



College, Career and Technical Education

2022-2023 Overview

Tennessee Department of Education | February 2024



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Executive Summary

The Tennessee Department of Education's (department) division of College, Career, and Technical Education (CCTE) plays an essential role in the future of our workforce. CCTE impacts the state's economy, school districts, students, and all stakeholders through ambitious projects and a tireless commitment to improvement. This report serves to highlight the achievements of the past school year and to preview what is still to come.

SECTION 1 **Economic Impact**

Through the expansion of work-based learning (WBL), apprenticeship and pre-apprenticeship programs, CCTE gives all students—including those from historically marginalized populations—the opportunity to earn while they learn. These initiatives not only assist in breaking the cycle of generational poverty, but they also help guarantee well-trained employees for state manufacturers and other vital businesses. Tennessee students can also earn valued industry credentials that expand options for future job placement. The department continuously assesses and improves the credentials offered to students as well as the standards which guide Career and Technical Education (CTE) classroom instruction.

SECTION 2 **School District Impact**

The department provides intentional support for local school districts to improve access and equity to high-quality CTE programs, sustainability of Innovative High School Models (IHSM), TN SySTEM and Out of School Time Career Pathways (OSTCP) grants, early postsecondary opportunities, AP Access for All, and STEM/STE(A)M initiatives. This includes helping districts to align their programs with local, regional, and state labor market needs by improving the connection to labor needs in Tennessee, training for educators, providing robust instructional resources for CTE classroom use, and continuing ongoing professional development for teachers and administrators.

SECTION 3 **Student Impact**

Students also benefit from CCTE's commitment to reimagining what middle and high school can look like. In addition, students can engage in career assessments and participate in Career and Technical Education Student Organizations (CTSOs) that help them see the connection between what they learn in school with what they will do in the professional workforce.

SECTION 4 **Future Impact**

The future of CTE in Tennessee is brighter than ever with ambitious projects and initiatives on the horizon. Through reimagining the high and middle school experience through the implementation of the Innovative School Models (ISM) grant; being intentional in inter-agency collaboration during the Perkins V rewrite; implementing K-12 computer science instruction; Industry 4.0 Diploma Distinction rollout; and improving how CCTE data is collected and used through the CCR Portal and LAUNCH Grant and connecting to emerging work across the state, like Ford's Blue Oval City. CCTE will continue to keep our state's workforce strong for years to come.



SECTION 1

CCTE Impact on TN Economy

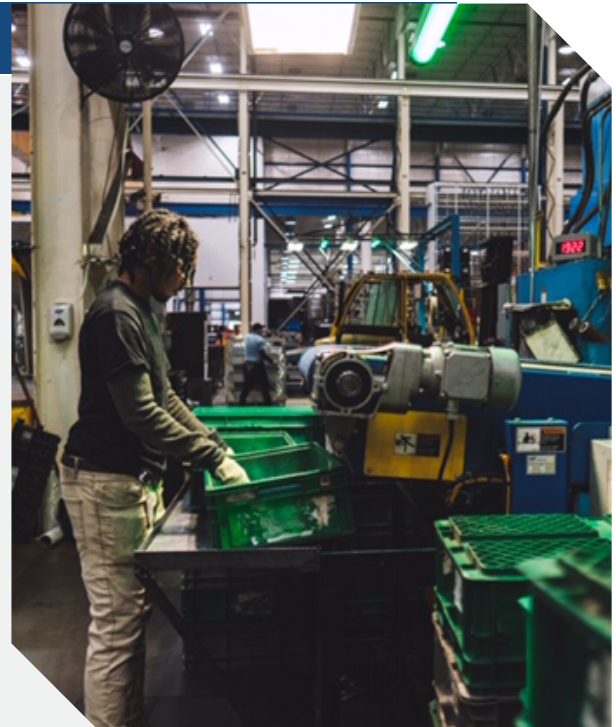
Work-Based Learning
Pre-Apprenticeships
Industry Credentials



SECTION 1: CCTE Impact on TN Economy

Work-Based Learning

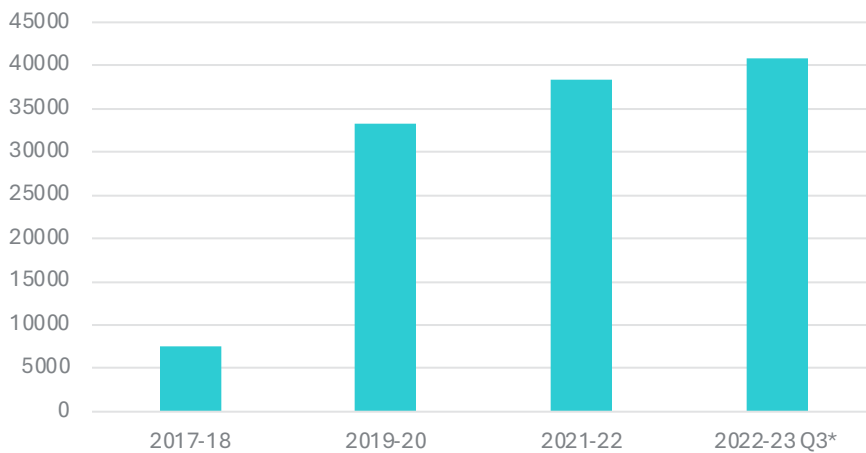
Work-based learning (WBL) is a proactive approach to bridging the gap between high school and high-demand, high-skill careers in Tennessee. Students build on classroom-based instruction to develop employability skills that prepare them for success in postsecondary education and future careers. Through experiences like internships, apprenticeships, and paid work experience, juniors, and seniors (16 years or older) may earn high school credit for capstone WBL experiences. WBL coordinators are educators trained and certified by the department to coordinate these WBL experiences for students.



Increased Opportunities

Increased WBL enrollment to pre-pandemic numbers, moved from 7,527 in 2017-18 to 33,263 in 2019-20 and 33,731 in 2021-22.

Figure 1: WBL Enrollment & Continued Program Growth



Continued Program Growth

After increasing WBL enrollment beyond pre-pandemic numbers (33,731 in Q1 of 2021-22), by Q4 of 2021-22, WBL enrollment reached 38,372, surpassing any quarterly enrollment measure ever.

***Through Q3 of 2022-23, WBL enrollment is 40,795, which has already eclipsed enrollment for the entire 2021-22 school year.**

Employer Partnerships

In partnership with the Tennessee Department of Labor and Workforce Development (TDLWD), we established a consultative process to advise employers on how to establish compliant WBL programs for minors, which has led to:

10 NEW CAPSTONE WBL PROGRAMS SINCE NOVEMBER 2020





Pre-Apprenticeships

ApprenticeshipTN (tn.gov/apprenticeshiptn) is an inter-agency collaborative established by the TDLWD that aims to increase access to registered apprenticeships and pre-apprenticeships for all Tennesseans. The department's role in this collaborative is to help design models for eligible K-12 students to participate in registered apprenticeships and pre-apprenticeships in accordance with T.C.A. 50-5-107 and to work with districts to partner with employers who offer registered and pre-apprenticeship programs for high school students.



Apprenticeship and Pre-Apprenticeship Expansion

In addition to the seven registered apprenticeship programs available for high school students statewide, there are now 35 high school Tennessee Certified Pre-Apprenticeship Programs statewide.

Employer Partnerships

As a result of collaborative work with the Workforce Compliance Division at TDLWD, WBL programs throughout the state have seen an increased number of new large business partners, including:



FedEx is currently working on building out a WBL partnership with districts throughout the Greater Memphis area.

Inter-Agency Partnerships

Within the department, the Director of Work-Based Learning & Industry Engagement co-leads the Apprenticeship/WBL Workgroup for the State Workforce Development Board, which involves **collaboration with eight State Agency partners to increase WBL, TN Certified Pre-Apprenticeship, and registered apprenticeship opportunities for high school students.**

STATEWIDE:

7 REGISTERED APPRENTICESHIP PROGRAMS FOR HIGH SCHOOL STUDENTS

35 TN HIGH SCHOOL CERTIFIED PRE-APPRENTICESHIP PROGRAMS

Eliminating Barriers

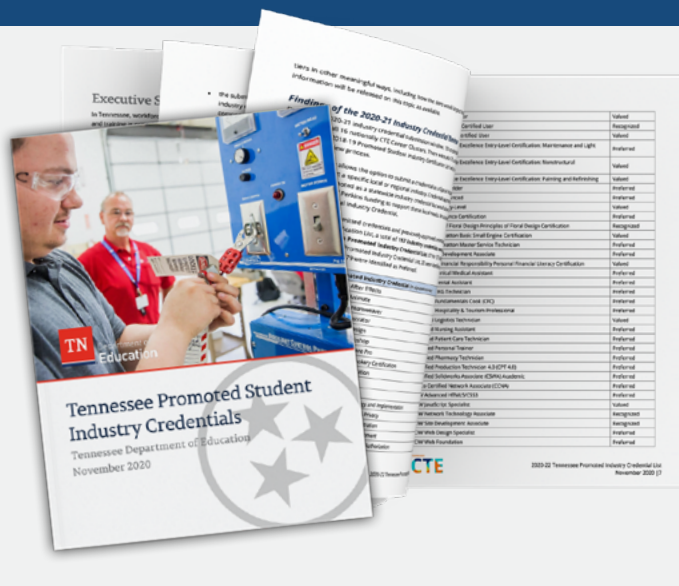
Since 2021, the department **AWARDED OVER \$150,000 TO DISTRICTS FACING SIGNIFICANT BARRIERS** to allow for participation in WBL for the development of School-Based Enterprises.



SECTION 1: CCTE Impact on TN Economy

Industry Credentials

The industry credential process establishes clear criteria to promote an industry credential statewide. This process allows for industry credentials to be submitted for review by representatives of the secondary, postsecondary, workforce, and other governmental agencies. The statewide promoted list can be utilized by all districts, and not just specific to some. If the credential is on the list, it is applicable for all students in all districts, making it easier to obtain and meet *Ready Graduate* criteria.



Industry Credentials

Industry credentials can be used as a measure of quality and validate the technical skill and competencies students have acquired through their chosen CTE program of study.

Promoted Student Industry Credentials

The promotion process established a tiered rating system of **recognized**, **valued**, or **preferred** credentials that aligns with the workforce for the **188 currently approved credentials**.

This process establishes clear criteria that allow for review by representatives of the secondary, postsecondary, workforce, and other governmental agencies.

188
CURRENTLY
APPROVED
CREDENTIALS

44,993
TOTAL EARNED
INDUSTRY
CREDENTIALS
IN 2021-22





SECTION 2

CCTE Impact on Districts

Innovative High School Models

Initial Grant Funding

Federal Grants

Innovative CTE Programs

Early Postsecondary Opportunities

AP Access for ALL

STEM/STE(A)M



SECTION 2: CTCE Impact on Districts

Innovative High School Models Initial Grant Funding

In May 2021, Innovative High School Model (IHSM) **grant awards were announced for 21 districts** across Tennessee with the goal of fostering local community partnerships that boost student readiness and prepare high schoolers for jobs and careers in their local communities. In total, **\$30 million in grant funding was awarded** through a competitive application process, with individual grant awards from \$750,000 to \$2 million.

Grant awardees were selected based off their commitment to rethink and revision high school educational models—from the use of time and space, entrance requirements, instructional practices and modes of learning, scheduling and mentorship and training opportunities available to students – to provide new and additional pathways for students to be prepared for postsecondary success.



Grant Impact

The 21 school districts and district consortiums that received the IHSM Grant reported continued strides in growing partnerships and providing early postsecondary opportunities (EPSOs), WBL, and industry certifications. **Over 32,000 students across the state were impacted by this grant in its second year of implementation.**

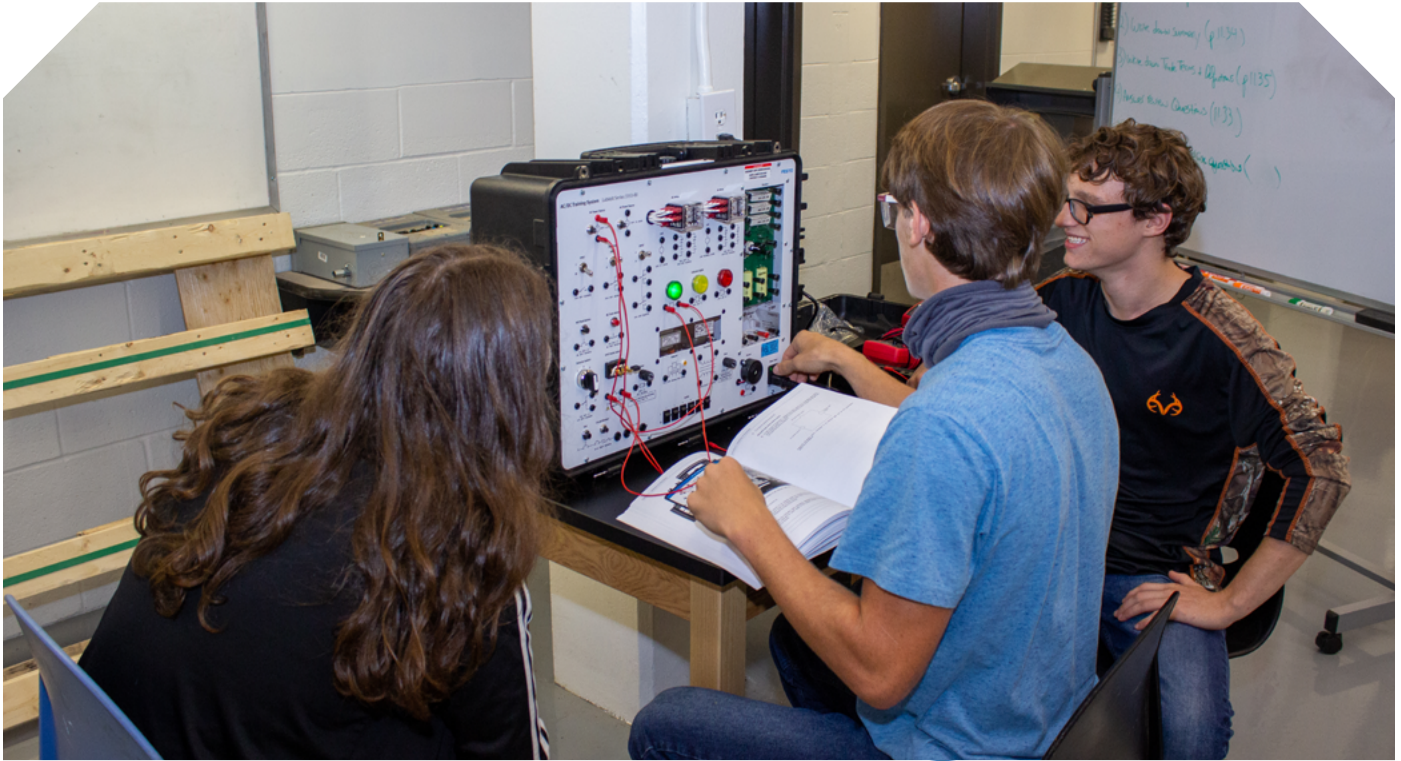
Grant Results

Grant funds directly supported the promotion and expansion of EPSOs, with over 3,900 students enrolling in 150+ courses for college credit.

- Over 6,300 industry credentials were awarded.
- Over 6,600 students participated in work-based learning opportunities at approximately 150+ organizations between 2021 – 2023. Additionally, school districts established and expanded partnerships in their regions, reporting over 100 partnerships that support reimagining the high school experience for students.



SECTION 2: CCTE Impact on Districts



Federal Grants

The department oversees the Pathways to STEM Apprenticeships for High School CTE Students Grant and the Out-of-School-Time Career Pathways (OSTCP) TEC Grant. Additionally, the department collaborates with Jobs for the Future (JFF) in the implementation of the TN SySTEM Grant.



OVER \$1M

IN FEDERAL GRANTS AWARDED



Pathways to STEM Apprenticeships for High School CTE Students Grant

The Pathways to STEM Apprenticeships for High School CTE Students Grant was awarded to the department by the U.S. Department of Education (USDOE). The purpose of this grant is to establish competency-based registered apprenticeship programs in STEM-related fields, including advanced manufacturing and computer science, where high school students simultaneously participate in paid on-the-job training and receive high-quality related training instruction.

Grant Successes and Outcomes

Since being awarded the Pathways to STEM Apprenticeships for High School Students, **TDOE registered four grant-related apprenticeships in welding, machining, and IT and three non-grant-related apprenticeships in culinary arts, maintenance, and mechatronics.** Additionally, TDOE has collaborated with TDLWD to **codify TN Certified Pre-Apprenticeship Program (Summer 2021) with 45 programs already operational.**



SECTION 2: CCTE Impact on Districts

TN SySTEM Grant

The TN SySTEM Grant is a project in partnership with Jobs for the Future (JFF) to develop, implement, and test the feasibility of STEM work-based courses (WBCs), structured as EPSOs with a focus on computer science for students in grades 11-12. WBCs modify existing dual enrollment courses so that employers and academic faculty co-design the learning objectives and instructional practices and co-teach course content. These courses are structured with 80 percent of the course content happening in the traditional classroom, and 20 percent of the course content happening “on the job” with the employer partners at the workplace.

Grant Successes and Outcomes

In 2021-22, the TN SySTEM Grant provided 6 school districts with \$45,000 grants to develop work-based courses. During the 2022-23 school year, four of the initial cohort of districts piloted eight different work-based courses in partnership with postsecondary and employer partners, and a second cohort of 12 schools was awarded additional grant funds. In November 2022, TDOE and JFF visited each pilot district, providing strategic planning and implementation guidance, obtaining firsthand input from students participating in the programs. A total of 45 students and 12 educators participated in district visits statewide. In April 2023, almost 50 grant stakeholders attended the inaugural TN SySTEM Grant convening, sharing best practices in preparation for the 2023-24 school year. Grantees will offer over 20 work-based courses at over 15 schools in the fall 2023 semester with a goal of reaching 25 work-based courses by the end of the grant period.

Out-of-School-Time Career Pathways (OSTCP) TEC Grant

The Out of School Time Career Pathways Grant, also known as the Tennessee Expansion of Computer Science (TEC) Project, demonstrates an exceptional approach to expanding STEM pathways in rural communities. The grant will support the expansion of computer science (CS) out-of-school programs in rural Tennessee schools by ensuring that rural districts have qualified instructors, industry-endorsed curriculum and materials, and innovative career exploration and experiences so that underrepresented rural students gain the skills, postsecondary credentials, and experience necessary to embark on high-wage, high-quality CS pathways.

Grant Successes and Outcomes

The Out of School Time Career Pathways grant wrapped up its second year of programming and implementation in the 2022-23 school year. An estimated 1,800 students were impacted across five rural counties in Tennessee, including weekly Code Force after school clubs, robotics clubs, eSports teams, and academic computer science classes. The 2022-23 school year included Traveling Tech Days as well as teacher externships facilitated via Nashville Technology Council, which bring students to visit industry and postsecondary partners across Nashville and Middle Tennessee. Almost 10% of all grant participants earned an industry recognized credential, participated in an internship, or participated in an apprenticeship as a result of this grant.



SECTION 2: CCTE Impact on Districts

CTE Programs

Tennessee’s career clusters are organized into 16 broad categories that encompass virtually all occupations from entry through professional levels and are aligned with the U.S. Department of Education’s structure of CTE. Career clusters identify the knowledge and skills needed to follow a pathway toward career goals and provide a context for exploring the many occupational options available. Career clusters are reviewed annually. Through this review, program managers engage with CTE educators, postsecondary partners, and business/industry partners to review various research and labor data points to determine improvements needed within the career cluster, program of study, and/or course standards.





SECTION 2: CCTE Impact on Districts



CTE Programs (continued)

New CTE State Dual Credit Courses in 2023

Two new state dual credit courses have been added to the course offerings for students taking **Business Management & Administration** and the **Education & Training** career cluster programs of study.



New CTE Courses Added in 2023



In **Agriculture, Food, and Natural Resources**, three courses have been added:



Capstone Supervised Agriculture Experience



Floral Design and Operations



Equine Science



Middle school courses **Career Awareness, Career Exploration, and Career Planning** were added to assist in preparing students for choosing an area of elective focus in high school.

New CTE programs of study added in 2024



In **Agriculture, Food, and Natural Resources**, a Meat Science program of study has been added to meet labor market demands.



In **Health Science**, a Behavioral Health program of study has been added to meet labor market demands.



SECTION 2: CCTE Impact on Districts



INSTITUTE FOR CTE EDUCATORS IN TENNESSEE

CTE 2022

INNOVATION

July 19-21 • Chattanooga Convention Center **AT WORK**

The Institute for CTE Educators, commonly referred to as simply, “the Institute,” is designed to engage attendees through sessions, workshops, and industry tours. Attendees have opportunities to explore instructional and resource best practices, network, and grow their professional focus on preparing students to meet the demands of the postsecondary pathway of their choosing.

CTE Summer Institute 2022

The department **hosted around 800 CTE directors, educators, and other stakeholders** from across the state. The Summer Institute **featured over 130 unrepeated sessions** including four new CTE Director Academy sessions and an extraordinary keynote speaker.

Sessions engaged attendees in exploring instructional best practices, developing innovative resources, and networking with peers. It also included strategies for in-demand initiatives such as industry credential attainment, middle school CTE course offerings, WBL opportunities, and dual enrollment partnerships with postsecondary institutions.

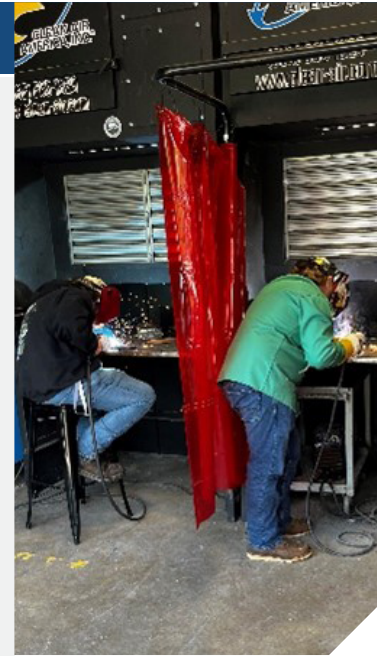


SECTION 2: CCTE Impact on Districts

Early Postsecondary Opportunities

Early postsecondary opportunities (EPSOs) include a course and/or exam that give students a chance to obtain postsecondary credit while still in high school. Tennessee students have an unprecedented opportunity to pursue education and training beyond high school through **Tennessee Promise**, a scholarship and mentoring program that provides high school seniors with two years of tuition-free attendance at a community or technical college in Tennessee.

Research has shown that students who participate in early postsecondary courses are more likely to enroll and persist in postsecondary environments. The eight opportunities offered in Tennessee appeal to diverse student interests, needs, postsecondary aspirations, and levels of prior academic performance. The current available early postsecondary opportunities in Tennessee are Advanced Placement, Cambridge International Examinations, International Baccalaureate, College Level Examination Program (CLEP), Dual Enrollment, Statewide Dual Credit, Local Dual Credit, and Industry Credentials



TCAT DUAL ENROLLMENT **TRIPLED IN 7 YEARS**

WITH HIGHER NUMBERS THAN PRE-PANDEMIC ENROLLMENT

ESTIMATED **122,307** POTENTIAL COLLEGE CREDITS OVER \$43 MILLION IN FEE SAVINGS

ESTIMATED SAVING FOR TENNESSEANS **\$2.6M+** TUITION VALUE

Dual Enrollment

TCAT dual enrollment has tripled in seven years, from 2,554 in 2015 to 9,298 in 2022, with higher numbers than pre-pandemic enrollment. In Fall 2022, high school students accounted for about 57% of the overall TCAT enrollment. Fields with the fastest growing TCAT dual enrollment rates are Health Care, Farming Operations Technology, and Welding Technology.

Advanced Placement (AP)

Tennessee's top enrollment courses are English Language and Composition, United States History, Human Geography, United States Government and Politics, and English Literature and Composition. Public and private high school students earned 40,769 qualifying AP scores of 3, 4, or 5 in the 2022 testing window. These scores translate into an **estimated 122,307 potential college credits**. With an average cost of \$352.33 per college credit, the potential **tuition and fee savings to Tennessee students and families is over \$43 million**.

Statewide Dual Credit (SDC)

The 2022-23 academic year saw **32,408 students taking 35,756 exams**. Students from **284 schools** across the state were served by the **12 SDC courses**. 2,350 exams successfully met or exceeded the established cut score for college credit – **saving Tennesseans an estimated tuition value of over \$2.6 million**.



SECTION 2: CCTE Impact on Districts



AP Access for ALL

AP Access for ALL (APAA) is a partnership between the Niswonger Foundation and TDOE that began in June 2021 with the **goal of increasing students' access to Advanced Placement (AP) courses**. The program also provides professional development for teachers, enabling more teachers to be qualified to teach AP coursework.



Expanded Access

AP courses offered through APAA are **completely free to students**, making TN one of only 12 states in the country to have a fully funded AP program. In the two years that the program has been operating, the **number of school districts with access to AP courses has doubled to 97%**. Students may now choose from 22 different AP course options to prepare them for college and career success.

**TENNESSEE
1 OF ONLY 12 STATES
IN THE COUNTRY**

Student Success

Over 4,000 students have enrolled in classes through AP Access for All. These students have experienced great success, earning qualifying scores on AP exams potentially saving them \$1.2 million in college tuition and fees! The program experienced significant growth from Year 1 to Year 2 as evidenced by:

65%

increase in the number of students earning a qualifying score on the AP exam

37%

increase in enrollment

57%

increase in AP credits earned

12%

increase in rural enrollments

54%

increase in the number of AP Exams taken

19%

increase in the number of high schools served

Teacher Training and Support

To increase the capacity to offer more AP courses statewide, the program has **provided scholarships for over 900 teachers** to complete AP Summer Institute. This training has **saved school districts approximately \$750,000**, as well as increased capacity to offer more AP courses both, virtually and at public high schools. Additionally, the program has **awarded over 200 teachers mini grants** to purchase important instructional materials and resources for their AP classrooms.



SECTION 2: CCTE Impact on Districts



STEM/STE(A)M

At its foundation, Science, Technology, Engineering, Art, Mathematics (STEM/STEAM) education is focused on building critical and creative thinking and analysis skills by addressing how students view and experience the world around them. Strong STEM/STEAM teaching and learning opportunities rest on inquiry-, technology-, and project-based learning activities and lessons that are tied to the real world; a diverse, interdisciplinary curriculum where activities in one class complement those in other classes; robust partnerships that reach beyond the walls of the classroom to include higher education and business; and strong school leaders who understand the “STEM approach” and fully use it to transform the delivery of education.

STEM Designation

Designations significantly increased from 15 in 2018 to 114 in 2023 and almost doubled in the number of intents from 44 to 88 between 2018 and 2022. **Each school received a \$35,000 investment to expand STEM at the local level.**

STEM Designations increase



New CTE Programs

The Tennessee Science Innovation Network (TSIN) and TDOE partnered to create a new STEM CTE teacher online training course for the STEM POS, training almost 500 teachers in three years.





SECTION 2: CCTE Impact on Districts

STEM/STE(A)M (continued)

STE(A)M Resource Hub

In 2022, over 20 professional development workshops were conducted by the regional STEM Innovation Hubs, with 167 K-12 educators engaged in training, impacting more than 35,420 students statewide.



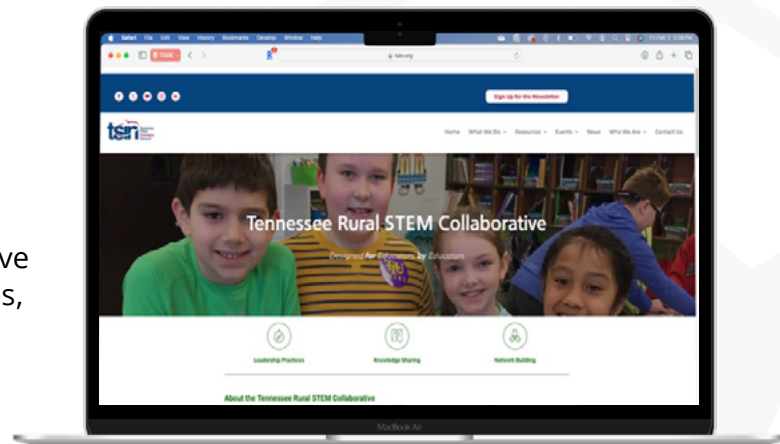
Science, Technology, Reading, Engineering, Arts, and Mathematics (STREAM) Summer Minicamps

LEARNING LOSS REMEDIATION CAMPS								
SUMMER 2021 & 2022	6 WEEK	Summer Learning Camp GRADES 1-5	4 WEEK					
		After School STREAM Learning Mini Camp GRADES 1-5						
SUMMER 2023 & Beyond	4 WEEK	Learning Loss Bridge Camp GRADES 4-8						
RISING GRADE:	1	2	3	4	5	6	7	8

To address the learning loss of students due to COVID-19, TDOE partnered with TSIN to provide learning loss remediation and academic acceleration programs in the forms of summer learning camps, after-school learning mini-camps, and in-depth STREAM training module. TSIN worked with the vendor, Defined Learning, to provide performance tasks for summer programs that were utilized **8,302 times by 670 teachers in 184 different entities**. Additionally, TSIN created a Summer STE(A)M Mini-Camp Teacher Training through EdX that was **viewed 20,371 times by teachers**.

The Rural STEM Collaborative (TRSC)

The 2022-23 cohort included 45 diverse educators from 26 counties engaged in the program. From 2017-2022, 278 educators from 68 counties participated in the program. Expanded implementation of the TRSC has provided the opportunity for educators across Tennessee to learn STEM best practices, develop a comprehensive network of educators and community partnerships, and implement a targeted STEM initiative in their home community.





SECTION 3

CCTE Impact on Students

Career Aptitude and
Readiness Assessments

CTSOs (Career and
Technical Student Organizations)



SECTION 3: CCTE Impact on Students



Career Aptitude and Readiness Assessments

Career Aptitude Assessments

A career aptitude assessment is a tool used to help a student understand how a variety of skills and attributes impact the student's potential success and satisfaction with different career options and work environments. T.C.A. 49-6-412(b) **requires that each local education agency (LEA) administers a career aptitude assessment in grades seven or eight "in order to help inform a student's high school plan of study"** and that the department shall "identify career assessments that LEAs may administer for purposes of this subsection."

The department conducts an ongoing analysis of currently available career assessments that are on the market or offered for free online. Currently, the department has **identified 17 career assessments** as meeting many criteria for quality assessments found in career exploration assessment literature. The CCTE division continues to evaluate new assessments on an ongoing basis.

Career Readiness Assessments

A career readiness assessment is a tool used to **assess and certify a student's ability to transition into the workforce** and gain a clear understanding of the pathways to high-growth, high-wage, in-demand occupations. T.C.A. 49-6-6001 **requires each LEA and public charter high school to offer each grade 12 student the opportunity to take a career readiness assessment** with the ability to obtain a nationally recognized certificate or credential.

The department will conduct a competitive Request for Applications (RFA) for organizations to offer career readiness assessments at no charge to the LEA, public charter high school, or the student. The CCTE division will facilitate the selection of qualified vendors and the delivery of these assessments in the 2023-24 school year.

**SECTION 3: CTE Impact on Students****Career and Technical Student Organizations (CTSOs)**

CTSOs enrich students' learning experience by incorporating practical instruction, fostering leadership and personal growth, facilitating hands-on learning, and promoting the real-world application of skills learned in the classroom. CTSOs help to enhance citizenship responsibilities and serve students of special populations.

CTSOs seamlessly integrate into the classroom curriculum, complementing the teaching and learning process by bridging the gap between theoretical knowledge and practical application. They build upon the foundational employability and career skills imparted in CTE programs by actively involving students in interactive demonstrations and providing real-life and work-related experiences. Through CTSO activities, programs, leadership development, and competitive events, students are guided in shaping their career paths, formulating personalized study programs, and acquiring the necessary skills and competencies for success in their chosen professions.

Furthermore, CTSOs offer students the chance to assume leadership roles at the local, state, and national levels and attend leadership development conferences that enable them to network with fellow students, business professionals, and industry partners. Currently, the department recognizes the following seven CTSOs that support career and technical education programs in Tennessee: DECA, Future Business Leaders of America (FBLA), Family, Career and Community Leaders of America (FCCLA), Future Farmers of America (FFA), Future Health Professionals (HOSA), SkillsUSA, & Technology Student Association (TSA).

Learn about Tennessee's Seven Career and Technical Student Organizations!



TSA-Technology Student Association

FBLA-Future Business Leaders of America

FCCLA-Family, Career and Community Leaders of America

DECA-Marketing, Finance, Hospitality & Management Student Organization

SkillsUSA-World Class Workers

HOSA-Future Health Professionals

FFA-National FFA Organization



**SECTION 3: CTE Impact on Students****CTSOs (continued)****Student Membership**

The number of student members in each CTSO has been steadily increasing, with over 58,000 members across the state. In the past year, every CTSO has experienced a minimum growth of 20% in their membership.

Fall Leadership Conferences

In the fall of 2022, CTSOs resumed hosting collaborative in-person fall leadership conferences (FLCs) for the first time since 2019. Nearly 2,000 students and educators attended leadership and professional development sessions in Memphis, Lebanon, and Knoxville.

State Leadership Conferences

Over 13,000 student members and educators attended seven CTSO state leadership conferences in the spring of 2023. Students competed in leadership, teamwork, and skilled competitive events. Additionally, students had the opportunity to attend training sessions for leadership development, workshops for career development, and network with business and industry partners.

National and International Conferences

Students continue to be successful at National and International CTSO leadership conferences by winning national contests and earning medals in competitive events.

Tennessee CTSO members had **262 TOP 20 WINNERS** at national conferences in the 2022-23 school year.

CTSO Scholarships

CTSO members were awarded \$213,476 dollars in scholarships at CTSO state and national conferences.

Fundraising and Volunteer Work

CTSO members raised over \$13,000 in fundraising and served over 20,000 hours volunteering for national service groups such as the American Cancer Society and Be the Match.

National Officers

DECA and HOSA-Future Health Professionals had student officers elected to serve the international officers for the organizations during the 2022-23 school year.




58,000+
STUDENT MEMBERS
ACROSS TENNESSEE

NEARLY 2,000
STUDENTS & EDUCATORS
ATTENDED LEADERSHIP
& PD SESSIONS

13,000+
STUDENT MEMBERS
& EDUCATORS
ATTENDED 7 STATE
LEADERSHIP CONF.
IN SPRING '23

\$213,476
CTSO MEMBERS
AWARDED IN
SCHOLARSHIPS

Milestones for 2023-24

-  Engage in more professional development opportunities specific to CTSO advisors.
-  Expand access to CTSOs in middle school levels.
-  Increase industry partner engagement.



SECTION 4

Looking to the Future

Innovative School Models
Computer Science Implementation (CS)
Industry 4.0 Diploma Distinction
CCR Portal
Perkins V Rewrite
LAUNCH Grant



SECTION 4: Looking to the Future



INNOVATIVE

SCHOOL MODELS

Innovative School Models

As part of Tennessee's ongoing commitment to bring Innovative School Models (ISMs) to every public middle and high school in Tennessee, the department has awarded over \$560 million across 137 public school districts and 45 public charter schools to invest in students and their postsecondary success.

A Historic Investment

Thanks to the historic investment by Governor Lee and the Tennessee General Assembly, this grant funding **distributed over 182 grants to increase opportunities** for career readiness and student success statewide.

Through a statewide application process, grant recipients received \$1 million per high school, \$500,000 per middle school, and \$200,000 per school serving less than 100 students. Combination schools, or schools that serve both middle and high school aged students, were awarded \$1 million each, and \$500,000 was awarded to those that serve elementary and middle school aged students.

The **goal of the ISM initiative is to encourage strong, strategic, and innovative partnerships between Tennessee public school districts, public charter schools, postsecondary education institutions, and local employers to prepare students with real-world, in-demand skills, credentials, and knowledge.** This grant opportunity expands the department's initial Elementary and Secondary School Emergency Relief (ESSER) investment of \$30 million. In 2021, 21 districts across the state were initially awarded ISM grant funding. These districts have **made incredible strides in boosting student readiness through exemplary ISM programming.**

AWARDED OVER
\$560 MILLION

ACROSS
137 PUBLIC SCHOOL
DISTRICTS + 45 PUBLIC
CHARTER SCHOOLS

\$1 MILLION
PER HIGH SCHOOL

\$500,000
PER MIDDLE SCHOOL

\$200,000
PER SCHOOL SERVING
LESS THAN 100 STUDENTS



SECTION 4: Looking to the Future



Computer Science Implementation (CS)

Chapter 979 of the Public Acts of 2022, codified at T.C.A. 49-6-1010 relating to computer science education, requires all K-12 students to have access to CS coursework, materials, and resources. An **ESSER investment of \$10 million and a recurring state investment of \$1.26 million** ensures students have high quality CS standards, curriculum, online coursework, materials, professional development, and other supports necessary to implement CS throughout the state and meet course requirements in school year 2024-25.

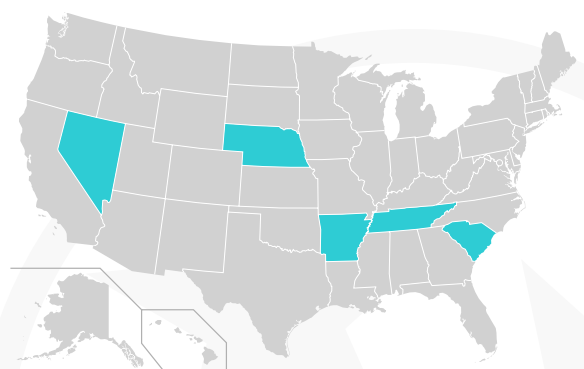
\$10 MILLION
ESSER INVESTMENT
+
\$1.26 MILLION
RECURRING STATE
INVESTMENT

Tennessee National Spotlight

Tennessee became **one of only five states with a Computer Science Graduation Requirement** (Arkansas, Nebraska, Nevada, South Carolina, and Tennessee).

K-12 Computer Science Standards

The new K-12 Computer Science Standards have been approved by the State Board of Education (SBE) and are available for implementation in the 2023-24 school year. These standards are required in 2024 and will provide elementary students with CS embedded in regular instruction. Middle school students will be required to take one grading period of CS during their middle school career. High school students will be required to take a credit bearing course in CS to meet graduation requirements.



**SECTION 4: Looking to the Future****CS (continued)****The Computer Science Endorsement Pathway (CSEP)**

CSEP has been approved by SBE and is a no cost route to CS endorsement for licensed TN teachers. Teachers seeking endorsement complete six modules by showing competency through embedding CS standards into instruction, submission of lesson plans and student artifacts, and completion of the end of course assessment. Teachers who previously held a CS Employment Standard are only required to complete three of the six modules in the pathway. There are currently over 1,900+ teachers signed up to participate in CSEP.

CURRENTLY
OVER 1900+ TEACHERS
SIGNED UP TO PARTICIPATE IN CSEP

Reach Them All

The CS Train the Trainer Model trained Delegates and Ambassadors in every district across the state to better understand CS integration in academic areas for grades K-12. Over 500 district representatives redelivered CS professional development throughout Tennessee for the 2023-24 school year. Schools received a classroom set of robotics once training was delivered. Elementary schools received Probots and Beebots while middle and high schools received Finch Robots.

OVER 500 DISTRICT REPRESENTATIVES
REDELIVERED CS PROFESSIONAL DEVELOPMENT THROUGHOUT TN FOR THE 2023-2024 SCHOOL YEAR

Computer Science Accelerator Week

This training series increased access across the state to AP Computer Science Courses by utilizing 5-day workshops and monthly academic year workshops, with 89 new educators in the 2021-22 school year that participated in the Code.org workshops, and 71 educators in the 2022-23 cohort.

2021-22	2022-23
89	71

EDUCATORS
PARTICIPATED IN THE CODE.ORG WORKSHOPS

The Computer Science Momentum Expedition (CSME)

CSME launched National Computer Science Education Week in Tennessee and allowed educators to learn more about Tennessee's efforts to expand K-12 student exposure and interest in CS. CSME saw 28 exhibitors and 480 attendees at its inaugural convening.

28 EXHIBITORS
480 ATTENDEES
AT CSME INAUGURAL CONVENING

The Virtual Coding Marathon

538 students registered 26.2 hours of coding in 2022, for a 75% increase in the number of students who completed the marathon in 2021.

538 STUDENTS REGISTERED IN 2022
A 75% INCREASE FROM 2021



SECTION 4: Looking to the Future

Industry 4.0 Diploma Distinction

The Industry 4.0 Diploma Distinction is a diploma distinction that allows students to pursue a career in a high-need, high-skill industry while in high school, as outlined in T.C.A. 49-6-420.

Early Access to Postsecondary/ Workforce

Students who earn the Industry 4.0 Diploma Distinction will **complete at least nine dual enrollment or WBL credits** aligned with their career goals. They will receive **monthly career coaching and counseling** to better prepare them for the transition into the workforce. Additionally, they will have the option to substitute a WBL or dual enrollment credit, as approved by the State Board of Education, for one math credit and one science credit.



Gibson County High School
Gibson County Special School District

The GCHS staff has enrolled 156 students and reimagined each student's school day to aid in employment with local industries.

Enhanced Student Support

The Industry 4.0 Diploma Distinction was codified into law on April 29, 2022. In order to ensure students and parents are well-informed about this opportunity, and to allow students to complete the requirements for the Industry 4.0 Diploma Distinction, all public high schools, including public charter schools, are required to fulfill specific obligations for students in different grades beginning in the 2022-23 school year.

College and Career Readiness (CCR) Portal

This platform is for districts and schools to monitor, analyze, and (eventually) predict student readiness for college and their future career. Using our state's longitudinal data system, we will be able to provide key metrics of college and career readiness to districts in real-time.

Through the collection of student course enrollments and ACT/SAT scores, the department produces a snapshot (i.e. a real-time view) of student readiness for postsecondary. The portal will serve as a datamart for districts and schools to view data related to CTE enrollment and completion. The portal will also ultimately replace eTiger.





SECTION 4: Looking to the Future

Perkins V Rewrite

After four years with the current Perkins V State Plan Strengthening CTE in Tennessee, it is time to draft another version with regard to Tennessee’s Innovative School Models (ISM) grant and TISA funding formulas. The proposed plan will be written in collaboration with the Tennessee Board of Regents (TBR) and Tennessee Department of Labor and Workforce Development (TDLWD). The secondary education section of the plan will contain **three new areas of focus: Elementary and Middle School Foundations, Innovative CTE Pathways, and STEM for ALL.** With TBR as the lead, Perkins V townhall meetings were held in each CORE region in September and October 2023. In addition, a 90-day open comment period was shared with stakeholders to request feedback. Revisions will be made as needed, and the final plan will be submitted to the Tennessee Education Commissioner in March for approval. This plan will go into effect Fall 2024 for a four-year period.



LAUNCH Grant

LAUNCH is a national college and career pathways initiative that brings together multiple states to promote progress toward enabling all learners to have access to and succeed in high-quality and equitable pathways. The underlying belief of the initiative is that every young person deserves a high school diploma, a postsecondary credential with labor market value, and to be engaged in full-time employment. Over the next two years, a team of state education and workforce agencies, K-12 districts, postsecondary institutions, and policymakers will collaborate with five leading national organizations in the pathways movement to develop a strategic plan that will drive systems change to create equitable and sustainable pathways for all students across the state.





Conclusion

Building upon our state's history of strong public-private partnerships and commitment to serving all students, these tactical programs and initiatives will ***provide more opportunities for students to explore and succeed in high-demand careers, for industries to develop local talent, and for schools to creatively meet the needs of their community.***

Tennessee's emphasis on CCTE has created:



access to career-ready curriculum,

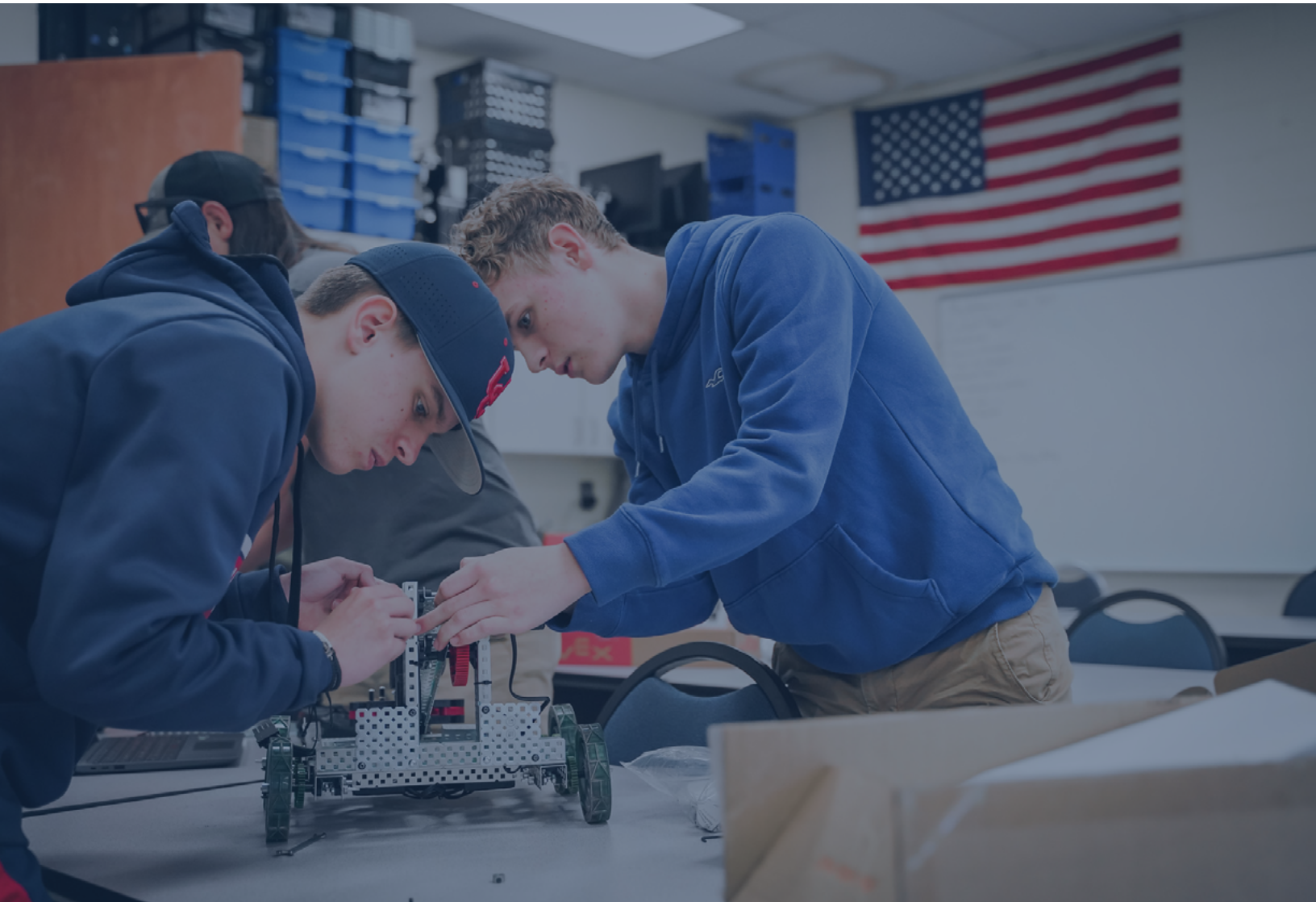


work-based learning opportunities, and



pathways to future success

...for students across the state. Through these ambitious projects and a relentless commitment by the Tennessee Department of Education, CCTE directly impacts the students, school districts, the state's economy, and all its stakeholders.



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tn.gov/education

#TNBestforAll

We will set all students on a path to success.

 @TennesseeEducation

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