



TEXES | Texas Examinations of Educator Standards

Preparation Manual



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PREFACE

The State Board for Educator Certification (SBEC) has developed new standards for Texas educators that delineate what the beginning educator should know and be able to do. These standards, which are based on the state-required curriculum for students—the Texas Essential Knowledge and Skills (TEKS)—form the basis for new Texas Examinations of Educator Standards (TExES). This initiative will impact all areas of Texas education—from the more than 100 approved Texas educator preparation programs to the more than 7,000 Texas school campuses. This standards-based system reflects SBEC's commitment to help align Texas education from kindergarten through college. SBEC's role in this K–16 initiative will ensure that newly certified Texas teachers have the essential knowledge and skills to teach the TEKS to the state's public school students.

This manual is designed to help examinees prepare for the new TExES test in this field. Its purpose is to familiarize examinees with the competencies to be tested, test item formats, and pertinent study resources. Educator preparation program staff may also find this information useful as they help examinees prepare for careers as Texas educators.

More information about the new TExES tests and educator standards can be found at <http://www.sbec.state.tx.us>.

KEY FEATURES OF THE MANUAL

List of competencies that will be tested

Strategies for answering test questions

Sample test items and answer key

If you have questions after reading this preparation manual, please contact the State Board for Educator Certification, Office of Accountability at 1-512-238-3200.

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SECTION I

THE NEW TExES TESTS FOR TEXAS TEACHERS

As required by the Texas Education Code §21.048, successful performance on educator certification examinations is required for the issuance of a Texas educator certificate. Each TExES test is a criterion-referenced examination designed to measure the knowledge and skills delineated in the corresponding TExES test framework. Each test framework is based on standards that were developed by Texas educators and other education stakeholders.

Each TExES test is designed to measure the requisite knowledge and skills that an entry-level educator in this field in Texas public schools must possess. The tests include both individual, or stand-alone, test items (questions) and items that are arranged in clustered sets based on real-world situations faced by educators.

Development of the New TExES Tests

Committees of Texas educators and interested citizens guide the development of the new TExES tests by participating in each stage of the test development process. These working committees are comprised of Texas educators from public and charter schools, faculty from educator preparation programs, education service center staff, representatives from professional educator organizations, content experts, and members of the business community. The committees are balanced in terms of position, affiliation, years of experience, ethnicity, gender, and geographical location. The committee membership is rotated during the development process so that numerous Texas stakeholders may be actively involved. The steps in the process to develop the TExES tests are described below.

1. **Develop Standards.** Committees are convened to recommend what the beginning educator should know and be able to do. To ensure vertical alignment of standards across the range of instructional levels, individuals with expertise in early childhood, elementary, middle, or high school education meet jointly to articulate the critical knowledge and skills for a particular content area. Participants begin their dialogue using a "clean slate" approach with the Texas Essential Knowledge and Skills (TEKS) as the focal point. Draft standards are written to incorporate the TEKS and to expand upon that content to ensure that all beginning educators possess the appropriate level of both knowledge and skills to instruct students successfully.
2. **Review Standards.** Committees review and revise the draft standards. The revised draft standards are then placed on the SBEC Web site for public review and comment. These comments are used to prepare a final draft of the standards that will be presented to the SBEC Board for discussion, the State Board of Education (SBOE) for review and comment, and the SBEC Board for approval. Standards not based specifically on the TEKS, such as those for librarians and counselors, are proposed as rule by the SBEC Board; sent to the SBOE for its 90-day review; and, if not rejected by the SBOE, adopted by the SBEC Board.
3. **Develop Test Frameworks.** Committees review and revise draft test frameworks that are based on the standards. These frameworks outline the specific competencies to be measured on the new TExES tests. The TExES competencies represent the critical components of the standards that can be measured with either a paper-and-pencil-based or a computer-based examination, as appropriate. Draft frameworks are not finalized until after the standards are approved and the job analysis/content validation survey (see #4) is complete.

4. **Conduct Job Analysis/Content Validation Surveys.** A representative sample of Texas educators who practice in or prepare individuals for each of the fields for which an educator certificate has been proposed are surveyed to determine the relative job importance of each competency outlined in the test framework for that content area. Frameworks are revised as needed following an analysis of the survey responses.
5. **Develop and Review New Test Items.** The test contractor develops draft items that are designed to measure the competencies described in the test framework. Committees review the newly developed test items that have been written to reflect the competencies in the new test frameworks and may accept, revise, or reject test items. Committee members scrutinize the draft items for appropriateness of content and difficulty; clarity; match to the competencies; and potential ethnic, gender, and regional bias.
6. **Conduct Pilot Test of New Test Items.** All of the newly developed test items that have been deemed acceptable by the item review committees are then administered to an appropriate sample of candidates for certification.
7. **Review Pilot Test Data.** Pilot test results are reviewed to ensure that the test items are valid, reliable, and free from bias.
8. **Administer New TExES Tests.** New TExES tests are constructed to reflect the competencies, and the tests are administered to candidates for certification.
9. **Set Passing Standard.** A Standard Setting Committee convenes to review performance data from the initial administration of each new TExES test and to recommend a final passing standard for that test. SBEC considers this recommendation as it establishes a passing score on the test.

Taking the TExES Test and Receiving Scores

Please refer to the current TExES registration bulletin for information on test dates, sites, fees, registration procedures, and policies.

You will be mailed a score report approximately four weeks after each test you take. The report will indicate whether you have passed the test and will include:

- a total test *scaled* score. Scaled scores are reported to allow for the comparison of scores on the same content-area test taken on different test administration dates. The total scaled score is not the percentage of items answered correctly and is not determined by averaging the number of questions answered correctly in each domain.
 - For all TExES tests, the score scale is 100–300 with a scaled score of 240 as the minimum passing score. This score represents the minimum level of competency required to be an entry-level educator in this field in Texas public schools.
- your performance in the major content domains of the test and in the specific content competencies of the test.
 - This information may be useful in identifying strengths and weaknesses in your content preparation and can be used for further study or for preparing to retake the test.
- information to help you understand the score scale and interpret your results.

You will not receive a score report if you are absent or choose to cancel your score.

Additionally, unofficial score report information will be posted on the Internet on the score report mailing date of each test administration. Information about receiving unofficial scores via the Internet and other score report topics may be found on the SBEC Web site at www.sbec.state.tx.us.

Educator Standards

Complete, approved educator standards are posted on the SBEC Web site at www.sbec.state.tx.us.

SECTION II

USING THE TEST FRAMEWORK

The Texas Examination of Educator Standards (TExES) test measures the content knowledge required of an entry-level educator in this field in Texas public schools. This manual is designed to guide your preparation by helping you become familiar with the material to be covered on the test.

When preparing for this test, you should focus on the competencies and descriptive statements, which delineate the content that is eligible for testing. A portion of the content is represented in the sample items that are included in this manual. These test questions represent only a *sample* of items. Thus, your test preparation should focus on the complete content eligible for testing, as specified in the competencies and descriptive statements.

Organization of the TExES Test Framework

The test framework is based on the educator standards for this field.

The content covered by this test is organized into broad areas of content called domains. Each domain covers one or more of the educator standards for this field. Within each domain, the content is further defined by a set of competencies. Each competency is composed of two major parts:

1. the *competency statement*, which broadly defines what an entry-level educator in this field in Texas public schools should know and be able to do, and
2. the *descriptive statements*, which describe in greater detail the knowledge and skills eligible for testing.

The educator standards being assessed within each domain are listed for reference at the beginning of the test framework, which begins on page 8. These are then followed by a complete set of the framework's competencies and descriptive statements.

An example of a competency and its accompanying descriptive statements is provided on the next page.

Sample Competency and Descriptive Statements

Pedagogy and Professional Responsibilities for Trade and Industrial Education 8–12

Competency:

The Trade and Industrial Education teacher understands human developmental processes and uses this knowledge to plan instruction and assessments that motivate students and are responsive to their developmental characteristics and needs.

Descriptive Statements:

The beginning Trade and Industrial Education teacher:

- Recognizes the wide range of individual developmental differences that characterizes students in grades 8 through 12 and the implications of this developmental variation for instructional planning.
- Recognizes the importance of helping students in grades 8 through 12 learn and apply employability skills (e.g., self-direction, decision-making, goal-setting, workplace skills) to promote lifelong learning and active participation in society.
- Recognizes typical challenges for students during adolescence and young adulthood (e.g., self-esteem, physical appearance, eating disorders, identity formation, involvement in risky behaviors, educational and career decisions) and knows effective ways to help students address these challenges.
- Knows social and emotional factors affecting students in grades 8 through 12 (e.g., desire for peer acceptance, conformity to peer group norms and expectations, parental divorce, homelessness) and their significance for teaching and learning.
- Uses knowledge of cognitive changes in students in grades 8 through 12 (e.g., refinement of abstract thinking and reasoning, reflective thinking, focus on the world beyond the school setting) to plan instruction that promotes learning and development.
- Analyzes how developmental characteristics of students in grades 8 through 12 affect learning and performance, and applies knowledge of students' developmental characteristics and needs to plan effective learning experiences and assessments.

Studying for the TExES Test

The following steps may be helpful in preparing for the TExES test.

1. Identify the information the test will cover by reading through the test competencies (see the following pages in this section). *Within each domain* of this TExES test, each competency will receive approximately equal coverage.
2. Read each competency with its descriptive statements in order to get a more specific idea of the knowledge you will be required to demonstrate on the test. You may wish to use this review of the competencies to set priorities for your study time.
3. Review the "Preparation Resources" section of this manual for possible resources to consult. Also, compile key materials from your preparation coursework that are aligned with the competencies.
4. Study this manual for approaches to taking the test.
5. When using resources, concentrate on the key ideas and important concepts that are discussed in the competencies and descriptive statements.

NOTE: This preparation manual is the only TExES test study material endorsed by SBEC for this field. Other preparation materials may not accurately reflect the content of the test or the policies and procedures of the TExES Program.

TEST FRAMEWORK FOR FIELD 170: PEDAGOGY AND PROFESSIONAL RESPONSIBILITIES FOR TRADE AND INDUSTRIAL EDUCATION 8–12

**Domain I Designing Instruction and Assessment to Promote Student Learning
(approximately 23% of the test)**

Standards Assessed:

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard I:**

Instructional Design: The T&I teacher designs instruction appropriate for all students (Grades 8–12) that reflects an understanding of relevant content and is based on continuous and appropriate assessment.

**Domain II Creating a Positive, Productive Learning Environment
(approximately 15% of the test)**

Standards Assessed:

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard II:**

Instructional Management and Safety: The T&I teacher creates a classroom environment of respect and rapport that fosters a positive climate for learning, equity, and excellence.

**Domain III Implementing Effective, Responsive Instruction and Assessment
(approximately 38% of the test)**

Standards Assessed:

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard III:**

Instructional Delivery: The T&I teacher promotes student learning by providing responsive instruction that makes use of effective communication techniques, instructional strategies that engage students in the learning process, and timely, high-quality feedback.

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard V:**

Work-Based Learning: The T&I teacher understands work-based learning approaches and incorporates relevant experiences into the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard VII:**

Entrepreneurship: The T&I teacher understands the importance of essential entrepreneurial skills and incorporates these skills into the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard VIII:**

Integration of Employability Skills: The T&I teacher understands and integrates employability skills into the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard X:**

Technology: The T&I teacher understands and integrates relevant technology in delivering the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).

Domain IV Fulfilling Professional Roles and Responsibilities
(approximately 23% of the test)

Standards Assessed:

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard IV:**

Professional Responsibilities: The T&I teacher exhibits professional roles and responsibilities and adheres to legal and ethical requirements of the profession.

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard VI:**

Collaborative Relationships: The T&I teacher understands the significant role of external and internal partnerships and enters into collaborative relationships with industry, organized labor, parents/guardians, agencies, proprietary and postsecondary institutions, and the community in delivering the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).

**Pedagogy and Professional Responsibilities for Trade and Industrial Education
Standard IX:**

Leadership: The T&I teacher understands and fosters the development of appropriate leadership skills through the delivery of the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]) and the implementation of the T&I student organization.

DOMAIN I—DESIGNING INSTRUCTION AND ASSESSMENT TO PROMOTE STUDENT LEARNING

Competency 001

The Trade and Industrial Education teacher understands human developmental processes and uses this knowledge to plan instruction and assessments that motivate students and are responsive to their developmental characteristics and needs.

The beginning Trade and Industrial Education teacher:

- Recognizes the wide range of individual developmental differences that characterizes students in grades 8 through 12 and the implications of this developmental variation for instructional planning.
- Recognizes the importance of helping students in grades 8 through 12 learn and apply employability skills (e.g., self-direction, decision-making, goal-setting, workplace skills) to promote lifelong learning and active participation in society.
- Recognizes typical challenges for students during adolescence and young adulthood (e.g., self-esteem, physical appearance, eating disorders, identity formation, involvement in risky behaviors, educational and career decisions) and knows effective ways to help students address these challenges.
- Knows social and emotional factors affecting students in grades 8 through 12 (e.g., desire for peer acceptance, conformity to peer group norms and expectations, parental divorce, homelessness) and their significance for teaching and learning.
- Uses knowledge of cognitive changes in students in grades 8 through 12 (e.g., refinement of abstract thinking and reasoning, reflective thinking, focus on the world beyond the school setting) to plan instruction that promotes learning and development.
- Analyzes how developmental characteristics of students in grades 8 through 12 affect learning and performance and applies knowledge of students' developmental characteristics and needs to plan effective learning experiences and assessments.

Competency 002

The Trade and Industrial Education teacher understands student diversity and knows how to plan learning experiences and how to design assessments that are responsive to differences among students and that promote all students' learning.

The beginning Trade and Industrial Education teacher:

- Demonstrates knowledge of the diverse personal and social characteristics of students (e.g., related to ethnicity, gender, language background, socio-economic background, exceptionality, learning preferences) and the significance of student diversity for teaching, learning, and assessment.
- Knows how to show acceptance of and respect for students with diverse backgrounds and needs.
- Knows strategies for enhancing one's own understanding of students' diverse backgrounds and needs.
- Knows how to plan and adapt lessons that are responsive to students' diverse backgrounds, skills, interests, and needs, including the needs of English Language Learners and students with disabilities.
- Understands the instructional significance of varied student learning needs and preferences.

Competency 003

The Trade and Industrial Education teacher understands learning processes and applies procedures for designing effective, coherent, and engaging instruction and assessment.

The beginning Trade and Industrial Education teacher:

- Analyzes the effects of various factors (e.g., teacher expectations, student grouping practices, teacher-student interactions, teacher and student roles during instruction) on student learning.
- Knows pedagogical practices that promote learning (e.g., deliver content that capitalizes on students' prior knowledge, skills, and experiences; connect new information and ideas to prior knowledge; make learning meaningful and relevant to students).
- Knows the importance of self-directed learning, and plans instruction and assessment that promote students' motivation and their sense of ownership of and responsibility for their own learning.
- Knows how to incorporate students' varying approaches to learning (e.g., auditory, visual, tactile, kinesthetic) into instructional practice.
- Understands the role of the state knowledge and skills standards (e.g., TEKS, TAKS) in determining instructional goals and objectives.
- Knows the importance of integrating academics into Trade and Industrial Education and making connections across disciplines.
- Knows how to develop a program vision and instructional goals with objectives that are clear, relevant, and assessed according to industry standards.
- Knows the importance of aligning instructional goals (e.g., campus, district, state, federal) with current industry standards and integrating all aspects of the industry into the Trade and Industrial Education curriculum.
- Uses assessment to analyze students' strengths and needs, evaluate teacher effectiveness, and guide instructional planning.
- Understands the connection among various components of the Texas statewide assessment program (e.g., TAKS) and instruction (e.g., TEKS) and analyzes data from state and other assessments (e.g., AEIS) to help identify students' strengths and needs.
- Knows how to locate, develop, and use materials and resources (including technological and industry resources) to prepare instruction, present lessons, assess student learning, and evaluate the appropriateness of specific materials and resources for particular situations, purposes, and student needs.
- Knows how to conduct an occupational/task analysis and validate it with a local advisory committee.
- Knows how to plan activities that utilize flexible groupings enabling students to apply knowledge in a variety of contextual activities (e.g., interpret technical data, solve industry-related problems).
- Applies skills for allocating time appropriately within lessons and units, including providing adequate opportunities for students to engage in reflection, self-assessment, and closure.
- Knows how to plan lessons and structure units that progress sequentially, support stated instructional goals based on the TEKS, and are based on industry standards and procedures.

DOMAIN II—CREATING A POSITIVE, PRODUCTIVE LEARNING ENVIRONMENT

Competency 004

The Trade and Industrial Education teacher knows how to establish a safe, positive climate that fosters learning, equity, and excellence.

The beginning Trade and Industrial Education teacher:

- Knows how to create a learning environment in which diversity and individual differences are respected, and uses strategies to ensure that classroom interactions are polite, respectful, and professional.
- Applies strategies for establishing a positive classroom climate that fosters student collaboration and active engagement in learning.
- Analyzes ways in which teacher-student and student-student interactions impact classroom climate and student learning and development.
- Knows how to present instruction in ways that communicate enthusiasm for learning.
- Establishes instructional goals, tasks, interactions, assessments, and other elements of the classroom and laboratory environment that convey high expectations for all students and meet industry standards.
- Recognizes the need to assure physical accessibility for all students, and knows how to monitor physical accessibility in the classroom, laboratory settings, and work-based learning environments.

Competency 005

The Trade and Industrial Education teacher implements strategies for creating an organized and productive learning environment and for managing student behavior.

The beginning Trade and Industrial Education teacher:

- Analyzes the effects of classroom management and laboratory procedures on student learning and achievement.
- Knows how to implement routines and procedures that promote an organized and productive learning environment.
- Organizes and manages individual and group activities that promote students' ability to assume responsible roles and develop collaborative skills and individual accountability applicable to industrial practice.
- Knows how to use flexible grouping to facilitate cooperation and productivity.
- Understands the importance of time management for effective classroom functioning, schedules activities to maximize student learning, and coordinates the performance of noninstructional duties (e.g., taking attendance) with instructional activities.
- Applies routines and procedures for the safe and effective management of instructional resources.
- Knows the importance of establishing standards of student conduct in the classroom, laboratory settings, and work-based learning environments with clear consequences for inappropriate behavior.
- Applies knowledge of effective discipline-management techniques in the classroom, laboratory settings, and work-based learning environments.
- Communicates and implements classroom rules and procedures to promote an effective learning environment.
- Applies procedures for instructing students on how to maintain ethical work-based standards and monitor their own behavior.

DOMAIN III—IMPLEMENTING EFFECTIVE, RESPONSIVE INSTRUCTION AND ASSESSMENT

Competency 006

The Trade and Industrial Education teacher knows how to communicate effectively in various instructional contexts and provide instruction that actively engages students in the learning process.

The beginning Trade and Industrial Education teacher:

- Applies principles and strategies for communicating effectively in various teaching and learning contexts, including laboratory settings and work-based environments.
- Uses language, including occupational terminology, that is appropriate to students' backgrounds, technical skill levels, and work experience.
- Knows how to engage all students in skilled questioning to facilitate effective student discussions.
- Uses effective communication techniques to enable students to meet specified goals in various contexts and to communicate directions, explanations, and procedures clearly and accurately with an appropriate level of detail.
- Knows how to use constructive feedback to guide student learning.
- Applies knowledge of factors that affect student motivation, and uses strategies that encourage self-motivation, creativity, and active engagement in learning.
- Knows how to use effective interpersonal skills (including both verbal and nonverbal skills) to actively engage students.
- Selects and uses instructional materials, resources, and technologies that are suitable for specified instructional goals and actively engage all students.
- Applies alternative instructional approaches (e.g., structuring and pacing lessons, flexible groupings) to ensure that all students learn and succeed.
- Presents content to students in ways that are relevant and meaningful to students' prior knowledge and experience.
- Engages in continuous monitoring of instructional effectiveness and modifies instruction as needed to promote student learning.

Competency 007

The Trade and Industrial Education teacher understands work-based learning approaches and incorporates relevant experiences into the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).

The beginning Trade and Industrial Education teacher:

- Knows the connections between classroom learning and work-based learning experiences.
- Knows various work-based learning models, including mentoring, job shadowing, career preparation co-op experiences, internships/externships, and capstone experiences.
- Knows education and training requirements associated with various career concentrations and how to comply with the requirements of work-based training.
- Identifies and evaluates work-based performance standards to meet individual needs and to develop individualized training plans for paid and unpaid work-based learning experiences.
- Matches work-based learning activities with student needs and goals.
- Applies instructional strategies associated with work-based models.
- Evaluates student progress based on work-based standards.
- Assists students in making the transition from program completion to employment and/or higher education (e.g., employment opportunities, career preparation requirements, career development resources, career concentrations).
- Knows the importance of collecting student follow-up data and analyzes the data to determine program effectiveness.

Competency 008

The Trade and Industrial Education teacher understands and integrates relevant technology in delivering the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).

The beginning Trade and Industrial Education teacher:

- Uses technology to enhance instructional delivery to create an effective teaching and learning environment.
- Uses technology applications to promote students' knowledge and skill development and to assess student learning.
- Applies procedures for using productivity tools in various instructional and administrative contexts (e.g., communication, calendars).
- Utilizes computer-mediated equipment and software for individualized instruction.
- Knows how to use technology resources to generate knowledge.
- Applies procedures for evaluating information acquired electronically.
- Utilizes technology for career guidance (e.g., assessing for interest, aptitude, and abilities; career decision making).
- Knows how to develop and use technology plans and associated budgets.
- Applies knowledge of technology-related laws, issues, and ethics relevant to Trade and Industrial curriculum and instruction.

Competency 009

The Trade and Industrial Education teacher monitors student performance and achievement and provides students with timely, high-quality feedback and responsive instruction to promote learning for all students.

The beginning Trade and Industrial Education teacher:

- Knows types of cognitive- and performance-based assessments and their characteristics and usage.
- Knows how to design and use cognitive- and performance-based assessments.
- Uses appropriate language and formats to provide students with timely, effective feedback that is accurate, constructive, and specific.
- Recognizes the benefits of student self-assessment, and knows how to promote students' ability to use feedback to guide and enhance their own learning.
- Modifies instruction based on ongoing cognitive- and performance-based assessments of student knowledge and skills.

Competency 010

The Trade and Industrial Education teacher understands and fosters the development of entrepreneurial, employability, and safety skills through delivery of the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).

The beginning Trade and Industrial Education teacher:

- Knows the basic procedures for establishing and organizing a business and the resources needed for business start-ups and financing.
- Knows basic organizational structures for businesses, and knows common practices and procedures used in business.
- Knows systems and processes used to deliver goods and services, and knows how to identify, serve, and maintain internal and external customers.
- Applies knowledge of employability skills (e.g., organization, time management, professional ethics, hygiene, appearance), analyzes the importance of specific employability skills for various career concentrations, and knows the characteristics of a value-added employee (e.g., employability skills, specific technical skills).
- Knows how to model employability skills, infuse employability skills into the Trade and Industrial curriculum, and assess students' proficiency in relation to employability skills.
- Understands the value of human diversity in relation to employment.
- Knows how to develop and implement a local safety plan for classroom, laboratory, and work-based learning settings that complies with local, state, and federal rules and regulations.
- Applies knowledge of relevant safety practices and teacher liability issues in the classroom, laboratory settings, and work-based learning environments.
- Applies knowledge of local, state, and federal safety regulations (e.g., OSHA, EPA, HAZMAT, child labor laws, wage and hour) to provide a safe learning environment for students.

DOMAIN IV—FULFILLING PROFESSIONAL ROLES AND RESPONSIBILITIES

Competency 011

The Trade and Industrial Education teacher understands the role of internal and external partnerships and develops and maintains collaborative relationships with educational partners to deliver the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).

The beginning Trade and Industrial Education teacher:

- Knows the importance of developing and establishing partnerships with internal and external entities (e.g., academic teachers, other career and technology educators, business/industry, postsecondary institutions, military).
- Applies skills and strategies for working and communicating effectively with educational partners (e.g., other professionals, parents/guardians, school boards, community organizations and agencies, business/industry, organized labor, proprietary and postsecondary institutions).
- Knows how to interact appropriately with families and other educational partners with diverse characteristics and backgrounds.
- Conducts effective meetings with parents/guardians, teachers, and industrial advisory committees.
- Applies skills and procedures for organizing and working with advisory committees.
- Knows how to maintain supportive and cooperative relationships with internal and external educational partners, identify and seek the support of resource persons, and engage in collaborative decision making and problem solving to support students' learning and well-being.
- Knows the process for developing articulation agreements with education and training partners.
- Understands the impact of relationships between Trade and Industrial programs and advisory committees (e.g., curriculum, instruction, youth organizations, professional organizations).
- Knows how to work effectively with local civic and service organizations to promote Trade and Industrial Education (e.g., marketing, recruiting, providing resources).
- Analyzes ways in which external factors influence the educational environment and the Trade and Industrial curriculum.

Competency 012

The Trade and Industrial Education teacher understands and fosters the development of leadership skills through delivery of the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]) and implementation of the Trade and Industrial Education state-approved student organizations.

The beginning Trade and Industrial Education teacher:

- Knows the cocurricular aspects of the Trade and Industrial student organizations within the curriculum, the benefits of a student organization, and the dual role of an educator and student organization advisor.
- Establishes and maintains an active Trade and Industrial student organization chapter.
- Knows characteristics of effective leadership, models leadership skills, and incorporates opportunities for students to develop leadership skills.
- Knows how to teach and apply conflict-resolution skills and problem-solving techniques.
- Recognizes the benefits and importance of community service, and provides students with community service opportunities.
- Knows how to market Trade and Industrial programs and involve students in public relations efforts.

Competency 013

The Trade and Industrial Education teacher understands professional roles and responsibilities and adheres to legal and ethical requirements of the profession.

The beginning Trade and Industrial Education teacher:

- Understands the value of participating in program, school, and community activities, and performs professional responsibilities and duties outside the classroom, laboratory, and work-based learning settings (e.g., serves on committees, volunteers to participate in events and project work with technical advisory committees).
- Knows characteristics, goals, and procedures associated with teacher appraisal systems.
- Uses self-assessment to identify strengths, challenges, and potential problems, and applies strategies for improving teaching performance and achieving professional development goals.
- Participates in professional development activities for enhancing technical knowledge and pedagogical skills related to Trade and Industrial Education (e.g., conferences, workshops, work with mentors and other support systems).
- Recognizes the importance of lifelong learning and knows how to use these experiences to enhance instruction in the Trade and Industrial program.
- Knows the benefits of maintaining membership in professional associations.
- Knows legal requirements for educators (e.g., related to special education, child labor laws, students' and families' rights, student discipline, equity, child abuse, patent and copyright laws, OSHA, Office of Civil Rights, Section 504 of the Rehabilitation Act).
- Applies knowledge of ethical guidelines, policies, and procedures for educators in Texas (e.g., related to confidentiality, interactions with students and others in the school and workplace, code of ethics).
- Uses knowledge of legal, ethical, and workplace guidelines to identify appropriate behaviors in education and work-based situations.
- Knows procedures and requirements for administering state- and district-mandated assessments and for maintaining student records.
- Uses knowledge of the structure of the education system in Texas, including relationships among campus, local, state, and federal entities, to seek information and assistance.
- Knows how to relate effectively and professionally to administrators, teachers, parents/guardians, and industrial partners.
- Knows how to serve as an advocate for students and for the teaching profession.

SECTION III

APPROACHES TO ANSWERING MULTIPLE-CHOICE ITEMS

The purpose of this section is to describe multiple-choice item formats that you will see on the TExES test in this field and to suggest possible ways to approach thinking about and answering the multiple-choice items. However, these approaches are not intended to replace familiar test-taking strategies with which you are already comfortable and that work for you.

The Pedagogy and Professional Responsibilities for Trade and Industrial Education 8–12 test is designed to include 80 scorable multiple-choice items and approximately 10 nonscorable items. Your final scaled score will be based only on scorable items. The nonscorable multiple-choice items are pilot tested by including them in the test in order to collect information about how these questions will perform under actual testing conditions. Nonscorable test items are not considered in calculating your score, and they are not identified on the test.

All multiple-choice questions on this test are designed to assess your knowledge of the content described in the test framework. The multiple-choice questions assess your ability to recall factual information **and** to think critically about the information, analyze it, consider it carefully, compare it with other knowledge you have, or make a judgment about it.

When you are ready to answer a multiple-choice question, you must choose one of four *answer choices* labeled A, B, C, and D. Then you must mark your choice on a separate answer sheet.

Item Formats

You may see the following two types of multiple-choice questions on the test.

- Single items
- Items with stimulus material

You may have two or more items related to a single stimulus. This group of items is called a cluster. Following the last item of a clustered item set containing two or more items, you will see the graphic illustrated below.



This graphic is used to separate these clustered items related to specific stimulus material from other items that follow.

On the following pages, you will find descriptions of these commonly used item formats, along with suggested approaches for answering each type of item. In the actual testing situation, you may mark the test items and/or write in the margins of your test booklet, **but your final response must be indicated on the answer sheet provided.**

SINGLE ITEMS

In the single item format, a problem is presented as a direct question or an incomplete statement, and four answer choices appear below the question. The following question is an example of this type. It tests knowledge of Pedagogy and Professional Responsibilities for Trade and Industrial Education 8–12 competency 008: *The Trade and Industrial Education teacher understands and integrates relevant technology in delivering the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).*

Which of the following is the most important consideration for students and teachers with regard to students' use of the Internet as a research tool?

- A. The name of a Web site does not always give a clear indication of the contents of the site.
 - B. The rapid expansion of the Internet makes it difficult to obtain the very latest information on a given topic.
 - C. Different search engines use different formulas for matching Web sites to search strings.
 - D. Much of the information on the Internet has not been reviewed and verified by experts in relevant fields.
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Suggested Approach

Read the question carefully and critically. Think about what it is asking and the situation it is describing. Eliminate any obviously wrong answers, select the correct answer choice, and mark it on your answer sheet.

This item addresses students' use of the Internet as a research tool. Since there are few controls over what information may be posted on the Internet and by whom, information obtained through this medium cannot be assumed to be accurate. Therefore, students who are using the Internet as a research tool must be made aware of the importance of consulting sources that have been reviewed by experts to verify the accuracy of any information obtained.

With regard to the other responses, it is true that the name of a Web site may not accurately represent the information it presents (option A), and it is also true that search engines use different formulas for matching Web sites to search strings (option C). While these issues may affect how easy it is to find information, they are not relevant to the more critical issue of accuracy. With regard to option B, the question of whether students have located the very latest information, which may or may not be substantiated, is less important than whether they have consulted a variety of up-to-date, accurate resources in a variety of media.

The correct response is therefore option D.

ITEMS WITH STIMULUS MATERIAL

Some questions are preceded by stimulus material that relates to the item. Some types of stimulus material included on the test are reading passages, graphics, tables, or a combination of these. In such cases, you will generally be given information followed by an event to analyze, a problem to solve, or a decision to make.

One or more items may be related to a single stimulus. You can use several different approaches to answer these types of questions. Some commonly used approaches are listed below.

Strategy 1 Skim the stimulus material to understand its purpose, its arrangement, and/or its content. Then read the item and refer again to the stimulus material to verify the correct answer.

Strategy 2 Read the item *before* considering the stimulus material. The content of the item will help you identify the purpose of the stimulus material and locate the information you need to answer the question.

Strategy 3 Use a combination of both strategies; apply the "read the stimulus first" strategy with shorter, more familiar stimuli and the "read the item first" strategy with longer, more complex, or less familiar stimuli. You can experiment with the sample items in this manual and then use the strategy with which you are most comfortable when you take the actual test.

Whether you read the stimulus before or after you read the item, you should read it carefully and critically. You may want to underline its important points to help you answer the item.

As you consider items set in educational contexts, try to use the identified teacher's point of view to answer the items that accompany the stimulus. Be sure to consider the items in terms of only the information provided in the stimulus—not in terms of specific situations or individuals you may have encountered.

Suggested Approach

First read the stimulus.

Use the information below to answer the two questions that follow.

Joel has worked for several years as an apprentice plumber for a firm in his community. At this point in his career, Joel would like to establish his own plumbing business and is considering possible locations in several neighboring communities.

Now you are prepared to address the first of the two questions associated with this stimulus. The first question measures competency 010: *The Trade and Industrial Education teacher understands and fosters the development of entrepreneurial, employability, and safety skills through delivery of the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).*

Which of the following steps should Joel take *first* before leaving his current job and establishing his own plumbing business?

- A. Contact a local bank to secure a loan to help establish the business.
 - B. Determine the potential market for his skills in each of the neighboring communities.
 - C. Draw up a detailed business plan for the establishment of the new business.
 - D. Identify potential locations for the new business in each of the neighboring communities.
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Read the question carefully and critically. Think about the question that is being asked. Eliminate any obviously wrong answers, select the correct answer choice, and mark it on your answer sheet.

This question tests understanding of priorities and procedures for establishing a business. Joel has decided to start his own plumbing business after working as an apprentice plumber. The question asks you to identify which step would be most important to take first in this process. Before establishing any business it is necessary to determine if there is a market for the goods and/or services supplied (option B). This information is used in making other business decisions (e.g., selecting a location, establishing financing, pricing goods and services) that occur later in the process.

All of the other responses represent necessary steps in establishing a business. However, all of these steps would likely be taken later in the process than option B. It is likely that Joel would need to present information about potential markets for his skills when applying for a loan (option A). This information would also be necessary for him to develop a detailed business plan (option C). Determining markets for his skills in each of the surrounding communities would also be a necessary first step to choosing a community and a location in the community in which to start his business (option D).

Option B is therefore the correct response.

Now you are ready to answer the next question. The second question also measures competency 010: *The Trade and Industrial Education teacher understands and fosters the development of entrepreneurial, employability, and safety skills through delivery of the Trade and Industrial curriculum (Texas Essential Knowledge and Skills [TEKS]).*

Joel is aware that many new businesses fail in the first year before they become well established. Asking himself which of the following questions would best help Joel assess his ability to stay in business past the first year?

- A. How much television, radio, and print advertising should I purchase and in what proportions?
 - B. Should I hire additional help to ensure that customers receive prompt and efficient service?
 - C. How much equipment and supplies should I order before opening the business?
 - D. Do I have adequate financial resources to be able to sustain expected early losses?
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This question requires an understanding of the reasons why businesses fail in the first year. It is very common for small start-up businesses such as Joel's to lose money in their first year until they are well established and have a regular clientele. However, this does not necessarily lead to the failure of the business if the owner has sufficient financial resources to cover these losses until the business begins to show a profit. Thus, Joel must plan for losses and must determine at the outset if he has enough financial resources to sustain these losses until the business is profitable (option D).

All of the other responses represent questions about business decisions that may affect the bottom line in some way. Advertising (option A) may increase interest in the business and affect sales. Hiring additional employees (option B) may help build customer satisfaction and expand the base of regular customers. Accurately estimating the equipment and supplies needed to start the business (option C) may help hold down costs. However, none of the answers to these questions would be useful in helping Joel assess whether first-year losses would lead to the failure of his business.

Option D is therefore the correct response.

SECTION IV

SAMPLE ITEMS

This section presents some sample test items for you to review as part of your preparation for the test. To demonstrate how each competency may be assessed, each sample item is accompanied by the competency number that it measures. While studying, you may wish to read the competency before and after you consider each sample item. Please note that the competency numbers will not appear on the actual test form.

An answer key follows the sample items. The answer key lists the item number and correct answer for each sample item. Please note that the answer key also lists the competency assessed by each item and that the sample items are not necessarily presented in competency order.

The sample items are included to illustrate the formats and types of items you will see on the test; however, your performance on the sample items should not be viewed as a predictor of your performance on the actual examination.

Pedagogy and Professional Responsibilities for Trade and Industrial Education 8–12

Competency 001

1. A high school junior tells a TIE teacher that he intends to drop out of school because school is a waste of time and a full-time job would enable him to earn a lot of money. The teacher is most likely to be able to discuss this issue effectively with the student if the teacher is aware that many students at this age:
 - A. focus on the present and have trouble appreciating long-term consequences.
 - B. are not yet able to recognize and distinguish the various roles of individuals and groups in society.
 - C. find it difficult to apply reasoning skills to any issues that are affecting their own lives.
 - D. view the authority figures in their lives, including teachers, as being able to make the best decisions.

Competency 002

2. At the beginning of the year, a TIE teacher has a "Get to Know You" conference with each of his students. One of the students has a physical condition that restricts her ability to hold and manipulate books and other materials. Which of the following is the most appropriate way for the teacher to communicate sensitivity to this student's special needs?
 - A. Assure her that although she will be given the same assignments as her peers, allowances will be made for her disability in grading some aspects of her work.
 - B. Avoid raising the topic of her disability and downplay its significance if she expresses concern about it.
 - C. Acknowledge her disability and offer to work with her to adapt class activities to make sure she has every opportunity for success.
 - D. Tell her about other students with physical disabilities who have had successful experiences in the teacher's classroom.

Competency 003

3. A TIE teacher wishes to use a task analysis to help develop elements of the curriculum. Which of the following best describes one likely role of an occupational advisory committee in this process?
- A. conducting the task analysis for the teacher at a variety of business and industry sites
 - B. ensuring that methods used in a state or national task analysis are scientifically valid and meet industry standards
 - C. validating an existing task analysis to ensure that it is in line with local standards and the local labor market
 - D. asking members of business and industry to conduct the task analysis for the teacher

Competency 003

4. A TIE teacher is planning to have his students prepare multimedia presentations. The teacher wants to ensure that the students do not focus exclusively on the design of their presentations. The teacher could address this issue most effectively by taking which of the following steps before students begin work on their presentations?
- A. prompting students to work simultaneously on both the content and the design of their presentation
 - B. requiring students to submit a rough outline of the design and content of their proposed presentation
 - C. creating a list of topics from which students must select the subject of their presentation
 - D. working with students to develop a project grading system that defines the relative importance of content and design features

Competency 004

5. A TIE teacher's classes include students from different cultural backgrounds. The teacher notes that relations among diverse student groups are sometimes tense and include occasional verbal conflict. The teacher can best respond to the observed tensions by using which of the following approaches?
- A. Reinforce student recognition of the benefits of cooperation by rewarding students who exhibit positive behavior toward their peers.
 - B. Use a seating arrangement that separates students from different groups, and allow students to choose the members of their groups for group work.
 - C. Create a grading system in which students' attitudes toward peers are as important as their performance on projects and tests in determining their grades.
 - D. Work with students to create a clear set of guidelines for classroom behavior and interactions, and insist that all students adhere to the guidelines.

Competency 004

6. Which of the following questions would be most important to consider for a TIE teacher who wishes to evaluate classroom climate?
- A. Does my instruction reflect a consistent and coherent educational philosophy?
 - B. Do my students have opportunities to participate in varied types of learning experiences?
 - C. Do my lessons promote all students' intellectual involvement and active engagement in learning?
 - D. Do I use procedures that ensure individual accountability in regard to student learning?

Competency 005

7. A TIE teacher uses group consequences to help manage his class. When the class is well-behaved and the noise level of the students is within acceptable levels, the students are allowed to turn on a radio while they work. When the noise level of the class is too high, or if any student engages in inappropriate behavior, the radio is turned off. Students take turns selecting the station when the radio is on, but students who do not follow classroom rules may miss their turn. Which of the following is the primary advantage of this approach?
- A. It relies on rewards to reinforce appropriate behavior, rather than punishments for inappropriate behavior.
 - B. It allows students considerable input in defining inappropriate behavior and developing classroom rules.
 - C. It uses peer pressure to reinforce classroom rules, while providing for individual consequences for inappropriate behavior.
 - D. It teaches students how to work together cooperatively to reach desired goals.

Competency 006

8. A TIE teacher is evaluating the effectiveness of a class discussion that occurred in one of her classes. Which of the following features of the discussion should concern the teacher most?
- A. Students often did not listen to what their classmates were saying.
 - B. Students frequently directed comments to one another rather than to the teacher.
 - C. Students sometimes failed to wait to be called on before speaking.
 - D. Students spent more time disagreeing about key points than agreeing.

Competency 006

9. A TIE teacher who teaches building trades concludes a lecture as follows.

As you recall, we started out last week learning about the characteristics of different types of wood and other materials used in house framing. Next time, we'll begin looking at the advantages and disadvantages of each type of material for specific framing applications. Some of these advantages and disadvantages were suggested today when we discussed characteristics such as weight, density, strength, and resistance to shearing of different types of framing materials.

The primary benefit of this type of conclusion is that it:

- A. prompts students to assess their own learning and identify potential areas of misunderstanding.
- B. helps students see how content covered over time ties together and makes a coherent whole.
- C. promotes students' recognition of the relevance to their own lives of the content being taught.
- D. summarizes for students the key concepts they should have learned about a topic.

Competency 007

10. Which of the following is likely to be the most important benefit to graduates completing a cooperative work-based learning program?
- A. exposing the graduate to the education and training requirements of a wide range of possible careers
 - B. motivating the graduate to seek higher education rather than immediately entering the job market
 - C. helping the graduate make the transition from high school to employment in a particular occupation
 - D. allowing the graduate to begin earning a salary equal to or greater than that paid other entry-level workers in an occupation

Competency 007

11. Which of the following factors is likely to be most important in ensuring the success of a cooperative work-based learning program?
- A. Teachers in the classroom and supervisors at the affiliated workplace use the same instructional methods.
 - B. Students spend approximately equal amounts of time in the classroom and working at the affiliated workplace.
 - C. Concepts taught in the classroom are relevant and applicable to student learning at the affiliated workplace.
 - D. Supervisors at the affiliated workplace are members of an occupational advisory committee for the TIE program.

Competency 009

12. When teachers create unit tests, it is most important to ensure that the tests:
- A. address previously defined learning goals and are closely aligned with what students have been taught.
 - B. include questions that are written at various levels of difficulty and in a range of assessment formats.
 - C. offer students opportunities to respond to both fact-based and opinion-based questions.
 - D. are designed in ways that will yield a substantial range of variation in student scores.

Competency 011

13. A high school and a community college enter into an articulation agreement under which graduates of the school's TIE program are granted college credit. This type of agreement is most likely to specify:
- A. the maximum amount of time that a graduate of the TIE program has to complete coursework required for a college degree.
 - B. the number of students from the TIE program that the college will admit each year.
 - C. the amount of financial aid that each graduate of the TIE program will receive upon admission to the college.
 - D. the courses that graduates of the TIE program must successfully complete.

Competency 012

14. Which of the following is a primary responsibility of the chapter advisor in helping a high school chapter of SkillsUSA develop the chapter's program of activities?
- A. assigning chapter members specific tasks for accomplishing each activity
 - B. ensuring that each activity conforms to school policy and has school authorization
 - C. contacting state and national representatives of SkillsUSA to request permission to carry out each activity
 - D. soliciting funds for each activity from local businesses and community members

Competency 012

15. The teacher of a cosmetology class offers students extra credit for volunteering to visit nursing homes to style residents' hair or provide them with manicures or pedicures. Each student volunteer works closely with the teacher and shares his or her perceptions about the experience with the rest of the class. By offering students this opportunity, the teacher demonstrates her awareness of the importance to student learning of:
- A. strengthening relationships with their peers.
 - B. becoming actively involved and playing an important role in society.
 - C. developing personal relationships with individuals of different ages.
 - D. controlling their own academic experiences.

Use the information below to answer the two questions that follow.

A group of Texas TIE teachers is attending a district seminar on the Educators' Code of Ethics. The purpose of the seminar is to help teachers better understand how the Code of Ethics applies to the practice of teaching in Texas schools and to provide an opportunity for teachers to share and discuss their concerns about how the code applies to their everyday activities in the schools. After reviewing the basic ethical principles stated in the Educators' Code of Ethics, seminar participants discuss situations that are relevant to the Code of Ethics.

Competency 013

16. At one point during the seminar, the discussion turns to the subject of how teachers should proceed before and during the administration of the Texas Assessment of Knowledge and Skills (TAKS). Which of the following teacher practices would be considered *unethical*?
- A. administering a teacher-made practice test several days prior to the actual administration of the TAKS to one's class
 - B. answering specific student questions about how to answer TAKS questions during the actual administration of the test
 - C. reviewing with one's class the directions for the different sections of the TAKS to prepare them for the actual administration
 - D. preparing students for the TAKS in advance by presenting lessons that focus on specific objectives measured by the test

Competency 013

17. During the discussion, one of the participants raises the topic of teachers' use of school property at home. Several teachers state their opinion that it is ethically permissible to borrow school equipment (e.g., computers, videotape recorders) for home use. The teachers' opinion is correct *only if* it is understood that the borrower:
- A. intends to return the equipment eventually.
 - B. believes the equipment is not currently needed at school.
 - C. uses the equipment for authorized school business only.
 - D. repairs any damage he or she may do to the equipment.



ANSWER KEY

Item Number	Correct Answer	Competency
1	A	001
2	C	002
3	C	003
4	D	003
5	D	004
6	C	004
7	C	005
8	A	006
9	B	006
10	C	007
11	C	007
12	A	009
13	D	011
14	B	012
15	B	012
16	B	013
17	C	013

SECTION V

PREPARATION RESOURCES

The resources listed below may help you prepare for the TExES test in this field. These preparation resources have been identified by content experts in the field to provide up-to-date information that relates to the field in general. You may wish to use current issues or editions to obtain information on specific topics for study and review.

Journals

ASCD Curriculum/Technology Quarterly, Association for Supervision and Curriculum Development.

ASCD Update, Newsletter of the Association for Supervision and Curriculum Development.

Educational Leadership, Journal of the Association for Supervision and Curriculum Development.

English Journal, National Council of Teachers of English.

Exceptional Children, Council for Exceptional Children.

Journal of Computing in Childhood Education, Journal of the Association for the Advancement of Computing in Education.

Journal of Industrial Teacher Education, National Association of Industrial and Technical Teacher Educators.

Journal of Reading, International Reading Association.

Journal of Vocational Education Research, American Vocational Education Research Association.

Learning and Leading with Technology, International Society for Technology in Education.

Mathematics Teacher, National Council of Teachers of Mathematics.

Social Education, National Council for the Social Studies.

Tech Directions Journal, Prakken Publications.

The Technology Teacher, Journal of the International Technology Education Association.

Vocational Education Journal, Association for Career and Technical Education.

Yearbooks for the Council on Technology Teacher Education, Glencoe/McGraw-Hill.

Other Sources

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- Association for Supervision and Curriculum Development. (1998). *Learning and Technology: 1998 ASCD Yearbook*. Alexandria, VA: Association for Supervision and Curriculum Development.
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Online Resources

- ACTEonline*, <http://www.acteonline.org>
- ATELS_BAT Information*, http://www.doleta.gov/atels_bat
- Department of Labor Wage and Hour Division*, <http://www.dol.gov/esa/whd>
- IRS Home*, <http://www.irs.ustreas.gov>
- Learning Skills Program—Bloom's Taxonomy*, <http://www.coun.uvic.ca/learn/program/hndouts/bloom.html>
- Occupational Safety & Health Administration—OSHA Home Page*, <http://www.osha.gov>
- SkillsUSA—VICA's Home Page*, <http://www.skillsusa.org>
- TCLEOSE*, <http://www.tcleose.state.tx.us>
- Tech Prep Texas*, <http://www.techpreptexas.org>
- Texas Administrative Code*, <http://info.sos.state.tx.us>
- Texas Administrative Code Sales Tax Info.*, [http://info.sos.state.tx.us/pub/plsql/readtac\\$ext.ViewTAC?tac_view=5&ti=34&pt=1&ch=3&sch=O&rl=Y](http://info.sos.state.tx.us/pub/plsql/readtac$ext.ViewTAC?tac_view=5&ti=34&pt=1&ch=3&sch=O&rl=Y)
- Texas Higher Education Coordinating Board*, <http://www.thecb.state.tx.us>
- Texas State Plumbing Examiners*, <http://www.tsbpe.state.tx.us>
- Texas Workforce Commission*, <http://www.twc.state.tx.us>

United States Department of Labor, <http://www.dol.gov>

Welcome to Prevent Blindness America, <http://www.prevent-blindness.org>

Welcome to Texas Cosmetology Commission, <http://www.txcc.state.tx.us>

Work Opportunity and Welfare-to-Work Tax Credits, <http://www.doleta.gov/employer/wotc.htm>

