Integrating CTSO Competitive Events into Work-Based Learning: A Toolkit for School Districts

What is a Career and Technical Student Organization (CTSO)?

A Career and Technical Student Organization (CTSO) is an organization that engages in career and technical education activities as an integral part of the instructional program. CTSOs provide opportunities to develop and refine the skills students need in their chosen occupational area. Conferences, competitive events, workshops, community service and other activities encourage leadership development and career exploration.

Integrating CTSOs into the Curriculum

CTSOs have proven their ability to connect education and careers, motivate students, build education and business partnerships, participate in career guidance and counseling, encourage higher level academics, and build interpersonal and employability skills of students.

CTSOs are directly linked to career education coursework through a comprehensive high school, career academy or college with an organized chapter of the related CTSO.

CTSOs support the career and technical curricula to:

- enable students to achieve high academic and occupational standards
- develop meaningful business partnerships
- link work-based and school-based learning to the real world of work and family
- motivate youth to become better students and productive citizens
- develop school and community leaders
- enhance students' self-esteem and self-confidence
- develop leadership skills and provide opportunities for success
- keep students motivated and concentrated

Student Outcomes

Students participating in career and technical student organizations have the opportunity to develop and enhance their leadership and citizenship skills within the context of career and program interests which also enhances their occupational skills and future employability. These organizations provide students opportunities in a caring, secure environment to participate in leadership initiatives, and to enhance their awareness of the role of community service and responsibility to governmental affairs.

Activities are designed to provide opportunities for student achievement in sound decision-making, positive professional appearances and skill attainment. These experiences are enhanced through involvement of business, industry and labor in a climate of positive interaction and cooperation. For many students, this is the only leadership opportunity they will experience during their educational careers. Communities, states and the nation benefit, as well as the individual and their families.

Community & Business Support

Producing viable, active citizens who are concerned about their professions and the welfare of their communities, states and nation is the positive product. Career and technical student organizations have an excellent reputation and years of success in Iowa.

Communities and businesses can provide support by serving as evaluators at state and national conferences, serving as guest speakers, providing opportunities for job shadowing or internships, and assisting in any way they and the organization agree upon.

Work-Based Learning Through CTSOs

A CTSO creates an opportunity for a student to apply their classroom knowledge, taught via course standards, to projects, activities, and experiences. This affords students an understanding of how their classroom knowledge will apply in their future careers and education.

Work based learning may take place within your CTSO to connect classroom learning to the workplace through application and workplace mentorship. Because CTSOs offer direct connection to industry, students may engage with industry partners to align their academic knowledge to real workplace tasks, reflecting on their learning process.

CTSO Competitive Events as Individual Work-Based Learning

All CTSOs offer a competitive events program that allows students to apply their classroom knowledge to real-world scenarios in their given career path. Topics, guidelines, and rating sheets are made available in advance, allowing students to review the expectations and rapidly apply what they have learned.

Academic Preparation Before a CTSO Competitive Event

- **Define the WBL Plan:** The student and advisor must create and sign a formal Individual WBL Plan Agreement Template. This document will outline the specific learning objectives, activities, and evaluation methods for the competitive project.
- **Access Competitive Event Standards:** The student must obtain and thoroughly review the official CTSO Competitive Event Guidelines & Technical Standards for their chosen event.
- **Develop a Project Plan:** The student will create a detailed "Project Plan" with a timeline and milestones, treating the competitive event entry as a formal work project.
- **Acquire Skills and Document Hours:** The student engages in self-guided learning to master the required technical skills outside of class time. They must maintain a detailed log of their study and practice hours.
- **Utilize Industry Resources Safely:** The student uses industry-standard tools and processes, either at school, a local business, or home.
- **Conduct Regular Advisor Check-ins:** The student must schedule and attend regular check-ins with their advisor. These meetings are documented with signed notes to track progress and address challenges.

Employer Engagement Before a CTSO Competitive Event

- **Collaborate with the State CTSO Director:** The student and advisor should reach out to the statewide CTSO director to understand which employers sponsor the specific competitive event. The state director may help facilitate formal introductions, and can help establish a clear point of contact with the employer sponsor if needed, validating the WBL experience.
- **Establish an Employer Mentorship:** The student will interact with an employer partner while preparing for the competitive event. An employer partner may be the employer sponsor of the upcoming CTSO competitive event or another employer that is related to the competitive event focus. These interactions will include:

1. **Ongoing Guidance:** The student schedules and manages regular check-ins (virtual or in-person) with the mentor for feedback on progress, technical questions, and professional development.
2. **Review of Deliverables:** The mentor reviews drafts of the student's project components (e.g., initial research, design concepts, a business plan draft) and provides feedback based on industry standards.

- **Facilitate Industry Access and Resources:** The employer can provide real-world problem scenarios or case studies for the student to practice with, making the self-guided learning more relevant and challenging. The employer might provide access to specific software, safety guidelines, or research materials that the student needs for the project.

Partnership Between Education and Industry During the CTSO Competitive Event

- **Engage with Judges:** During the competitive event, the student must actively participate in Q&A sessions with industry professional judges. This simulates a professional review or job interview process.
- **Document Feedback:** The student is responsible for obtaining and retaining the formal, signed judge rating sheets and any written feedback, as this serves as documented evidence of industry input.
- **Network Professionally:** The student should proactively seek to build professional connections with judges and other industry representatives, following professional etiquette and communication guidelines.
- **3Verify Participation Hours:** The advisor must verify the student's total WBL hours, which includes time spent on preparation, the competitive event itself, and networking activities

Academic Follow-Up After the CTSO Competitive Event

- **Conduct Structured Reflection:** The student completes a guided reflection on their experience, performance, lessons learned, and the skills developed.
- **Create an Improvement Plan:** The student analyzes the feedback from judges and develops a formal action plan for future improvement in their skills and professional approach.
- **Evaluate the Program:** The advisor uses student feedback and competitive event outcomes to measure the program's effectiveness and identify areas for improvement in future individual WBL activities.

Reporting CTSO Competitive Events as Individual Work-Based Learning Experiences

The Department will rely on multiple specific data points to accurately collect and report work-based learning experiences for students across the state. Data will be used to calculate the work-based learning sub-measure of the Postsecondary Readiness Accountability Measure for the Every Student Succeeds Act (ESSA) and School Performance Profiles (percentage of students participating in work-based learning while in high school). Data will also be used to determine the Perkins Secondary Career and Technical Education (CTE) 5S3 work-based learning indicator of performance (percentage of CTE concentrators graduating from high school having participated in work-based learning). A CTE concentrator is defined in Iowa as a secondary student who has earned credit for two (2.0) or more Carnegie Units within a state-approved CTE program (e.g., health science).

Individual-Level Work-Based Learning Codes

Work-based learning experiences that are connected to a CTSO competitive event are individual-level work-based learning experiences. In such cases where the work-based learning experience is not part of a course, school districts must use the Individual Work-Based Learning Code that was added to the SRI system starting in the 2025-2026 academic year. Districts need to manually review and make appropriate changes to this data field to ensure accurate coding and reporting by the end of June each year.

The Individual Work-Based Learning Code is a four-digit code where the first two numbers represent the SCED Subject Area and the second two numbers represent the type of WBL experience. For example, a simulated work experience in information technology would be coded as "1012."

The tables below appear in the SRI Data Dictionary available at https://educate.iowa.gov/pk-12/data/data-collections/student-reporting.

Note: In order for these experiences to be reported properly, it is the responsibility of the student to communicate these types of experiences, along with the outcomes learned during the experience, to their school counselor.

Code Area (First Two Numbers)	Keyword(s) to Include in Course Title
01	English Language and Literature
02	Mathematics
03	Life and Physical Science
04	Social Sciences and History
05	Visual and Performing Arts
07	Religious Education and Theology
08	Physical Health and Safety Education
09	Military Service
10	Information Technology
11	Communication and Audio/Visual Technology
12	Business and Marketing
13	Manufacturing
14	Health Care Services
15	Public, Protective, and Government Services
16	Hospitality and Tourism
17	Architecture and Construction
18	Agriculture, Food, and Natural Resources
19	Human Services
20	Transportation, Distribution, and Logistics
21	Engineering and Technology
22	Miscellaneous

24	World Languages
25	Integrative Learning

WBL Code (Second Two Numbers)	WBL Experience
11	Industry Partnership Projects
12	Simulated Work Experience

User notes:

1. Can be used to enter a work-based learning experience a student completed over the summer or if a student completes a work-based learning experience that is not embedded in a course.
2. The first two digits represent the SCED Subject Area of the experience and the last two digits represent the type of WBL experience.