

## **PEDAGOGY AND PROFESSIONAL RESPONSIBILITIES (8–12) STANDARDS 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.
- 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.
- 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.
- Standard IV.*** Professional Responsibilities: The T&I teacher exhibits professional roles and responsibilities and adheres to legal and ethical requirements of the profession.
- 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]).
- 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]).
- 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]).
- 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]).
- 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.
- 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]).

**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.**

**Teacher Knowledge: What Teachers Know**

*Teachers of Students in Grades 8–12*

The beginning teacher knows and understands:

- 1.1k the developmental characteristics of students in grades 8 through 12;
- 1.2k the implications of students’ learning styles, diverse backgrounds, skills, interests, and abilities and their impact on planning appropriate instruction;
- 1.3k the importance of integrating academics into trade and industrial education;
- 1.4k the content and performance standards as outlined in the Texas Essential Knowledge and Skills (TEKS) for Trade and Industrial Education;
- 1.5k pedagogical practices that are designed to maximize student learning;
- 1.6k the importance of developing a program vision and instructional goals and objectives that are clear, relevant, and assessed according to current work-based standards;
- 1.7k the importance of aligning instructional goals with campus goals, district goals, and current industry standards;
- 1.8k how to locate, develop, and use materials and resources for preparing instruction, presenting lessons, and assessing student learning;
- 1.9k how to conduct an occupational/task analysis and to validate it with a local advisory committee;
- 1.10k how to plan lessons and structure units that progress in a logical sequence and are based on industry standards and procedures;
- 1.11k how to monitor and assess instructional effectiveness;
- 1.12k methods of using cognitive- and performance-based assessment;

**Application: What Teachers Can Do**

*Teachers of Students in Grades 8–12*

The beginning teacher is able to:

- 1.1s plan lessons that reflect an understanding of students’ social and developmental characteristics;
- 1.2s create lessons to address students’ diverse backgrounds, skills, interests, and abilities;
- 1.3s plan and use a variety of techniques to motivate students and to address their learning styles and preferences;
- 1.4s incorporate into the curriculum the Texas Essential Knowledge and Skills (TEKS) for Trade and Industrial Education;
- 1.5s plan instruction that makes connections across disciplines;
- 1.6s develop a program vision and instructional goals and objectives that are clear, relevant, and assessed according to industry standards;
- 1.7s locate, develop, and use materials and industry resources to design instruction that enhances student achievement;
- 1.8s design and use cognitive- and performance-based assessments;
- 1.9s analyze assessment results to determine students’ strengths and needs and to plan instruction;
- 1.10s plan instructional activities that progress sequentially, support stated instructional goals based on the Texas Essential Knowledge and Skills (TEKS), and are validated by a local advisory committee;
- 1.11s plan activities that utilize flexible groupings to engage students and to meet instructional goals;

**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.**

**Teacher Knowledge: What Teachers Know**

*Teachers of Students in Grades 8–12 (continued)*

- 1.13k the benefits and strategies of promoting student self-assessment;
- 1.14k how to utilize student follow-up data for instructional planning; and
- 1.15k the components of all aspects of industry and the importance of incorporating them into the T&I curriculum.

**Application: What Teachers Can Do**

*Teachers of Students in Grades 8–12 (continued)*

- 1.12s plan lessons and units to provide opportunities for students to engage in reflection and closure;
- 1.13s plan instruction that applies knowledge in a variety of contextual activities (e.g., interpret technical data, solve industry-related problems); and
- 1.14s incorporate components of all aspects of industry into the T&I curriculum.

**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.**

<b>Teacher Knowledge: What Teachers Know</b>	<b>Application: What Teachers Can Do</b>
<p><i>Teachers of Students in Grades 8–12</i></p>	<p><i>Teachers of Students in Grades 8–12</i></p>
<p>The beginning teacher knows and understands:</p>	<p>The beginning teacher is able to:</p>
<p>2.1k the importance of creating a learning environment in which diversity and individual differences are respected;</p>	<p>2.1s use strategies to ensure that classroom interactions are polite, respectful, and professional;</p>
<p>2.2k how to establish a positive classroom climate that fosters active engagement in learning among students;</p>	<p>2.2s establish instructional goals, tasks, interactions, assessments, and other elements of the classroom and laboratory environment that convey high expectations for student achievement and meet industry standards;</p>
<p>2.3k the importance of communicating enthusiasm for learning;</p>	<p>2.3s communicate and implement classroom rules and procedures, including an effective discipline management plan to promote a safe and effective learning environment;</p>
<p>2.4k the necessity of communicating expectations for student learning;</p>	<p>2.4s organize and manage groups to ensure that students work together, and promote students’ ability to assume responsible roles and develop collaborative skills and individual accountability applicable to industrial practice;</p>
<p>2.5k how classroom and laboratory procedures affect student learning and achievement;</p>	<p>2.5s schedule activities and manage class time to maximize student learning and safety;</p>
<p>2.6k how to utilize flexible grouping to facilitate cooperation and productivity;</p>	<p>2.6s implement routines and procedures for the safe and effective management of instructional resources;</p>
<p>2.7k the importance of time management for effective classroom functioning;</p>	<p>2.7s coordinate the performance of noninstructional duties with instructional activities;</p>
<p>2.8k routines and procedures for managing and using instructional resources;</p>	<p>2.8s apply local, state, and national safety regulations to provide a safe learning environment for students;</p>
<p>2.9k current local, state, and federal safety regulations (e.g., OSHA, wage and hour, EPA, HAZMAT, child labor laws);</p>	<p>2.9s 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;</p>
<p>2.10k teacher liability issues related to the classroom and the laboratory;</p>	
<p>2.11k discipline management techniques in a classroom and laboratory setting;</p>	
<p>2.12k relevant safety practices in the classroom and laboratory;</p>	

**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.**

**Teacher Knowledge: What Teachers Know**

*Teachers of Students in Grades 8–12 (continued)*

- 2.13k the importance of establishing standards of student conduct for the classroom, laboratory, and work-based learning settings and clear consequences for inappropriate behavior; and
- 2.14k the necessity for assuring physical accessibility for all students.

**Application: What Teachers Can Do**

*Teachers of Students in Grades 8–12 (continued)*

- 2.10s instruct students in how to maintain ethical work-based standards and monitor their own behavior; and
- 2.11s monitor physical accessibility in a classroom and laboratory setting.

**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.**

<p><b>Teacher Knowledge: What Teachers Know</b></p>	<p><b>Application: What Teachers Can Do</b></p>
<p><i>Teachers of Students in Grades 8–12</i></p>	<p><i>Teachers of Students in Grades 8–12</i></p>
<p>The beginning teacher knows and understands:</p>	<p>The beginning teacher is able to:</p>
<p>3.1k principles and strategies for communicating effectively in various teaching and learning contexts, including work-based learning and laboratory;</p>	<p>3.1s communicate directions and procedures clearly, accurately, and with an appropriate level of detail (e.g., procedures, manuals, technical publications);</p>
<p>3.2k spoken and written language appropriate to students’ backgrounds, technical skills levels, and work experience;</p>	<p>3.2s use effective interpersonal skills (including both verbal and nonverbal skills) to actively engage learners;</p>
<p>3.3k strategies for engaging in effective questioning and facilitation of effective student discussions;</p>	<p>3.3s use effective communication techniques that enable students to understand content (including questioning and student-led discussions and instructor-led small group discussions);</p>
<p>3.4k the effective use of instructional materials, resources, and technologies that are appropriate and engaging for students in varied learning situations;</p>	<p>3.4s select and use instructional materials, resources, and technologies that are suitable for instructional goals and actively engage students in the instructional process;</p>
<p>3.5k strategies and techniques for using instructional groupings to promote student learning in classroom and work-based learning settings;</p>	<p>3.5s deliver content that capitalizes on students’ prior knowledge, skills, and experiences;</p>
<p>3.6k strategies and factors affecting student motivation;</p>	<p>3.6s pace lessons in response to student learning needs;</p>
<p>3.7k techniques for structuring and pacing lessons to promote student participation and learning;</p>	<p>3.7s use strategies that encourage self-motivation, creativity, and active engagement in learning;</p>
<p>3.8k how to use constructive feedback to guide student learning;</p>	<p>3.8s use appropriate trade terminology and language to enhance student learning;</p>
<p>3.9k how to monitor and modify instruction (e.g., the importance of encouraging independent study, work-based learning, cooperative learning and management of learning activities); and</p>	<p>3.9s provide each student with timely feedback that is accurate, constructive, and specific;</p>
<p>3.10k the use of technology for enhancing the teaching and learning environment.</p>	<p>3.10s adjust instruction based on ongoing cognitive- and performance-based assessments of student knowledge and skills;</p>

***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.***

**Application: What Teachers Can Do**

***Teachers of Students in Grades 8–12 (continued)***

- 3.11s use alternative instructional approaches to ensure that all students learn and succeed; and
- 3.12s use technology effectively to enhance instructional delivery.

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

**Teacher Knowledge: What Teachers Know**

*Teachers of Students in Grades 8–12*

The beginning teacher knows and understands:

- 4.1k the appropriate ways of working and communicating effectively with educational partners (i.e., parents/guardians, business, other professionals, school boards, community organizations);
- 4.2k how to identify and seek the support of resource persons;
- 4.3k the benefits of participating in program, school, and community activities;
- 4.4k the importance of participating in professional development activities to enhance trade, technical knowledge, and pedagogical skills related to trade and industrial education;
- 4.5k the characteristics, goals, and procedures associated with teacher appraisal systems;
- 4.6k the legal requirements for educators (e.g., those related to special education, Section 504 of the Rehabilitation Act, child labor laws, OSHA, students' and families' rights, student discipline, equity, child abuse, Office of Civil Rights);
- 4.7k ethical guidelines, policies, and procedures for educators in Texas (e.g., in relation to confidentiality, interactions with students and others in the school and workplace, code of ethics);
- 4.8k the procedures and requirements for maintaining accurate student records (e.g., grades, career portfolios, work records, transition plans);
- 4.9k the importance of adhering to required procedures for administering state- and district-mandated assessments;

**Application: What Teachers Can Do**

*Teachers of Students in Grades 8–12*

The beginning teacher is able to:

- 4.1s interact appropriately with families and educational partners that have diverse characteristics, backgrounds, needs, skills, and abilities;
- 4.2s conduct parent/guardian, teacher, and industrial advisory committee meetings;
- 4.3s maintain supportive and cooperative relationships with educational partners (internal and external);
- 4.4s engage in collaborative decision making and problem solving with educational partners to support students' learning and well-being;
- 4.5s perform professional responsibilities and duties outside the classroom, laboratory, and work-based learning settings (e.g., serve on committees, volunteer to participate in events and project work with technical advisory committees);
- 4.6s maintain membership in professional associations and actively participate in various types of professional development opportunities (e.g., conferences, workshops, work with mentors and other support systems);
- 4.7s update occupational specialization and pedagogical knowledge and skills;
- 4.8s use self-assessment to identify strengths, challenges, and potential problems; improve teaching performance; and achieve instructional and professional development goals;
- 4.9s use knowledge of legal, ethical, and workplace guidelines to develop behaviors in education and work-based situations;
- 4.10s serve as an advocate for students and the teaching profession;

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

**Teacher Knowledge: What Teachers Know**

*Teachers of Students in Grades 8–12 (continued)*

- 4.10k the structure of the educational system, including relationships between campus, local, state, and federal entities;
- 4.11k the importance of lifelong learning;
- 4.12k patent, copyright, and intellectual property laws;
- 4.13k requirements for occupational certification/licensure; and
- 4.14k how to relate effectively as a professional to administrators, teachers, parents/guardians, and industrial partners.

**Application: What Teachers Can Do**

*Teachers of Students in Grades 8–12 (continued)*

- 4.11s maintain accurate student and professional records;
- 4.12s utilize lifelong learning experiences; and
- 4.13s maintain required occupational certification/licensure.

**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]).**

<p><b>Teacher Knowledge: What Teachers Know</b></p>	<p><b>Application: What Teachers Can Do</b></p>
<p><i>Teachers of Students in Grades 8–12</i></p>	<p><i>Teachers of Students in Grades 8–12</i></p>
<p>The beginning teacher knows and understands:</p>	<p>The beginning teacher is able to:</p>
<p>5.1k the connections between classroom learning and work-based learning experiences;</p>	<p>5.1s incorporate teaching strategies unique to work-based models;</p>
<p>5.2k work-based learning models (e.g., mentoring, job shadowing, career preparation co-op experiences, internships/externships and capstone experiences);</p>	<p>5.2s assist students in the transition from program completion to employment and/or higher education (e.g., employment opportunities, career preparation requirements, career development resources, career concentrations);</p>
<p>5.3k required education and training associated with career concentrations;</p>	<p>5.3s match work-based learning activities with student needs and goals;</p>
<p>5.4k how to identify and evaluate work-based performance standards to meet individual student needs;</p>	<p>5.4s comply with the requirements of work-based training;</p>
<p>5.5k how to develop an individualized training plan for paid and unpaid work-based learning experiences; and</p>	<p>5.5s evaluate student progress based on work-based standards; and</p>
<p>5.6k the importance of collecting student follow-up data to determine program effectiveness.</p>	<p>5.6s analyze follow-up data to determine program effectiveness.</p>

**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]).**

**Teacher Knowledge: What Teachers Know**

*Teachers of Students in Grades 8–12*

The beginning teacher knows and understands:

- 6.1k the importance of establishing partnerships with internal and external entities (e.g., academic teachers, other career and technology educators, industry, postsecondary institutions, military);
- 6.2k the relationship between T&I programs and advisory committees and the impact of that relationship on various areas (e.g., curriculum, instruction, youth organizations, professional organizations);
- 6.3k external influences as they impact the educational environment of the T&I curriculum; and
- 6.4k the purpose and roles of committees and individuals in providing services to special populations.

**Application: What Teachers Can Do**

*Teachers of Students in Grades 8–12*

The beginning teacher is able to:

- 6.1s develop partnerships among business, education, and community agencies;
- 6.2s develop articulation agreements with education and training partners;
- 6.3s organize and work with advisory committees;
- 6.4s work with local civic and service organizations to promote T&I education (e.g., market, recruit, provide resources); and
- 6.5s be actively involved with educational personnel and agency representatives in providing appropriate services for students from special populations in T&I programs.

**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]).**

<b>Teacher Knowledge: What Teachers Know</b>	<b>Application: What Teachers Can Do</b>
<i>Teachers of Students in Grades 8–12</i>	<i>Teachers of Students in Grades 8–12</i>
The beginning teacher knows and understands:	The beginning teacher is able to:
7.1k state and federal laws and regulations related to establishing and operating a business;	7.1s conduct a market analysis and develop a business plan;
7.2k business systems and processes for the delivery of goods and services;	7.2s use labor market information to analyze future work force opportunities; and
7.3k the importance of human and public relations in managing businesses;	7.3s utilize marketing and advertising procedures.
7.4k how to establish and organize a business;	
7.5k common business and management practices (e.g., inventory control, hiring and termination procedures);	
7.6k resources necessary for business startups and financing;	
7.7k how to identify, serve, and maintain internal and external customers; and	
7.8k basic organizational structures for business.	

**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]).**

**Teacher Knowledge: What Teachers Know**

*Teachers of Students in Grades 8–12*

The beginning teacher knows and understands:

- 8.1k the importance of specific employability skills as related to a career concentration;
- 8.2k the characteristics of a value-added employee (e.g., employability skills, specific technical skills);
- 8.3k strategies for infusing employability skills into the T&I curriculum;
- 8.4k the value of human diversity in relation to employment; and
- 8.5k how to assess the level of student proficiency in relation to employability skills.

**Application: What Teachers Can Do**

*Teachers of Students in Grades 8–12*

The beginning teacher is able to:

- 8.1s model and incorporate employability skills in the curriculum (e.g., organizational skills, time management skills, professional ethics, hygiene, appearance).

**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.**

**Teacher Knowledge: What Teachers Know**

*Teachers of Students in Grades 8–12*

The beginning teacher knows and understands:

- 9.1k the co-curricular aspects of the Trade & Industrial Career & Technology student organization within the T&I curriculum;
- 9.2k the dual role of the T&I teacher as educator and student organization advisor;
- 9.3k the characteristics of effective leadership;
- 9.4k the benefits of a student organization;
- 9.5k various conflict-resolution and problem-solving techniques (e.g., Robert’s Rules of Order);
- 9.6k how to involve students in public relations efforts; and
- 9.7k the benefits and importance of community service.

**Application: What Teachers Can Do**

*Teachers of Students in Grades 8–12*

The beginning teacher is able to:

- 9.1k model various leadership skills and incorporate them into lesson planning;
- 9.2k teach and apply conflict-resolution skills;
- 9.3k teach and apply problem-solving techniques;
- 9.4k provide students with community service opportunities;
- 9.5k market T&I programs; and
- 9.6k establish an active Trade & Industrial Career & Technology student organization chapter.

**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]).**

**Teacher Knowledge: What Teachers Know**

*Teachers of Students in Grades 8–12*

The beginning teacher knows and understands:

- 10.1k how to use technology applications to promote and assess student learning;
- 10.2k the importance of developing a strategic technology plan and budget;
- 10.3k technology laws, issues, and ethics as they relate to the T&I curriculum;
- 10.4k the use of productivity tools for use in instructional and administrative tasks (e.g., communication, calendars);
- 10.5k how to use technology resources to generate knowledge; and
- 10.6k how to evaluate information acquired electronically.

**Application: What Teachers Can Do**

*Teachers of Students in Grades 8–12*

The beginning teacher is able to:

- 10.1s use technology applications to promote and assess student learning;
- 10.2s develop and use technology plans and associated budgets;
- 10.3s use and incorporate technology to improve student knowledge and skill development;
- 10.4s use productivity tools for instructional and administrative tasks;
- 10.5s utilize technology for computer-mediated equipment and software for individualized instruction;
- 10.6s utilize technology for career guidance (e.g., assess for interest, aptitude, and abilities; career decision making); and
- 10.7s evaluate information acquired electronically.