Division of College, Career, and Military Preparation (CCMP)
One Mission. One Strategy.

Every child, prepared for success in college, a career or the military.

**Strategic Priorities**

- **Recruit, support, and retain teachers and principals**
- **Build a foundation of reading and math**
- **Connect high school to career and college**
- **Improve low-performing schools**

**Enablers**

- Increase transparency, fairness and rigor in district and campus academic and financial performance
- Ensure compliance, effectively implement legislation and inform policymakers
- Strengthen organizational foundations (resource efficiency, culture, capabilities, partnerships)
Connect High School to Career and College: Division of CCMP

Aligning Texas’s Educational Goals with Its Diverse Industry Needs and Opportunities
Mismatch Between Labor Supply Pipeline and Demand

What the Labor Market Needs

- Alignment between programs of study, postsecondary programs, and local labor market

How Program Decisions are Made

- Student Interest
- Teacher endorsements

Labor Market Demand
- Skills Gap
- Unfilled In-demand High-wage Jobs
- Degrees but no Jobs
- High Student Debt

Current Trends
- Secondary Programs Based on Student and/or Teacher Interest

Current Trends
- Student Interest
- Teacher endorsements
## Connect High School to College and Career: CCMP Projects

| Category                          | Initiative                                                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
| Identify                          | Identify & Verify Industry-Based Certifications (IBCs)                       | • Create process for identification and verification of IBCs to include employer input  
• Align IBCs to high wage and high demand occupations and vertically aligned postsecondary programs in Texas  
• Establish revised list of IBCs for implementation in 2019-2020  
• Conduct research on Texas Labor Market Information (LMI) to identify high wage and high demand occupations  
• Cultivate external stakeholders and leverage existing Tri-Agency efforts to form Texas Regional Pathways Advisory/Steering Committee  
• Refine components of effective P-20 student pathways  
• Conduct statewide evaluation  
• Align CTE programs of study (coherent sequences of courses) with Texas high wage, high demand occupations and postsecondary programs. Embed IBCs, postsecondary programs, and work-based learning in CTE programs of study  
• Create new statewide industry advisory councils for each career cluster to assist in program of study revisions  
• Perkins V  
• Revise blueprints and Outcome Based Measures for Early College High Schools, Pathways in Technology Early College High Schools, Texas-STEM Academies, and Industry Cluster Innovative Academies  
• Provide technical assistance to districts to implement CCRSM  
• Expand and create advanced course offerings (AP, IB, dual credit, other opportunities)  
• Provide expanded access for students to demonstrate college and career readiness (ACT, SAT, TSIA)  
• Conduct research on existing best practices in WBL models across Texas and United States  
• Establish a flexible statewide K-12 WBL framework from career awareness and exploration through career preparation, inclusive of externships, internships, and apprenticeships  
• Establish a statewide plan for increasing access to STEM subjects and methodology across K-12
Listening Session

Designing Statewide Frameworks for Work-Based Learning and STEM

Michelle Sedberry
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Shane Thomas
Work-Based Learning Program Specialist
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Presenter Background

Michelle Sedberry

- Taught Science for 8 years
- District Level Science Specialist with Lubbock ISD for 4 years
- K-12 Science Specialist at ESC 17 for 6 years
- Aerospace/STEM Officer for USAF Civil Air Patrol for 4 years
- Adjunct Science Professor at TTU for Preservice Science Teachers
- TEA STEM Program Specialist since June 1, 2018
Shane Thomas

- Taught Marketing courses in Fairfax County, Virginia for 6 years
- Director of Competitive Events for DECA Inc. for 8 years
- Career and Technical Education Coordinator for Dallas ISD for 2+ years
- TEA Work-Based Learning Program Specialist since July 16, 2018
Obtain information from stakeholders across the state to help develop flexible statewide frameworks for Work-Based Learning (WBL) and STEM.
Session Purpose

**IS:**
- To hear the voice from the field
- To identify innovative and promising practices
- To identify obstacles and barriers for implementation
- To start an ongoing, two-way dialogue

**IS NOT:**
- To create the final frameworks
- To mandate implementation
- To create curriculum
Session Norms

- Stay student focused
- Stay solutions-focused and think outside the box
- Ensure everyone gets a chance to have their voice heard
- Assume positive intent
- Speak freely, but respect and appreciate different ideas
- Use technology in learning mode (be present)
- Use parking lot for questions not connected to current conversation
Development of K-12 STEM and Work-Based Learning Frameworks
Work-Based Learning

Shane Thomas
Work-Based Learning Program Specialist
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TEA®
Texas Education Agency
TEXAS HAS ADDED THE
MOST PRIVATE SECTOR JOBS
OVER THE LAST 10 YEARS
THAN ANY OTHER STATE
1,776,400
JOBS
Source: Labor Market and Career Information Department, Texas Workforce Commission

Goal:
Align Texas’s educational goals with its diverse industry needs and opportunities.
Theoretical Model of Work-Based Learning

Classroom Learning (Academic Knowledge) -> Work-Based Learning (Employability Skills) -> Skilled Talent Pool for the Workforce

Classroom Learning (Technical Skills) -> Work-Based Learning (Employability Skills)

Adapted from Corinne Alfeld’s Theoretical Model of Work-based Learning
Elements of High-Quality Capstone Work-Based Learning Experiences

Work-Based Learning is a P-20 continuum of intentional activities and experiences designed to expand the boundaries of the classroom and prepare students for future career opportunities.

Work-Based Learning provides opportunities for students to:

- Develop essential employability skills
- Engage with business and industry professionals
- Explore potential career options
- Apply knowledge learned in the classroom
Work-Based Learning (WBL) Continuum

Learning about work

- Industry and Career Awareness

Learning for work

- Industry and Career Exploration
- Career Preparation

Learning through work

- Career Training
Discussion

- What are the strengths of your current work-based learning efforts?

- How are you currently measuring the success of your work-based learning efforts?

- What challenges/barriers are you currently facing related to offering high-quality work-based learning experiences to your students?

- What help/assistance from TEA do you need in order to improve work-based learning efforts?
Shane Thomas
Work-Based Learning Program Specialist
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BREAK
Science, Technology, Engineering, Math (STEM)

Michelle Sedberry
STEM Program Specialist
michelle.sedberry@tea.texas.gov
“The industrial revolution made it necessary for all children to learn to read, the technology revolution has made it critical for all children to understand STEM.”

National Science Foundation 2017 Executive Summary
Based on the Research...

STEM Education is...

- A way of thinking about content
- A method of delivering integrated content
- Teaching STEM fluency Skills that are transferrable
- Real-world problems presented as part of the curriculum and students are challenged to apply each of the four content areas seamlessly.

STEM Education is not:

- A course or program
- Turning all students into engineers
- A buzz word
- A fad or short-term endeavor
Texas is expected to have the second-highest percentage of the nation’s future STEM job opportunities.

Source: Texas Workforce Commission

US Bureau of Labor Statistics
Regardless of geography, race, gender, ethnicity, socioeconomical status, veteran status, parental education attainment, disability status, learning challenges, and other social identities, all Americans deserve the chance to master STEM skills and methods, both for their own success and for America’s competitiveness.
STEM Education Goals

- Ensure **equitable** access to STEM programming across Texas

- Increase **student outcomes** and help guide students into relevant, and engaging pathways that lead to postsecondary success

- Vertically align efforts to allow **earlier exposure** to STEM integrated thinking
What is STEM Integrated Thinking?

It is the integration of **science** and **math** knowledge to **design** products or processes to solve problems using **technology**.
Examples of STEM Integrated Thinking in High School

- Networking Lab
- Digital Media
- Computer Programming I and II
- Robotics I and II
- Advanced Animal Science
- World Health Research
- Forensic Science
- AC/DC Electronics
- Agricultural Equipment Design and Fabrication
- Construction Management II
- Metal Fabrication and Machining II
- Engineering Design and Problem Solving
- Mathematical Applications in Ag, Food and Natural Resources
- Mathematics for Medical Professionals
Texas STEM Education Continuum

Learning STEM Integrated Thinking through Content Application

- Communication
- Creativity
- Collaboration
- Critical Thinking
- Resilience

STEM Application through Work

- Promptness
- Time Management
- Flexibility
- Problem Solving
- Collaboration
**Poster 1:** What would you consider to be the *gold standard* for a STEM program?

**Poster 2:** What are the *obstacles* for implementing STEM in Elem/Middle/High School?

**Poster 3:** How are you *measuring* the success of your K-12 STEM program (short-term, long-term)?

**Poster 4:** What *assistance and support* do you need from TEA for implementation of high-quality STEM programming?

**Poster 5:** What is your district currently doing that *promotes* STEM integrated thinking?

**Poster 6:** What else do you want TEA to know before we start developing the STEM Framework?
### Your Voice Matters

1. Number off 1-6
2. Rules of engagement:
   - 1 idea per post-it note
   - Everyone must participate at each poster
3. 1 minute to capture your response
4. 2 minutes to discuss group post-its or add new ideas
5. Move to the next poster when you hear the chime

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<tr>
<th><strong>Administrator:</strong></th>
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<tbody>
<tr>
<td>Superintendent</td>
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<td>Principal</td>
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Affirmation Gallery Walk

Put a dot next to the statement you most agree with on each poster.
Michelle Sedberry
STEM Program Specialist
michelle.sedberry@tea.texas.gov
Next Steps
Stay Connected

- TEA Website
- CCMP Listserv

Career and Technical Education: [bit.ly/2Qg4wxi](https://bit.ly/2Qg4wxi)


- ESC Updates
Listening Session
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