be aware of what's going on in your life and take control of your future. When you know where your education is going and why, your classes will become more meaningful. You'll make contact with students, teachers, and employers who share your interest in a particular career area. You'll have experiences that are fun and exciting. You'll be on your way to success in school, in a career, and in life.





# WHAT IS A High School Graduation Plan?

It's a smart idea to create a High School Graduation Plan, or 4-year plan, to guide your studies through high school and into college or other postsecondary education or training. Your 4-year plan represents your chance to take control of your education and career choices. Working with your parents/guardians and guidance counselor, you can pick the cluster on which you want to focus your studies as well as your career and postsecondary

education goals. Don't worry. You aren't locked into your choices. You should revisit your 4-year plan at least once a year to update it. You can change clusters, programs of study, and career and postsecondary goals as your interests and ambitions change. Having a plan—even if it changes—is smarter than having no idea of what you want to do and why you are attending school. Here's how to fill out your 4-year plan.

**CHOOSE** a career cluster on which to focus your high school and college or postsecondary studies. The idea is to offer you a seamless route to follow from high school, through college or other postsecondary education, and into a career. Not all Texas schools offer all clusters, so ask your guidance counselor which clusters are available at your school.

**LIST** basic information such as your name and school.

**PICK** a program of study within the cluster. There are three programs of study within the Education & Training cluster (see page 12).

**CHOOSE** one or more occupations for which you would like to prepare. Use resources such as Texas Career Check ([www.texascareercheck.com](http://www.texascareercheck.com)) to research your options.

**PLAN** for what you want to do after high school. Your goal may be to attend a four-year university or two-year college, join the military, or enter an apprenticeship program. Your postsecondary goal should influence the classes you take in high school; for example, you will need certain course credits to qualify for admission to a college.

**SKETCH** out your schedule of classes for your high school years. Most of your time will be spent taking your core academic courses. By carefully selecting your electives, you can get the education and experience you need to start toward the profession of your choice.

**PICK** extended learning activities that complement your classes (see page 14). Work on community service projects. Plan for paid and unpaid career learning experiences, such as job shadowing and internships. All these extracurricular activities can give you experience that will help you get into college or land a job.

### High School Personal Graduation Plan

Name: Taylor Jones  
 School: Springfield High School  
 Cluster: Education & Training  
 Program of Study: Teaching & Training  
 Career Goal: Elementary School Teacher  
 Postsecondary Goal: Teacher Certification, Bachelor's Degree in Multidisciplinary Studies

9th Grade	10th Grade	11th Grade	12th Grade
Algebra I	Geometry	Algebra II	Precalculus
English I	English II	English III	English IV
Biology	Chemistry	Physics	AP Environmental Science
World History	World Geography	U.S. History	U.S. Government
Languages Other Than English I	Languages Other Than English II	Professional Communications	Fine Arts
Physical Education	Technology Applications	PE	
Principles of Education and Training	Child Development OR Human Growth and Development OR Interpersonal Studies OR Psychology	Instructional Practice in Education and Training OR Languages Other Than English III	Practicum in Education and Training OR Problems and Solutions OR Languages Other Than English IV

Curricular Experiences: Family, Career and Community Leaders of America; Texas Association of Future Educators  
 Extracurricular Experiences: 4-H Youth Development, Language Immersion Programs, School Newspaper, Speech and Debate Team  
 Career Learning Experiences: Career Preparation—Paid and Unpaid, Internships, Job Shadowing  
 Service Learning Experiences: Before/After School Aide; Campus Service Organizations; Ready, Set, Read

A CAREER PORTFOLIO (see page 15) is a good way to organize information about your educational experiences, record results of career interest and abilities assessments, and hold examples of your best work.



# Change Lives In Teaching

If you make a SPLASH in Education & Training, the ripples can go on forever.

Teaching creates ripple effects throughout society," says Steven Johnson, Associate Vice-President for External Relations for the Texas Association of Community Colleges. "There are few professions where you can have an impact on so many people's lives on a daily basis."

If you want to make a lasting imprint on society in a field where job openings are plentiful, a career in the Education & Training cluster might just be for you. Educators directly influence the lives of hundreds, sometimes thousands, of people, and they indirectly impact even more as their students go out into the world and engage in their personal, professional, and civic lives.

### Job Security

As the second fastest growing job category in Texas, a career in Education & Training also offers "lots of job security," says Blanche Desjean-Perrotta, associate dean for teacher education in the College of Education and Human

Development at the University of Texas at San Antonio. "It's one of the few professions in which, if you're good at your job, you can stay in that job until you retire," she says.

In Texas, says Ann Hatchitt, director of communications for the Texas Workforce Commission, the number of jobs in education is growing fast. Projections for the ten years from 2002–2012 show a 30 percent anticipated job growth rate in educational services, compared to an 18 percent expected growth rate for all jobs in Texas.

"Of the fastest-growing occupations listed for Texas, 10 of the top 25 are in Education & Training," reports Hatchitt.

### High Demand

A boom in the state's population is the main reason there's such a high demand for educators, says Johnson. We're going to have "larger public school enrollments than the state has ever seen," he says. Baby boomers "leaving the classroom to retire" are another reason demand will

be high, says Desjean-Perrotta.

Right now, demand is high in Texas schools for teachers of math and science, Desjean-Perrotta notes. "If you are a math or science teacher, you will have no trouble getting a job today." Special education teaching is also a hot career, among the 10 fastest-growing jobs in the state.

A third factor is the growing importance of education in our information driven, high-tech society, says Paul Whitton, associate executive director for the Texas Association of School Administrators. "Our jobs are becoming so sophisticated and so technically oriented that you have to



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Is Education & Training the right cluster for you?

Take this quiz to find out. Answer "yes" or "no" to the following questions.

1.

Do you enjoy school?

2.

Do you have a favorite subject that you want to make your career?

3.

Are you a good public speaker?

4.

Do you like to help people with their problems?

5.

Do you enjoy playing team sports?

6.

Are you involved in school or community groups?

7.

Are you good at playing with and engaging young children?

8.

Are you optimistic, caring, and confident?

9.

Do you help friends with school work or studying?

10.

Do you consider yourself a role model for other people?

If you answered "yes" to five or more of the above questions, Education & Training may be the right cluster for you.

To get a more specific and scientific measurement of your attitudes and abilities, ask your guidance counselor or teacher about taking a career assessment test or interest inventory.

## 10 Top-Paying Careers

Occupation	Average Wage	Low-Level Wage	High-Level Wage
Law Teacher, Postsecondary	\$53.18	\$10.46	\$85.33
Health Specialties Teacher, Postsecondary	\$48.82	\$19.64	\$85.33
Biological Science Teacher, Postsecondary	\$46.46	\$21.23	\$85.33
Training and Development Manager	\$45.48	\$25.74	\$71.07
Engineering Teacher, Postsecondary	\$43.95	\$21.84	\$85.33
Education Administrator, Postsecondary	\$43.90	\$23.18	\$85.33
Environmental Science Teacher, Postsecondary	\$41.69	\$20.51	\$62.82
Economics Teacher, Postsecondary	\$39.43	\$17.18	\$75.80
Atmospheric, Earth, Marine, and Space Sciences, Postsecondary	\$39.18	\$19.90	\$73.15

This is a chart of hourly wages for 10 of the top-paying careers in the Education & Training cluster in Texas. All hourly wages here are calculations based on annual rates. Low- and high-level wages are provided, as current wage information on entry- and experienced-level wages were not available. Source: U.S. Bureau of Labor and Statistics via careeronestop.online.

have a degree to qualify for these jobs.”

Such sophisticated jobs also require employers to provide more job training for adults, creating a higher demand for educators outside the schools and colleges. Corporate trainers, who specialize in teaching specific skills to professionals at their place of business, need to have “a lot of flexibility, knowledge of adult learning, and an understanding of business” to be successful, says Linda Farley, owner of Farley Training in San Antonio.

### A Variety of Opportunities

You are not limited to standing in front of a classroom if you’re interested in a career in education. “There are a multitude of opportunities,” says Desjean-Perrotta. Administrators such as school principals and superintendents of school districts make decisions on spending and hiring teachers that have far-reaching effects. Phyllis Ramsey, former principal of West High School in West, says that as an administrator, “you influence more lives—both teachers and kids.”

Other educators, including counselors, speech-language pathologists, and school psychologists, choose to serve students one-on-one. Linda Hughes of the Georgetown Independent School District says she left teaching to become a guidance counselor because she wanted to help students with “social skills, emotional concerns, and exploring careers.”

### Pay Issues

Because children’s lives are often changed by great teachers, many students are attracted to

careers in education. “Education is not for everyone, though,” says Desjean-Perrotta. While wages for careers in education “have gotten better, there are other jobs that pay more.” For many educators, however, the job security, health insurance, and retirement benefits are a plus, she adds. However, teachers often say enlightening students is their biggest reward.

The Texas Education Agency says the average starting salary for teachers in the state is \$33,100. Average salaries for teachers in kindergarten through grade 12 (K–12) range from \$35,000 to \$45,000. Corporate trainers earn an average of \$47,773.

Administrators earn the most money in this cluster. K–12 administrators average \$64,266, while those at the college and university level average \$93,140. Law school professors earn about \$110,000, but generally they are trained and practicing attorneys with significant income in addition to their teaching salaries.

**THE AVERAGE  
K-12 TEACHER  
SALARY IN TEXAS  
IS \$42,658, ACCORDING  
TO THE TEXAS  
WORKFORCE COMMISSION.**

### Role Models

Because educators are entrusted with the huge responsibility of influencing lives and society, they must be of high “integrity and character,” says Desjean-Perrotta. School districts do background checks on potential employees.

The bottom line, says Desjean-Perrotta, is “teachers have to be the type of person to whom you would entrust your children.” Whether you’re a teacher, principal, support worker, college professor, or corporate trainer, you will be a role model. “People will look up to you,” she says.

## 10 Fast-Growing Careers

Occupation	% Growth (2008–2018)	New Jobs Created (2008–2018)
Special Education Teachers, Preschool, Kindergarten, and Elementary School	50.0%	990
Elementary School Teachers, Except Special Education	43.0%	9,400
Instructional Coordinators	43.0%	640
Middle School Teachers, Except Special and Vocational Education	40.0%	4,590
Athletic Trainers	38.0%	90
Education Administration, Elementary and Secondary Schools	35.0%	1,240
Business Teacher, Postsecondary	35.0%	4,300
Self-Enrichment Education Teacher	41.1%	5,750
Art, Drama, and Music Teacher, Postsecondary	39.5%	1,600
Foreign Language and Literature Teacher, Postsecondary	39.4%	650

This is a projection of 10 fast-growing careers in Education & Training in Texas from the year 2002 to 2012 and the number of new jobs created in each occupation. Note that while the percentage of growth in jobs may be high, the actual number of jobs created may be low. Source: Texas Workforce Commission.



## What Employers Want

### INTEREST IN STUDENTS

"You have to like children; that's one of the main things we look for in a teacher," says Linda Chance, executive director of professional and support staffing for the Dallas Independent School District.

"We hire teachers who are passionate about students," adds Paul Matney, vice president and dean of instruction at Amarillo College, a community college in the panhandle of Texas. Dedication is another sought-after quality. "We look for someone who is dedicated to finding a way to help children learn. We don't want people who give up," says Chance. "Sometimes you have to have a lot of perseverance in finding a way to teach a child or to connect with a child."

### SPECIALIZATION IN A SUBJECT

"Too many individuals are going into general education," Chance says. She suggests that students major in areas in which there is a high need, such as math, science, or special education. "They will have the opportunity to select the positions they want because there is such a high demand."

At the college level, Matney says he looks for teachers who not only are experts in curriculum, but also are "passionate" about the subject. "You don't want to hire someone to teach biology who is not really excited about biology," he says.

Corporate training managers often look for specialization, too, says Jacquie Burandt, administrative director of staff development, human resources communications, and volunteerism for University Health System in San Antonio. Her staff includes two trainers with master's degrees in nursing and one with a master's degree in business administration.

### "HIGH-ENERGY" ROLE MODELS

In a K-12 setting, a "high energy level" is critical, says Chance. "Teaching is one of those careers that doesn't end at the end of the day. We're looking for someone who is willing to do the extras outside of the regular school day, things like sponsoring a club, coaching, or helping with academic activities after school or on weekends."

Employers also require a clean criminal record and references that speak well of the job candidate's character, says Chance. "The background check is very important because we want to make sure children are safe, and because the candidate needs to be a role model for students."

In the corporate environment, Burandt says she looks for trainers who will serve as leaders for other employees. "We have to be the role model when it comes to customer service, leadership—all those things that we teach."



# More than Academics

In CHANGING STUDENTS' lives, educators play many different roles.

**T**eachers wear a lot of different hats," says kindergarten teacher Amanda Pennell from Oakmont Elementary in Fort Worth. "We're a mother or father figure, counselor, nurse, dietitian, guardian angel, and social worker."

Whether they work in K-12 schools, colleges and universities, corporations, or elsewhere, teachers help shape lives. "At my school, we're not just teaching academics, we're shaping the whole person," says Phyllis Ramsey, principal of West High School in West.

### Teaching Takes Commitment

Reaching students on a social and emotional level is what some educators find most rewarding about their day-to-day jobs.

Pennell gives the example of a boy in her kindergarten class. "At the beginning of the year, he was so violent, he had to be restrained physically," she says. After six months of working with him, "he became a model student. That's my favorite thing. I'm able to positively influence children at an early stage, when it's really

important."

To succeed as a teacher in elementary, middle, and high school, Pennell adds, you must have empathy, a strong will, and be confident, dedicated, and "heart-sensitive."

### Teaching College

"The thing that really touches me is making a difference in other people's lives," says Robert H. Blodgett, professor of geology at the Austin Community College in Austin.

Teaching at the college and university level is different from teaching in the lower grades because you don't have the discipline problems, adds Blodgett. Also, it allows more flexibility with your time and more freedom in what to teach, he says, and in "who you are as an individual."



TWO COLLEGE OF EDUCATION ACADEMIC PROGRAMS  
 AT THE UNIVERSITY OF TEXAS AT AUSTIN  
 —EDUCATIONAL ADMINISTRATION AND  
 SPECIAL EDUCATION—  
**RANKED IN THE TOP 10**  
 IN THE 2006 U.S. NEWS & WORLD REPORT  
 GUIDE TO AMERICA'S BEST COLLEGES.

At a community college, an educator's focus is entirely on teaching, Blodgett observes. At a large college, it's mainly on instruction, but other time is often dedicated to research. At a university, research is a professor's main responsibility. Blodgett believes that to teach college, you need to be self-disciplined, patient, outgoing, tolerant, organized, and a good communicator.

#### Not Just Teachers

Not all educators are teachers. Professional staff in schools—such as principals, school counselors, and school psychologists—perform highly specialized tasks.

Linda Hughes, a guidance counselor in the Georgetown Independent School District, says counselors spend lots

of one-on-one time with students. To succeed as a guidance counselor, you need patience, a willingness to listen, and, Hughes says, "most of all, you need to be nonjudgmental. You have to accept all students." Ramsey says to be a successful administrator, you need to be a leader, a good listener and communicator, and "have a vision for your school."

#### Adult Education

Corporate trainers are educators, too. They operate in the world of business and must behave accordingly. They deal with adults who have limited time, and they must quickly adjust to different audiences in various businesses. A perk of corporate training for Linda Farley, owner of Farley Training in San Antonio, is that her assignments often involve travel. "I've

gotten to travel the world on other people's dimes," she says happily.

Julie Mumme Smith, cooperative extension agent in Borden County, 80 miles south of Lubbock, is involved in adult and youth education in a rural setting. The extension system provides education in agriculture, community development, family and consumer sciences, 4-H, and youth development in counties across Texas.

Smith says she enjoys the variety of her career. She advises the local 4-H program for students interested in careers in agriculture and organizes educational series for adults. "I like the flexibility of what I do," Smith says. "I get to be creative."



## 5 Cool Careers

CHECK OUT THESE EXCITING JOBS IN EDUCATION & TRAINING

1.

#### OUTDOOR EDUCATION INSTRUCTOR

If you love outdoor adventure activities, you can get paid to be an outdoor education instructor. They teach skills such as white-water canoeing, rock climbing, and wilderness first-aid. Sometimes the jobs involve environmental education. Most jobs require an instructor's certificate before the instructor can teach a specific skill. Certification programs generally last one to three months. Some colleges and universities also offer educational programs that vary from one-year certificates to bachelor's degrees.

2.

#### INSTRUCTIONAL MEDIA DESIGNER

Instructional media designers combine graphic design and technical skills with an understanding of teaching methods. "They create instructional resources for schools, including brochures, multimedia presentations, PowerPoint slides, videos, film clips, audio, e-learning modules, and websites," says Marilyn Wragg, curriculum director at Texas Tech University (TTU) in Lubbock. A bachelor's degree is usually required in education media or instructional design.

3.

#### DEPARTMENT OF DEFENSE OVERSEAS SCHOOL TEACHER

As a teacher for the Department of Defense (DOD) overseas schools, "you get to teach all over the world," says Blanche Desjean-Perrotta, associate dean for teacher education at the College of Education and Human Development at the University of Texas at San Antonio. The schools serve children of U.S. military personnel stationed overseas. Requirements are the same as for Texas public school teachers, plus a passing grade on the DOD school system's competency test.

4.

#### FITNESS TRAINER

Fitness trainers "teach individuals or groups exercise activities and fundamentals of sports. They also demonstrate technique and work to improve physical skills," says Letitia Killman, curriculum specialist at TTU. Trainers work in a variety of settings, including health clubs, cruise ships, and recreational parks. Some positions require certifications, which are offered by various professional organizations.

5.

#### SCHOOL PSYCHOLOGIST

For some children, learning can begin to happen once they've found ways to cope with emotional difficulties. School psychologists are there to help them do so, says Loretta Allen, Ph.D., president of the Texas Association of School Psychologists. Psychologists work with students directly and advise teachers on the best ways to help the students in the classroom. The job outlook is good, says Allen. "There is a shortage. Students are filling jobs as fast as they graduate."

# Education & Training

Listed below are 25 careers you might consider in the Education & Training cluster. These are not all the careers you can find at different education levels. Turn to the "Online Info" on the inside back cover to research all career options. Here's an explanation of the kind of information presented in each column.

**SOC:** Stands for Standard Occupational Code, which organizations like the U.S. Department of Labor use to categorize career information. Sometimes you can find data on a career faster by searching for its SOC.

**GROWTH:** This is the projected annual growth in Texas for the career between 2002 and 2012. Fast-growing occupations may offer greater career opportunities for young adults.

**OPENINGS:** This is the projected number of job openings for the career in Texas each year. Even though a career may be fast growing, there may not be a lot of positions available. Careers with more openings will give an entry-level worker a better chance of getting a job and greater job security.

**WAGES:** This is the amount the average person in the career earns in Texas per year. Naturally, entry-level wages are lower than the average, and those for workers with years of experience are generally higher.

SOC	Occupation	Growth	Openings	Wages	Education
25-1112	Law Teacher, Postsecondary	46.7%	50	\$82,742	First professional degree
25-1082	Library Science Teacher, Postsecondary	100.0%	5	\$54,542	Doctoral degree
25-1122	Communications Teacher, Postsecondary	33.3%	65	\$50,159	Doctoral degree
25-1111	Criminal Justice and Law Enforcement College Teacher	28.6%	55	\$48,324	Doctoral degree
25-1061	Anthropology and Archeology Teacher, Postsecondary	25.0%	10	\$65,439	Doctoral degree
25-1121	Art, Drama, and Music Teacher, Postsecondary	39.5%	250	\$52,369	Master's degree
25-1124	Foreign Language and Literature Teacher, Postsecondary	39.4%	100	\$48,175	Master's degree
25-1071	Health Specialties Teacher, Postsecondary	37.6%	425	\$69,588	Master's degree
21-1012	Educational, Career and Technical, and School Counselor	25.7%	830	\$48,735	Master's degree
25-2032	Career and Technical Education Teacher, Secondary School	24.5%	495	\$46,244	Bachelor's plus experience
25-2023	Career and Technical Education Teacher, Middle School	22.6%	70	\$43,955	Bachelor's plus experience
11-9032	Education Administrator, Elementary and High School	37.1%	1,045	\$64,562	Bachelor's plus experience
25-1191	Graduate Teaching Assistant	35.6%	980	\$30,067	Bachelor's degree
25-2042	Special Education Teacher, Middle School	48.7%	415	\$42,130	Bachelor's degree
25-2041	Special Education Teacher, Pre-K through Elementary	48.6%	915	\$42,505	Bachelor's degree
25-2043	Special Education Teacher, Secondary School	47.1%	430	\$42,986	Bachelor's degree
25-2022	Middle School Teacher, except Special Education	24.1%	3,045	\$42,822	Bachelor's degree
25-9021	Cooperative Extension Agent	7.1%	15	\$31,057	Bachelor's degree
25-3011	Adult Literacy and Remedial Education Teacher	24.7%	150	\$35,806	Bachelor's degree
25-2012	Kindergarten Teacher, except Special Education	43.7%	750	\$40,436	Bachelor's degree
39-9031	Fitness Trainer and Aerobics Instructor	42.0%	665	\$30,287	Postsecondary award
25-2011	Preschool Teacher, except Special Education	38.1%	1,900	\$23,152	Postsecondary award
25-3021	Self-Enrichment Education Teacher	41.1%	745	\$34,642	Work experience in a related occupation
43-4121	Library Assistant, Clerical	27.1%	400	\$20,262	Short-term on-the-job training

Source: Texas Workforce Commission (TWC)

Note: This chart is a sampling of careers in the cluster, not recommendations from TWC or any other agency or organization. Always do thorough research and consult with your parents/guardians before making a career choice.

career options in the cluster—they are just a sampling showing the variety of occupations available to options in the cluster of your choice and decide on the ones that best fit your talents and ambitions.

**EDUCATION:** This is the minimum preferred level of educational attainment for people working in the career in the United States. This can range from short-term on-the-job training to a doctoral degree taking several years of college.

**EDUCATION LEVELS:** The color bars show the mix of education levels attained by people actually working in the profession in Texas (see bars at right). If a bar features mostly one color, that means that level of education is likely the one you'll need to reach to work in the profession. Look at law teacher, for example, and you'll see that virtually everyone in the field has a college degree or better. If the three colors in the bar are roughly equal in size, that means that there are opportunities in the profession for people of all education levels. For example, about 22 percent of the people working as kindergarten teachers have a high school diploma, while 31 percent have some college, and 47 percent have four-year degrees or better.

**JOB DESCRIPTION:** These are brief descriptions of each career from O\*NET Online ([online.onetcenter.org](http://online.onetcenter.org)).

High School	Some College	College or Better
Percentage of people in the occupation who have at most high school diplomas	Percentage of people in the occupation who have some college	Percentage of people in the profession who have a four-year college degree or better

Education Levels	Job Description
	Teach courses in law.
	Teach courses in library science.
	Teach courses in communications, such as organizational communications, public relations, radio/television broadcasting, and journalism.
	Teach courses in criminal justice, corrections, and law enforcement administration.
	Teach courses in anthropology or archeology.
	Teach courses in drama, music, and the arts, including fine and applied art, such as painting and sculpture, or design and crafts.
	Teach courses in foreign (i.e., other than English) languages and literature.
	Teach courses in health specialties, such as veterinary medicine, dentistry, pharmacy, therapy, laboratory technology, and public health.
	Counsel individuals and provide group educational and career and technical guidance services.
	Teach career and technical or occupational subjects at the secondary school level.
	Teach career and technical or occupational subjects at the middle school level.
	Plan, direct, or coordinate the academic, clerical, or auxiliary activities of public or private elementary or secondary schools.
	Assist department chairperson, faculty members, or other professional staff members at a college or university by performing teaching or teaching-related duties, such as teaching lower-level courses, developing teaching materials, preparing and giving examinations, and grading examinations or papers. Graduate teaching assistants must be enrolled in a graduate school program.
	Teach middle school subjects to educationally and physically handicapped students. Includes teachers who specialize and work with aurally and visually handicapped students and those who teach basic academic and life processes skills to the mentally impaired.
	Teach elementary and preschool school subjects to educationally and physically handicapped students. Includes teachers who specialize and work with aurally and visually handicapped students and those who teach basic academic and life processes skills to the mentally impaired.
	Teach secondary school subjects to educationally and physically handicapped students. Includes teachers who specialize and work with aurally and visually handicapped students and those who teach basic academic and life processes skills to the mentally impaired.
	Teach students in public or private schools in one or more subjects at the middle, intermediate, or junior high level, which falls between elementary and senior high school as defined by applicable State laws and regulations.
	Advise, instruct, and assist individuals and families engaged in agriculture, agriculture-related processes, or family and consumer sciences activities. Demonstrate procedures and apply research findings to solve problems; instruct and train in product development, sales, and the utilization of machinery and equipment to promote general welfare.
	Teach out-of-school youths and adults in remedial education, literacy, or English as a Second Language classes, or in preparatory classes for the General Educational Development test. Teaching may or may not take place in a traditional educational institution.
	Teach elemental natural and social science, personal hygiene, music, art, and literature to children from 4 to 6 years old. Promote physical, mental, and social development. May be required to hold State certification.
	Instruct or coach groups or individuals in exercise activities and the fundamentals of sports. Demonstrate techniques and methods of participation. Observe participants and inform them of corrective measures necessary to improve their skills.
	Instruct children (normally up to 5 years of age) in activities designed to promote social, emotional, physical, and intellectual growth needed for primary school in preschool, child-care center, or other child development facility. May be required to hold State certification.
	Teach courses other than those that normally lead to an occupational objective or degree. Courses may include self-improvement, nonvocational, and nonacademic subjects. Teaching may or may not take place in a traditional educational institution.
	Compile records, sort and shelve books, and issue and receive library materials such as pictures, cards, slides, and microfilm. Locate library materials for loan and replace material in shelving area, stacks, or files according to identification number and title. Register patrons to permit them to borrow books, periodicals, and other library materials.



PROGRAM PROFILES

HERE ARE the programs of study available within the Education & Training cluster in Texas high schools.\* The State has created programs of study for each of these areas. These documents detail high school classes you might take, extended learning opportunities, and postsecondary programs.

**ADMINISTRATION & ADMINISTRATIVE SUPPORT**

In this field, professionals provide instructional leadership and manage the day-to-day activities in schools, colleges, and universities. They also manage educational programs in businesses, correctional facilities, and community service organizations.

**PROFESSIONAL SUPPORT SERVICES**

Professionals in this field assist students in schools with personal and family needs, mental health needs, educational goals, and career decision making.

**TEACHING & TRAINING**

In addition to being knowledgeable in the subjects they teach, professionals in this area must be able to communicate, inspire trust and confidence, motivate learners, and understand their educational and emotional needs.

\* Not all schools offer all programs of study or clusters. Ask your counselor which programs are available at your school.



## HIGH SCHOOL PROGRAMS let would-be teachers practice their skills in the classroom.

**R**eady, Set, Teach! allows students to explore all facets of teaching by observing, shadowing, and walking in the shoes of experienced teachers," says Karen Kallas, a teacher who directs the program (see "Changing Lives in Real Classrooms," page 13) at Birdville High School in North Richland Hills. "At the end of the course, students should know if teaching is the profession for them.

"I know that there is a possibility that the students who have been trained through the program could become my colleagues someday," Kallas says. "It excites me to know that I could be professionally involved with others who truly have the mission to teach in their heart."

**Solid Foundations**

Direct experience with the workplace through programs such as Ready, Set, Teach! is an established part of high school preparation for teaching careers. Of course, becoming a good teacher starts with taking rigorous academics. The high school core curriculum provides the solid foundation a good educator needs in English language arts, science, mathematics, and social studies.

"I followed the advice of my teachers to take an academically challenging course load," says Kallas. "I packed my schedule with every math, science, and foreign

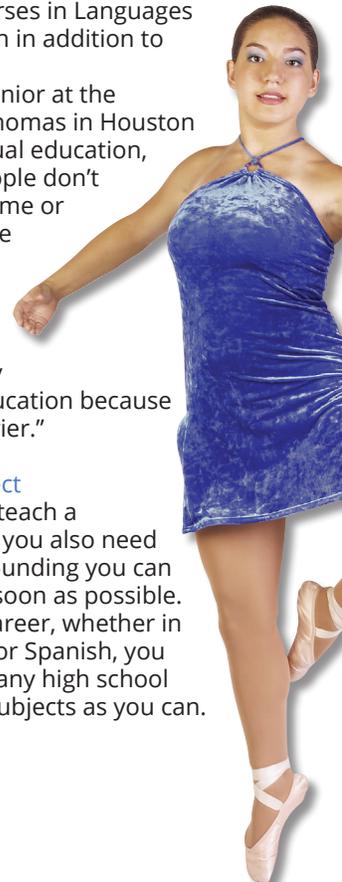
language course I could."

Marilyn Wragg, curriculum director at Texas Tech University in Lubbock, says it's particularly important that aspiring teachers "learn how to effectively communicate." Wragg recommends that students take courses in Languages Other Than English in addition to English.

Cassie Silva, a junior at the University of St. Thomas in Houston majoring in bilingual education, agrees. "Many people don't want to take the time or effort to help those who don't speak English," Silva says. "Children shouldn't have to miss out on any aspect of their education because of a language barrier."

**Master Your Subject**

If you intend to teach a particular subject, you also need to get the best grounding you can in that subject as soon as possible. For a successful career, whether in physics, fine arts, or Spanish, you need to take as many high school courses in those subjects as you can.



## NEW TEACHERS IN TEXAS GET INSTRUCTIONAL AND MENTOR SUPPORT THROUGH THE TEXAS BEGINNING EDUCATOR SUPPORT SYSTEM (TXBESS).

### Educational Electives

In addition to the academic curriculum which all high school students take, a wide variety of electives in the Education & Training cluster are available.

"A good course a student could take is one that provides essential background knowledge of child and adolescent development, such as Child Development or Preparation for Parenting," Wragg says. Other useful electives available to students interested in education are Exploring Education Careers, Family and Career Management, and Individual and Family Life.

Some high school electives help students obtain certification of mastery of particular skills. The knowledge and skills required for the Educational Aide I certificate, for example, can be developed through the Ready, Set, Teach! course. The certificate qualifies students to become a teacher's aide after high school.

Your high school education should include an experience in teaching. "Eleventh and 12th graders should

participate in a focused teacher-prep course that provides instructional interaction and field experiences," says Wragg.

Students may think they know very well what goes on in a school classroom, but classroom teaching is a lot different from classroom learning. Wragg recommends Ready, Set, Teach! for high school students who want to get a sense of what it feels like to be at the head of a class.

### Leave a Legacy

Although a good high school program in Education & Training can help you decide if you want to teach and start you down the road to your career, educators stress that in many ways, teaching is a calling as well as a learned discipline.

Linda Aiello, who teaches aspiring teachers in the educational assistant program at Clements High School

in Sugar Land, says, "I like working with students and I want to make a difference. I enjoy watching students discover that they can achieve more than they ever thought possible.

"My mother was a wonderful teacher who earned the love of her students. I wanted to have the chance to build the same rapport."

If you've got that desire and a talent for helping others reach their goals, a good way to prepare is to watch what happens at your school and in your classes. Volunteer to help your teachers and seek their advice as mentors. Make yourself a student of education.

"The best way to get experience is to be in the classroom," concludes Wragg.

# SPOTLIGHT

## CHANGING LIVES IN REAL CLASSROOMS Ready, Set, Teach! Shows Future Teachers How It's Done

Elizabeth Hernandez was told her Ready, Set, Teach! (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.

"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.

Ready, Set, Teach! is an internship that gives high school juniors and seniors the chance to work in a real classroom environment. The course lets aspiring teachers direct activities with single children or with groups, prepare instructional materials, help

with record keeping, and observe experienced teachers at work.

"The biggest selling point to high school students is the opportunity to teach other students," says Kim Kamin, who directs Ready, Set, Teach! at Trinity High School in Euless. Students in the course intern under the direction and supervision of teachers in elementary, middle, and high schools.

"Ready, Set, Teach! provides a reference point for students' college education courses," Kamin says. "This course does not teach everything they need to know, but the high school experiences will help them to become better teachers later."

The students' internships are coordinated with instruction they receive from their RST instructors.

"The students have assignments that



they complete," Kamin says. "We also spend time discussing what happened during their time teaching to evaluate what to do the next time a similar situation occurs."

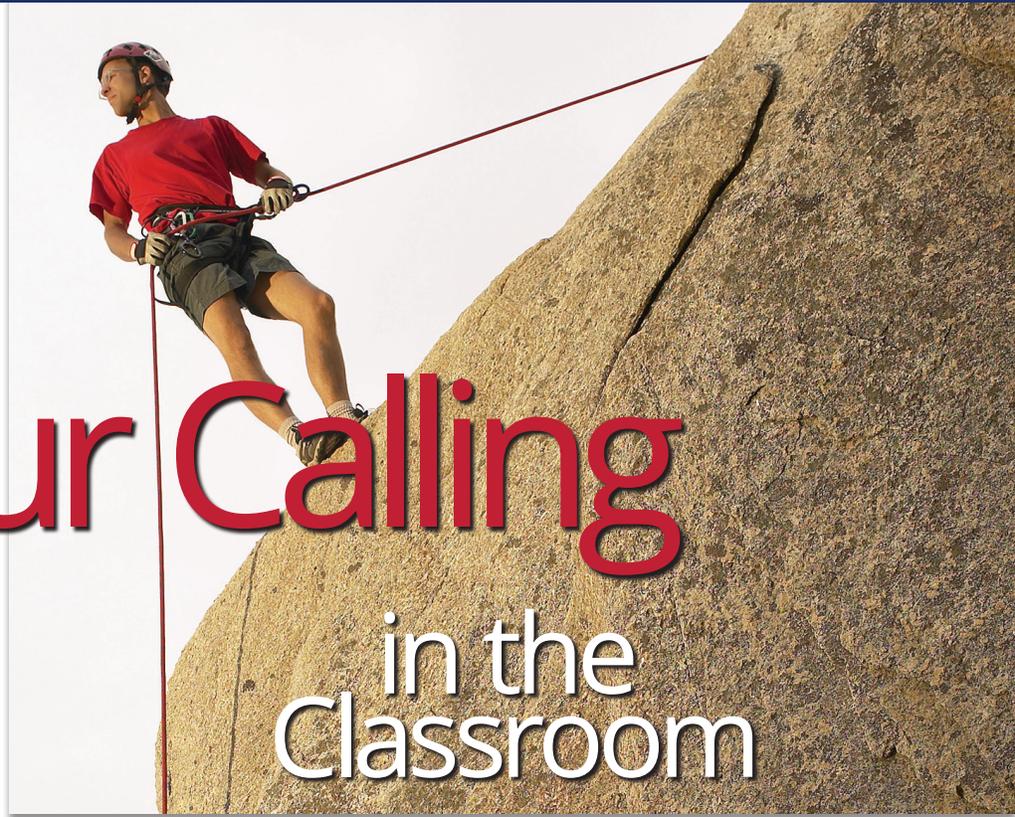
During her RST experience, Hernandez worked with second graders measuring their accuracy in reading. Now employed at Northside Elementary, Hernandez teaches alongside teachers who helped her gain experience in the program. She says RST helped her realize that teachers must practice patience.

"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."

Real-life experience in teaching can help you develop your skills.

# Find Your Calling

## in the Classroom



**E**mily Martin is preparing for a career in Education & Training. A senior at Angelo State University in San Angelo, Martin found interning at an elementary school during her senior year of high school gave her a better understanding of the teaching profession.

"It gave me a new perspective of a school," Martin says. "I had the opportunity to assist behind the scenes. It was a great experience."

She encourages students to get involved in a teaching internship

before entering college. "I've known many people who started in the field of education only to find that they didn't like writing lesson plans and working with students," Martin says. Her advice to high school students is to find an opportunity to work with children before making the commitment to pursue an education career in college.

### Get Experience

One of the best ways to find out whether teaching is your calling is to learn by doing. This is called extended learning, and it means to extend your professional development beyond the walls of your own classroom.

A great way for students to begin this process is to participate in student organizations such as Family, Career and Community Leaders of America (FCCLA) and the Texas Association of Future Educators (TAFE) (see "Top Student Teachers" at right). Both organizations sponsor activities to help students explore teaching as a career.

FCCLA offers a series of competitive events known as STAR (Students Taking Action with Recognition) Events. During the Early

Childhood STAR Event, for example, students work in a classroom setting and document their work by compiling a portfolio. The portfolio is then submitted to competitions at the regional, state, and national levels.

Kristy Hernandez, a senior at Hutto High School, is headed to the state competition with a 30-page portfolio documenting her work at A Mother's Choice Learning Center in Hutto. As a teacher's aide, Hernandez wrote lessons that matched the school's weekly themes. At the state competition, she will present the lesson to judges.

"Planning lessons that appeal to students who have already spent the entire day in a classroom has been difficult and time-consuming, but fun at the same time," says Hernandez. "I have enjoyed watching the students grow and learn from my activities."

### Lead Others

FCCLA and TAFE also sponsor volunteer activities that help aspiring teachers cultivate service and leadership skills. To kick off the school year at Killen High School, the school's TAFE chapter sponsored a back-to-school teacher car wash. "Teachers donated school supplies in order to get a free car wash. We sold

**THE UTEACH PROGRAM**  
AT THE UNIVERSITY OF TEXAS AT  
AUSTIN HAS DOUBLED THE NUMBER  
OF UT AUSTIN STUDENTS GRADUATING  
WITH MATH AND SCIENCE TEACHER  
CERTIFICATION.



barbecue and soft drinks and were able to collect several carloads of supplies for the elementary schools in the district," says Killeen's Samantha Powell, who also serves as president of TAFE statewide.

Other students develop leadership skills by volunteering for activities such as coaching a Little League team or serving as a group leader in scouting. Lindsey Roe, who is pursuing a career in teaching at Texas Tech University, says her service on student council in high school helped her tremendously. "It gave me an opportunity to practice skills every teacher needs, such as public speaking and leadership."

#### Educational Aide

The Ready, Set, Teach! course in Texas high schools (see "Changing Lives in Real Classrooms" on page 13) provides hands-on teaching experience for the Educational Aide certification program, says Jeanye

Wester, a teacher in the Frenship Independent School District. "Certification is an integral facet of Ready, Set, Teach!," she says. "Students gain experience with teaching children in child-care centers, elementary schools, junior high schools, and special education programs."

Linda Aiello works with high school juniors and seniors in the Education Assistant Co-op Program at Clements High School in Sugar Land. Students in the Clements program assist a supervising teacher with daily routines of the classroom and receive pay for their work.

Some students may discover teaching is not right for them, and Aiello says that is one of the benefits of the program. However, she admits, "one of my greatest pleasures has been seeing my students return to our district and develop into quality teachers."

## SPOTLIGHT

### TOP STUDENT TEACHERS FCCLA and TAFE Cultivate Aspiring Educators' Skills

Samantha Powell was headed for a career in medicine until she became involved in the Texas Association of Future Educators (TAFE) at Killeen High School.

"I discovered that I enjoyed tutoring the elementary students," says Powell, a high school junior. "Now I have decided that a teaching career would be very rewarding."

As the president of the state TAFE organization, Powell travels to different schools to share her knowledge of community projects among the more than 235 chapters across the state.

TAFE encourages participating schools to select among a number of service projects. "They can supplement what they learn in the Ready, Set, Teach! course [see 'Changing Lives in Real Classrooms,' page 13], for instance, and mentor younger students," says TAFE Program Director Alejandro Arguello. "The idea is to cultivate the qualities of character, service, and leadership that are

essential characteristics of effective educators."

Sharon Pierce, state advisor for Family, Career and Community Leaders of America (FCCLA), says FCCLA also promotes community service that builds and strengthens families.

Education is one of FCCLA's primary focus areas. The approximately 60,000 Texas high school FCCLA members enrolled in Education & Training classes can choose any number of extended learning opportunities, including observing teachers in the classroom, volunteering to work with children, and participating in organized competitive events.

"What's great about the competitive events is to see the passion students develop for what they're doing," Pierce says. "That's why so many choose to participate."

## CREATE a Career PORTFOLIO

One valuable tool that can help you get ready for college and beyond is a career portfolio—a collection of items that document your achievements both in and out of school, assembled in one convenient package.

A career portfolio is not simply a resume, although it can certainly include one. So what should go in a career portfolio? A variety of things, depending on your own personal experiences. It could include transcripts and grades; writing samples; letters of recommendation from teachers, mentors, or employers; awards you've received; and items that document other activities, such as internships and job shadowing experiences.

"You need to be specific—dates, how many years, any awards, what they meant, and who you received them from," says Grace Brauchle, who helps students put their portfolios together as the career center coordinator for Lehman High School in Kyle.

Brauchle says portfolios come in handy when students apply for jobs or admission to college. "First impressions are a very big thing," she says, "and you want to be the one whose papers get passed around the office. You want to be the one where the admissions counselors say, 'Wow, look at this one!'"





# Lifelong Learning

EDUCATION after high school is especially important for teachers and trainers.

Tutoring children in reading or working as a camp counselor or teacher's aide can help students decide whether they want to teach and can help to develop teaching skills. The ultimate road to becoming an educator, however, begins with higher education after high school.

"The courses and extended learning experiences in college," says Jennifer Bergman, a 2004 graduate of Trinity University in San Antonio, "helped me develop skills I knew I would need in the classroom, such as child development and teaching styles."

A broad range of well-planned and supervised college-level instruction and field experiences in an educational setting, advises Letitia Killman, curriculum specialist at Texas Tech University in Lubbock, "is the best way for a student to prepare for a career in education after he or she graduates from high school."

In fact, says Aleta Belcher, assistant professor of secondary education at Sul Ross State University in Alpine, "all teachers of academic subjects in Texas public schools must hold a bachelor's degree."

THE NEED FOR TEACHERS IS PARTICULARLY GREAT IN MATH, SCIENCE, SPECIAL EDUCATION, FOREIGN LANGUAGES, TECHNOLOGY APPLICATIONS, AND BILINGUAL EDUCATION.

## Community College

This does not necessarily mean that all students interested in Education & Training must focus their career preparation on four-year universities.

At the community college level, students can get degrees that qualify them to work as a child-care professional. For example, they can be certified to become a child-care worker, an educational aide, or a special education aide with a two-year associate's degree or a one-year certificate.

However, Belcher points out, "these programs do not allow the individual to teach, only to assist or aid in the classroom."

The two-year Associate of Arts in Teaching (AAT) degree offered in Texas community colleges allows students interested in classroom teaching to begin their preparation at a community college and then transfer to a four-year university to complete their studies. This often enables students to save money on the first two years of their education.

A bachelor's degree from a four-year university and teacher certification qualify students to teach in the public schools. Texas colleges and universities do not offer degrees in education. Every prospective educator must have an academic major, as well as teacher preparation courses.

## University Preparation

Don't skimp on your university preparation, advises Karen Kallas, a teacher at Birdville High School in North Richland Hills. Kallas, who specializes in family and consumer sciences, says that in college "I tried to make sure I had a strong background in all areas associated with family and consumer sciences."

"For instance, the nutrition and food science-related areas require a strong science knowledge base, so I took my college chemistry and microbiology classes very seriously. Rather than take the general math course that was required, I took college calculus."





### Teacher Certification

The teacher certification process is complex, involving a number of different regulations and entities. After completing university coursework, students must also pass a certification exam.

“Students should check early in the process with advisors and professors to find out all the steps,” says Marilyn Wragg, curriculum director at Texas Tech University. “It is important to follow a certification checklist and work closely with advisors.”

Because demand for teachers is so high, there are many incentives and programs to encourage students to go into education. Some programs pay your full college tuition if you teach a minimum number of years (usually three to five) and work in communities and fields experiencing a shortage of educators.

### Continuing Education

The certification process does not end with certification. After students become certified teachers, they must complete at least 150 hours of continuing professional education every five years.

“Teacher certifications must be renewed every five years,” says Wragg. “Renewal activities could include attending professional development conferences, site-based training and development activities,



**THE UNIVERSITY OF NORTH TEXAS**  
 IN DENTON HOSTS A WEEKLONG, ALL-EXPENSES-PAID FUTURE BILINGUAL TEACHERS ACADEMY EACH SUMMER FOR NEW HIGH SCHOOL GRADUATES INTERESTED IN BECOMING BILINGUAL EDUCATION TEACHERS.

independent study, or attending additional college classes in the teacher’s related field.”

Education requirements for corporate trainers are less stringent, though you still must be able to convince companies that you truly are an expert in the field you are teaching.

### Graduate Studies

Colleges require their professors to have an advanced degree such as a master’s degree or doctorate.

“A doctorate benefits those who intend to teach in the collegiate environment or those who wish to obtain credentials for a specialized, paraprofessional position,” Belcher says, “such as school counselor, librarian, or superintendent.”

“If you want to teach in higher education, you almost always need a doctoral degree,” says Ruth Struthers, the head of the education department at the University of St. Thomas in Houston.

Jennifer Bergman, who is in her second year of law school at the South Texas College of Law in Houston, says she wants to become a professor of either political science or law.

“Going to graduate school was never really on my mind until later in my college career,” Bergman says. “I always enjoyed history and law, but I also enjoyed my teaching experiences throughout my life, so I plan to use my law degree to pursue a career in education.”

### Beyond College

Educational opportunities for teachers and trainers extend beyond college. The Fulbright Scholarship, for example, is an international exchange program that gives grants to students to participate in educational activities—mainly university lecturing, advanced research,

graduate study, and teaching in elementary and secondary schools—in other countries.

Whatever route a student chooses in career preparation, says Karen Kallas, it doesn’t pay to cut corners. “In all that I did, I thought about what would best help me reach the goals I had set,” she says. “I found that taking the quickest or easiest route was not always the best option.”

## Get the CREDIT You Deserve

Dual credit in Texas is a great way to earn college credits toward a postsecondary degree while you’re still in high school. Dual credit programs center on “articulation agreements,” contracts between the student, his or her high school, and postsecondary institutions the student would like to attend. While most students take basic core courses such as English, history, math, science, and social science, coursework may include areas in Career and Technical Education.

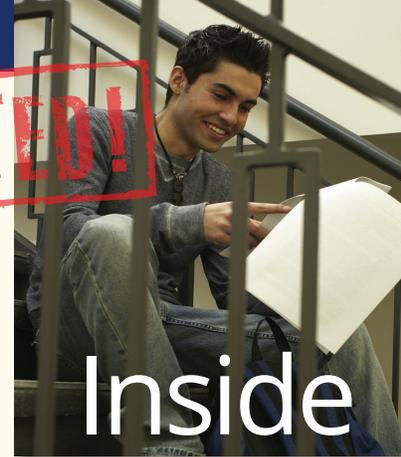
Dual credit courses cover the same material as the equivalent college course, allowing the student to receive credit toward the college degree. It’s like a bank account. The credit is banked for you at the college, and you withdraw it when you enroll.

Ask your counselor about advanced placement, dual credit, or articulated courses and other opportunities to earn college credit.

ACCEPTED!

## SIX THINGS Texas students should know about getting into college

Applying to college is a lot like looking for a job or trying out for a team. You choose something that interests you, and then try your best to convince whoever is in charge that you have what it takes to be part of their organization. But whereas there might be only a few spots open on your high school's varsity football squad, there are thousands of places available in hundreds of colleges each year. Whether you are the first in your family to apply to college or both of your parents have advanced degrees, going through the admissions process can be stressful. Fortunately, there are plenty of free resources available for Texas college-bound students. The best is College for Texans ([www.collegeforalltexas.com](http://www.collegeforalltexas.com)), which features a list of all the state's colleges and universities, a checklist for selecting a school, and a link to the online Texas Common Application. To help you get started on your own college search process, here are six steps you should take.



# Inside College Admissions

### 1. Make School Your Job

The first thing college admissions officers look for on your application is your grade point average. It's simple—you have to make the grades in high school to earn your spot in a college. The easiest way to do that is to think of school as your job, starting in your first year. If you show up late for work, slack off, and talk back to the manager, you'll get fired faster than you can say, "Do you want fries with that?" But if you always arrive on time, work really hard, and try to learn from management, then pretty soon you'll probably get a raise or a promotion.

What works on the job works in the classroom, too. Take challenging courses. Turn in all your work on time. Pay attention in class. Contribute to discussions. Ask for help when you don't understand something. By treating school as a career, you'll have a better shot at earning the grades and teacher recommendations that you need to move to the next level.

### 2. Get Involved in Activities

Colleges don't accept students to fill seats. They look for students who will add to the entire college community by playing on sports teams, performing on stage, volunteering for service projects, and so on. Look at the clubs and teams available at your school and sign up for the ones that interest you. In addition to showing school spirit, being part of an organization is a great way to build teamwork and leadership skills—two traits that can really help your college application stand out from the pack.

### 3. Build a Resume Portfolio

What if you had to take a final exam on the last three years of

a subject and didn't have any notes to study? Well, that's exactly what it's like trying to complete a college application if you haven't kept an ongoing file of all your activities, honors, and employment.

Start your first year and build a career portfolio (see page 15). It's also smart to create a computer file called "college resume" and add to it each time you participate in a service project, win an award, get a new job, and so on. Use technology to create a resume format or ask your parents or guidance counselor for help. When you sit down to complete your college applications, review your career portfolio and call up the resume—all the information you need will be right at your fingertips.

### 4. Prep for Tests

Most colleges use scores from the SAT, SAT II, or ACT tests in making their admissions decisions. Check which tests the schools you're interested in require and sign up to take them in time to include the scores in your application. College for Texans ([www.collegeforalltexas.com](http://www.collegeforalltexas.com)) also has a free ACT, SAT, and GRE prep course.

Spend time preparing for the tests before you walk into the room with your No. 2 pencils and calculator. Go through sample SAT questions at [www.collegeboard.org](http://www.collegeboard.org) or ACT tests at [www.actstudent.org](http://www.actstudent.org). There are also dozens of test-prep books you can buy, some including software that tracks your progress as you go through sample exams.

Remember: If you don't do well on a test the first time, you usually can take it again and try to improve your score.

### 5. Make a List of Colleges

Do you want to stay in Texas for college or see another part of the country? Would you be more comfortable at a big university or a small college?

Think about what you would like to study and what matters most to you (like location, size, or religious affiliation), and then start developing a list of colleges that fit your criteria.

Use online tools like [www.collegeforalltexas.com](http://www.collegeforalltexas.com) or [www.collegeboard.org](http://www.collegeboard.org) to learn more about each school and take online campus tours. Buy or borrow from the library some of the many college guides available. If possible, schedule visits to the schools you are interested in, or, through the school's admissions office, arrange an interview with a recent grad who lives in your area so you can ask questions about courses, faculty, or anything else.

By the fall of your senior year, narrow the list down to the top five or six choices. While some online applications are free, it can cost up to \$70 per school to apply, so be realistic about how much you can spend on applications.

### 6. Submit Polished Applications

Once you send in an application to a college there's no taking it back, so make sure you get it right the first time. Double-check your spelling. If you use the same essay for multiple schools, remember to change the name of the school to fit each application. Make sure you have any required standardized test results (ACT, SAT, SAT II) sent to each school.

Be neat and complete, and meet every deadline. Make copies of each application before you hit the send button or pop it in the mail. If you don't receive an email or postcard confirming that your application was received, contact the college to make sure it arrived. Items can get lost or misdirected, especially when thousands of students are sending in applications at the same time. By having copies, you can easily submit again.



EVEN IF you get accepted to college, you'll never be able to pay the bill, right? Wrong! There's financial aid available if you know where to look.

College isn't cheap. With tuition and room and board at private schools often topping \$40,000, and even in-state, public schools costing several thousand dollars a year, you may wonder why you should even apply.

Well, don't worry. Every Texas student can afford to go to college.

"Access and affordability of higher education can be intimidating to students and parents; however, there are numerous resources available to walk you through the process and into an exciting future," says Heather V. Crowson, vice president for enrollment management at Sam Houston State University.

The secret to getting the aid you need to go to school is in filling out the necessary forms, getting good grades, and applying to schools that offer generous financial aid packages. (A financial aid package consists of need- or merit-based scholarships and grants plus work-study jobs and low-interest student loans.)

Here's a quick overview of steps you can take to get the financial aid you need to continue your studies after high school. For more information about the aid available at a specific college or university, go to the school's website and click on the "Admissions and Financial Aid" link. Many schools provide an online form you and your parents can fill out that will give you the estimated financial aid package you might receive if accepted to that school.

**Apply:** You definitely won't get any financial aid if you don't apply. To figure out how much grant money (which you don't pay back) and loans (which you do pay back) you'll need to afford school, colleges use a formula that factors in your parents' income and investments, your income, the number of kids in the family who will be in college at the same time, and other financial information. Families of all income levels may receive aid, so fill out the forms.



# Financial Aid BASICS



All schools require the Free Application for Federal Student Aid (FAFSA), which determines eligibility for federal aid, such as work-study, Pell grants, and the Stafford loan program; and for college grants and, sometimes, merit scholarships. Complete the application as soon as possible at the beginning of October your junior year. FAFSA forms and instruction booklets are available in your guidance counselor's office, or you can complete the form online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov).

Most private schools also require applicants to complete a school financial aid application and, in some cases, the CSS/ Financial Aid Profile form ([profileonline.collegeboard.org](http://profileonline.collegeboard.org)), which is used to award nonfederal student aid funds. Carefully read each college's application to determine financial aid deadlines and what forms you will need to submit.

**Study In-state:** Whether you choose a public or a private school, staying in-state for college will cut your costs considerably. Plus, since Texas covers 267,339 square miles, you can "go away" to college without ever leaving the state.

To help ensure that qualified Texas high school graduates with financial need can go to college, the State Legislature established the TEXAS (Towards Excellence, Access, and Success) Grant Program. Grants can be used to study at any public college or university in the state and are equal to the student's tuition and required fees. In 2005–2006, 61,086 students received TEXAS Grants. To apply, fill out the FAFSA.

Another way to score some serious state aid is to get good grades in high school. Texas students who are in the top 10 percent of their graduating class are eligible for automatic admission to any public university in the state. With that automatic admission comes the opportunity to apply for merit scholarships and special programs available at each school.

**Take Two at a Community College:** The first two years of many college programs are filled with core courses that could easily be taken at a local community college for a lot less money. If you fill out all the forms, do the math, and still can't afford a four-year school, enroll in a community college for the first two years, then transfer to a four-year school.

By living at home, working part-time, and getting required courses out of the way, you could save tens of thousands of dollars in tuition and room and board, and be able to afford to attend the college of your choice for junior and senior years. For a complete list of the state's community colleges, go to the Texas Association of Community Colleges website at [www.tacc.org](http://www.tacc.org).

**Target Your Search:** Applying to a couple of colleges where your grades and talents put you near the top of the typical talent pool makes it more likely you'll qualify for merit aid and other special school scholarships and grants. Do a little research on college websites to find schools where your standardized test scores and grade point average rank you in the top 25 percent or so of the most recently accepted first-year class. Colleges want to attract the best and brightest students available, and often will offer attractive scholarship/grant/loan packages to convince those students to come to their school.

There are also more than 1 million local, national, and college-specific scholarships available each year. The trick is to find and apply for scholarships that best fit your strengths and talents. FastWeb ([www.fastweb.com](http://www.fastweb.com)) is a free college scholarship search source. Register online and you will start receiving email notices about scholarships, internships, and other opportunities that fit the profile information you submit.



LOOK IT UP! Here are key words and phrases used in this guide that you may not already know.



# what does that mean?

**Articulation agreements:** formal agreements between or among educational organizations (high schools, community colleges, and universities) that align courses and majors in a way that allows students to transition from one institution to another without loss of course credit or time.

**Associate's degree:** a two-year degree awarded by a community or technical college.

**Bachelor's degree:** a four-year degree awarded by a university.

**Career and technical student organizations (CTSOs):** curricular organizations for students that offer activities and competitions related to particular careers.

**Career cluster:** a way of organizing curricula, instruction, and assessment around specific occupational groups (for example, Information Technology or Health Science) that offers students core academics, coursework related to specific occupations, and extended learning experiences.

**Career guidance:** structured developmental experiences presented systematically from kindergarten through 12th grade that help students analyze and evaluate abilities, skills, and interests.

**Career portfolio:** a collection of student work indicating progress made in subjects, activities, or programs. In career cluster systems, portfolios are often used to assess student performance in extended learning experiences.

**Doctoral degree:** a degree awarded by universities for study beyond a master's degree. Also referred to as a Ph.D. or professional degree.

**Dual credit:** credit given in both high school and college for college-level courses taken while in high school.

**Extended learning experiences:** participation in career and technical student organizations, extracurricular activities, job shadowing, internships, or service learning.

**Financial aid:** scholarships, grants, loans, and work-study funds awarded to students to pay for college expenses.

**Internship:** an extended learning experience in which students work temporarily at entry-level jobs in careers that interest them.

**Job shadowing:** an extended learning experience in which students observe professionals in particular careers as they go through a day on the job.

**Master's degree:** a degree awarded by universities for study beyond a bachelor's degree.

**Postsecondary education:** education beyond high school. Middle school and high school are referred to as secondary education, so postsecondary means after high school.

**Program of study:** a way of organizing the curricula and educational activities within a career cluster related to a student's specific academic and career goal.

**Service learning:** an extended learning experience in which students do volunteer work related to their career goals.

**Targeted industry clusters:** six industry clusters that have been identified by Texas as high-demand, high-growth sectors paying high wages. As they are developed by the State, these may be hot areas in which to build a rewarding career.

**Program of Study:** an education plan suggesting the high school courses a student should take to prepare successfully for graduation and transition into postsecondary education. The vision for Texas CTE is that eighth graders, in consultation with their parents/guardians, counselors, and teachers, will select a program of study and create a plan. Plans are to be reviewed and revised at least once each school year.





# Online Info

Explore these Internet resources for more about your education and career options.

## America's Career InfoNet [www.acinet.org/acinet](http://www.acinet.org/acinet)

This is the place to search for occupational information, industry information, and state-specific labor market information.

## College for All Texans [www.collegeforalltexans.com](http://www.collegeforalltexans.com)

Here is everything a Texan needs to know about preparing for, applying for, and paying for college or technical school. And it's all in one up-to-date, easy-to-navigate mega-site almost as big as the state itself. Remember: \$4 billion is available every year to help Texans attend college.

## Employability Skills Framework <http://cte.ed.gov/employabilityskills/>

Employability skills are general skills that are necessary for success in the labor market at all employment levels in all sectors. The Employability Skills Framework is a one-stop resource for information and tools to inform the instruction and assessment of employability skills.

## My Next Move [www.mynextmove.org/](http://www.mynextmove.org/)

This is a career planning resource for students, parents, career changers, and career advisors.

## TEXAS CAREER CHECK

The State of Texas has created a special website for students and others researching careers. It's called Texas Career Check. Texas Career Check lets you explore higher education options by looking at detailed information by school and program of study, AND you can explore careers, occupational information, and postsecondary education options. You'll find a wealth of information about hundreds of career choices. To explore Texas Career Check, go to [www.texascareercheck.com](http://www.texascareercheck.com).

## O\*NET (Occupational Information Network) [online.onetcenter.org](http://online.onetcenter.org)

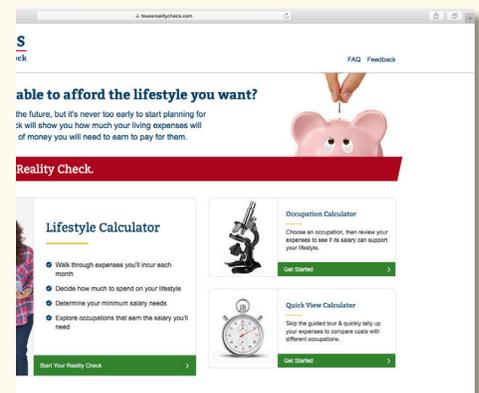
Also available in schools and libraries, O\*NET provides full information on occupations, including compensation, employment prospects, and skill matching for students. Information on compensation is available on a state-by-state basis.

## U.S. Department of Labor Occupational Outlook Handbook [www.bls.gov/home.htm](http://www.bls.gov/home.htm)

This nationally recognized resource offers information on job responsibilities, earnings, working conditions, and job prospects for the future.

## Take a Reality Check

The Texas Workforce Commission has created an online resource called Reality Check to help you understand how much money you'll need to live on your own after high school or college and how you can earn it. There are three ways to explore careers, expenses, and earnings. For the first option, which is called "Get a Reality Check," you choose an area you'd like to live in, such as Austin. You then go through a series of screens with real-world costs for items such as housing, clothing, transportation, health care, and personal expenses. The site automatically adds up your estimated monthly expenses, then uses salary information for Texas to show you careers that will make you that much money. The second option, called "Future Salary," starts with the wages you expect to earn, what education you plan to pursue, and the career cluster that interests you. Then it generates a list of careers in which you can make that amount of money. The third option, "Occupation Direct," begins with your occupational choice and the area where you want to live, then shows how your estimated expenses subtract from the salary for your chosen job. The site, which is at [www.careerwise.mnscu.edu/careers/realitycheck.html](http://www.careerwise.mnscu.edu/careers/realitycheck.html), is a great way to play "what if" when it comes to mixing your job, earnings, and expense options.



The results of Reality Check show you how expenses add up quickly when you are living on your own.

# Texas CTE Career Clusters



**Agriculture,  
Food &  
Natural  
Resources**

Processing, production, distribution, and development of agricultural commodities and natural resources



**Architecture &  
Construction**

Designing, managing, building, and maintaining the built environment



**Arts, A/V  
Technology &  
Communications**

Creating, exhibiting, performing, and publishing multimedia content



**Business  
Management &  
Administration**

Organizing, directing, and evaluating functions essential to productive business operations



**Education &  
Training**

Providing education and training services, and related learning support services



**Finance**

Financial and investment planning, banking, insurance, and business financial management



**Government  
& Public  
Administration**

Executing governmental functions at the local, state, and federal levels



**Health Science**

Providing diagnostic and therapeutic services, health informatics, support services, and biotechnology research



**Hospitality  
& Tourism**

Managing restaurants and other food services, lodging, attractions, recreation events, and travel-related services



**Human  
Services**

Providing for families and serving human needs



**Information  
Technology**

Designing, supporting, and managing hardware, software, multimedia, and systems integration



**Law,  
Public Safety,  
Corrections  
& Security**

Providing legal, public safety, protective, and homeland security services



**Manufacturing**

Processing materials into intermediate or final products



**Marketing**

Performing marketing activities to reach organizational objectives



**Science,  
Technology,  
Engineering &  
Mathematics**

Performing scientific research and professional and technical services



**Transportation,  
Distribution  
& Logistics**

Managing movement of people, materials, and goods by road, pipeline, air, rail, and water

**About Texas CTE** You may have seen the name Texas CTE on the cover of this magazine. What exactly is that?

Texas CTE is the name of Texas' college and career education initiative. The idea behind it is simple: Planning for the future so that students achieve lifelong success. As Texas CTE grows, you'll see how subjects such as English, math, science, and social studies are relevant to your personal goals and ambitions. You'll get the chance to begin a plan that gets you where you want to go in life. You'll have the opportunity to take courses and engage in extended learning experiences that give you marketable skills. Best of all, you'll be in control of your future. Read all 16 editions of Texas CTE in Action (available through your counselor) to explore Texas' career clusters and start on the road to success.