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Technology Applications

Engagement Session, March 2024

Today, we will discuss the following topics.

1. Highlight key facts about the revised Texas Essential Knowledge and Skills (**TEKS**) for technology applications
2. Review available TEA technology applications **resources**
   a. TEKS
   b. Other resources
3. Answer **common questions** related to technology applications
4. Recap today's session
5. Discuss **additional questions**

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The Revised TEKS for Technology Applications

The revised TEKS for technology applications can be found online.

- Located in **Chapter 126 of the 19 Texas Administrative Code (TAC)**
- Include "Adopted 2022" in rule title

Texas Administrative Code

TITLE 19 EDUCATION
PART 2 TEXAS EDUCATION AGENCY
CHAPTER 126 TEXAS ESSENTIAL KNOWLEDGE AND SKILLS FOR TECHNOLOGY APPLICATIONS
SUBCHAPTER B MIDDLE SCHOOL

Rules

§126.13 Implementation of Texas Essential Knowledge and Skills for Technology Applications, Middle School, Beginning with School Year 2012-2013
§126.14 Technology Applications, Grade 6, Beginning with School Year 2012-2013
§126.15 Technology Applications, Grade 7, Beginning with School Year 2012-2013
§126.16 Technology Applications, Grade 8, Beginning with School Year 2012-2013
§126.17 Technology Applications, Grade 6, Adopted 2022
§126.18 Technology Applications, Grade 7, Adopted 2022
§126.19 Technology Applications, Grade 8, Adopted 2022

https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=4&ti=19&pt=2&ch=126

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A timeline of the revised TEKS can be found online.

- 2022-2023 – **TEKS are adopted** by the State Board of Education (SBOE)
- 2023-2024 – **Instructional materials are adopted** by the SBOE
- 2024-2025 – Revised **TEKS are implemented**

TEKS and Instructional Materials Review and Adoption Schedule

Subject	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
*E & S Language Arts and Reading	K–8 TEKS and IM Implemented HS IM Adopted	HS TEKS and IM Implemented						TEKS** Reviewed
*Science	TEKS HS Reviewed	Revised HS TEKS Adopted K-8 TEKS Reviewed	Revised K-8 TEKS Adopted Issue Proc. 2024	IM Reviewed	IM Adopted	Revised TEKS and IM Implemented		
Social Studies	Streamlined MS and HS TEKS Implemented	Streamlined K-5 TEKS Implemented	TEKS Reviewed	Revised TEKS Adopted Issue Proc. 2025	IM Reviewed	IM Adopted	Revised TEKS and IM Implemented	
*Math				TEKS Reviewed	Revised TEKS Adopted Issue Proc. 2026	IM Reviewed	IM Adopted	Revised TEKS and IM Implemented
*Fine Arts					TEKS Reviewed	Revised TEKS Adopted Issue Proc. 2027	IM Reviewed	IM Adopted
Health/PE	TEKS Reviewed	Revised TEKS Adopted	IM Adopted	Revised TEKS and IM				
Tech Apps		K-8 TEKS Reviewed	K-8 Revised TEKS Adopted Issue Proc. 2024	IM Reviewed	IM Adopted	Revised K-8 TEKS and IM Implemented		
LOTE							TEKS Reviewed	Revised TEKS Adopted Issue Proc. 2029
Other	Pre-K Systems Reviewed	Pre-K Systems Adopted	ELPS Adopted Pre-K Systems Implemented					

https://tea.texas.gov/academics/curriculum-standards/teks-review/teks-review-and-revision

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There are several overarching changes to the revised technology applications TEKS.

- Elementary TEKS are now **written for each grade level**, K–5
- TEKS are organized into **five strands**:
  - Computational thinking (new)
  - Creativity and innovation
  - Data literacy, management, and representation (new)
  - Digital citizenship
  - Practical technology concepts (new)
- TEKS include "**with assistance**" and "**with or without technology**"
- Technology is written with **broad descriptions** for emerging technology
- Strands connect to **everyday life**

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Technology Applications TEKS Resources

TEA's vertical alignment documents show the progression of concepts from K–8.

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Two versions are available:

- Organized by strand
- Organized by substrand

https://tea.texas.gov/academics/subject-areas/technology-applications

Technology Applications K–8 Vertical Alignment **Digital Citizenship Strand**

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
(5) Digital citizenship--social interactions. The student identifies appropriate ways to communicate in various digital environments. The student is expected to	**(6) Digital citizenship--social interactions. The student identifies appropriate ways to communicate in various digital environments. The student is expected to**	**(7) Digital citizenship--social interactions. The student identifies appropriate ways to communicate in various digital environments. The student is expected to**	**(8) Digital citizenship--social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact. The student is expected to:**	**(8) Digital citizenship--social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact. The student is expected to:**	**(8) Digital citizenship--social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact. The student is expected to:**	**(8) Digital citizenship--social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact. The student is expected to:**	**(8) Digital citizenship--social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact. The student is expected to:**	**(8) Digital citizenship--social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact. The student is expected to:**
(5) identify and demonstrate responsible behavior within a digital environment.	(6) describe and demonstrate respectful behavior within a digital environment.	(7) participate in digital environments to develop responsible and respectful interactions.						
			(A) define digital footprint;	(A) describe how information retained online creates a permanent digital footprint;	(A) identify the components of a digital footprint such as online activity, game use, or social media platforms;	(A) identify the impact of a digital footprint;	(A) classify actions as having a positive or negative effect on a digital footprint;	(A) analyze the importance of managing a digital footprint and how a digital footprint can affect the future;

Technology Applications TEKS to be Implemented In 2024–2025

In 2022, the State Board of Education gave final approval to revised TEKS for technology applications which are scheduled to be implemented beginning with the 2024–2025 school year.

Beginning the 2024–2025 school year, the TEKS for technology applications that were adopted in 2011 will be replaced by the revised TEKS for technology applications that were adopted in 2022.

Elementary School (Implementation School Year 2024–2025):

- 19 TAC §126.1 TEKS for Technology Applications (Adopted 2022), Kindergarten
- 19 TAC §126.2 TEKS for Technology Applications (Adopted 2022), Grade 1
- 19 TAC §126.3 TEKS for Technology Applications (Adopted 2022), Grade 2
- 19 TAC §126.8 TEKS for Technology Applications (Adopted 2022), Grade 3
- 19 TAC §126.9 TEKS for Technology Applications (Adopted 2022), Grade 4
- 19 TAC §126.10 TEKS for Technology Applications (Adopted 2022), Grade 5

Middle School (Implementation School Year 2024–2025):

- 19 TAC §126 TEKS for Technology Applications (Adopted 2022), Grade 6
- 19 TAC §126 TEKS for Technology Applications (Adopted 2022), Grade 7
- 19 TAC §126 TEKS for Technology Applications (Adopted 2022), Grade 8

Technology Applications Vertical Alignment Documents The following documents show the vertical alignment of the revised TEKS for technology applications.

- Technology Applications Vertical Alignment - Organized by Strand
- Technology Applications Vertical Alignment - Organizaed by Substrand

To assist educators and administrators in understanding the differences between the current TEKS for technology applications and the upcoming TEKS, the following resource has been provided for reference:

- Understanding the Updates in the Revised Technology Applications TEKS (Adopted 2022)

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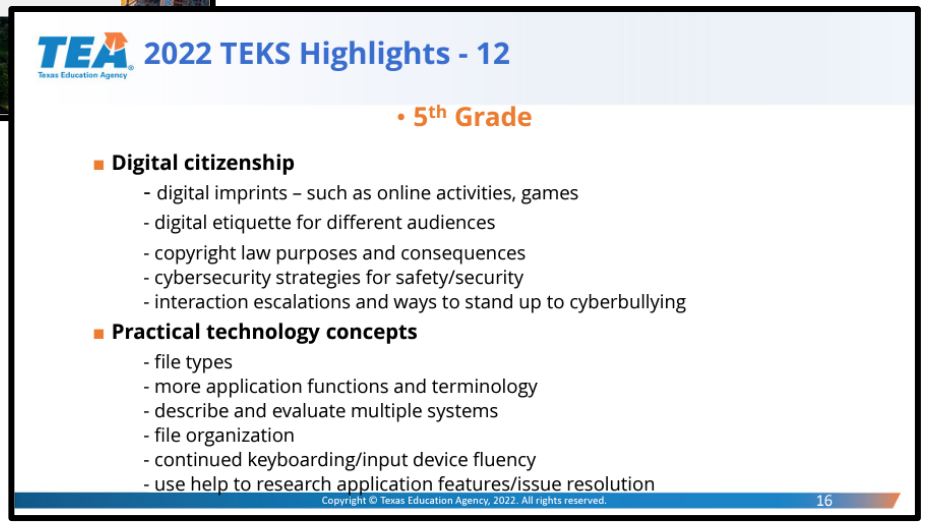
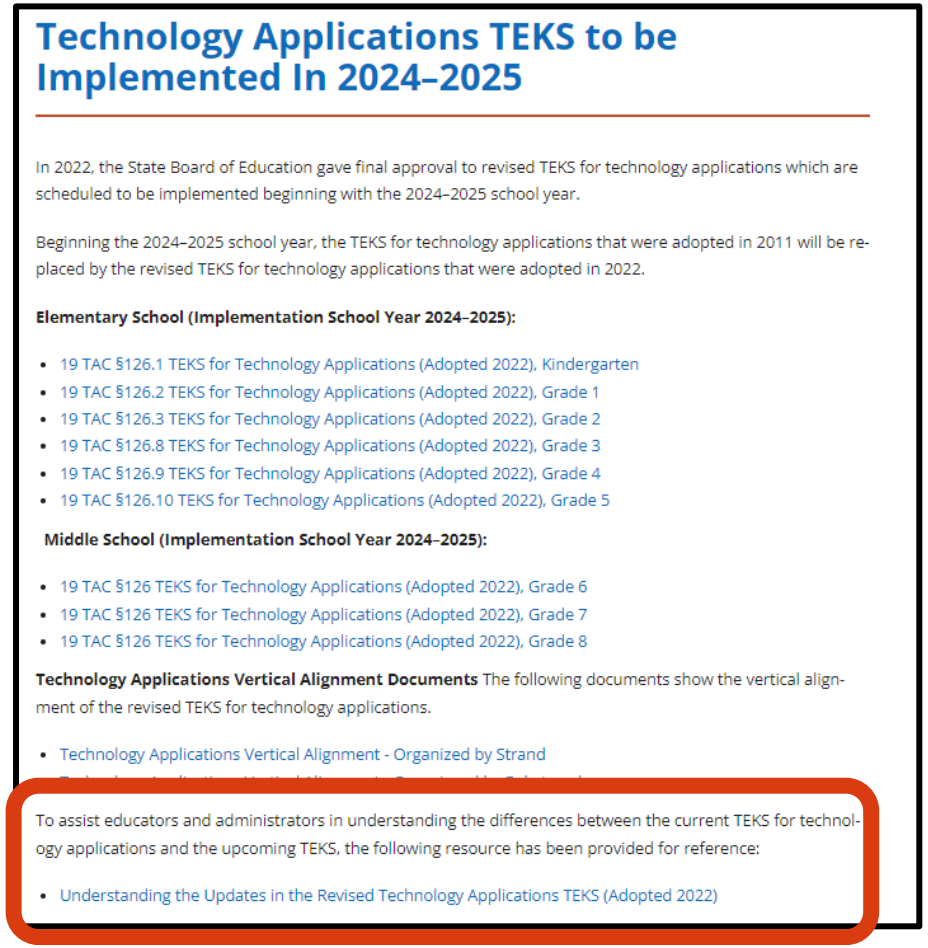
The “Understanding the Updates” document explains major differences between the current and revised TEKS.

- List of overarching changes
- TEKS highlights per grade level and strand





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https://tea.texas.gov/academics/subject-areas/technology-applications

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There are other upcoming resources to support the revised TEKS for technology applications.

- TEA has published a **side-by-side document** comparing the current TEKS for **grades 6, 7, and 8** with the revised TEKS for grades 6, 7, and 8.
- The technology applications **engagement sessions scheduled for May** will go over the side-by-side document.
- **No side-by-side document for grades K–5** will be developed due to the transition from elementary grade band to grade-level TEKS.

https://tea.texas.gov/academics/subject-areas/technology-applications

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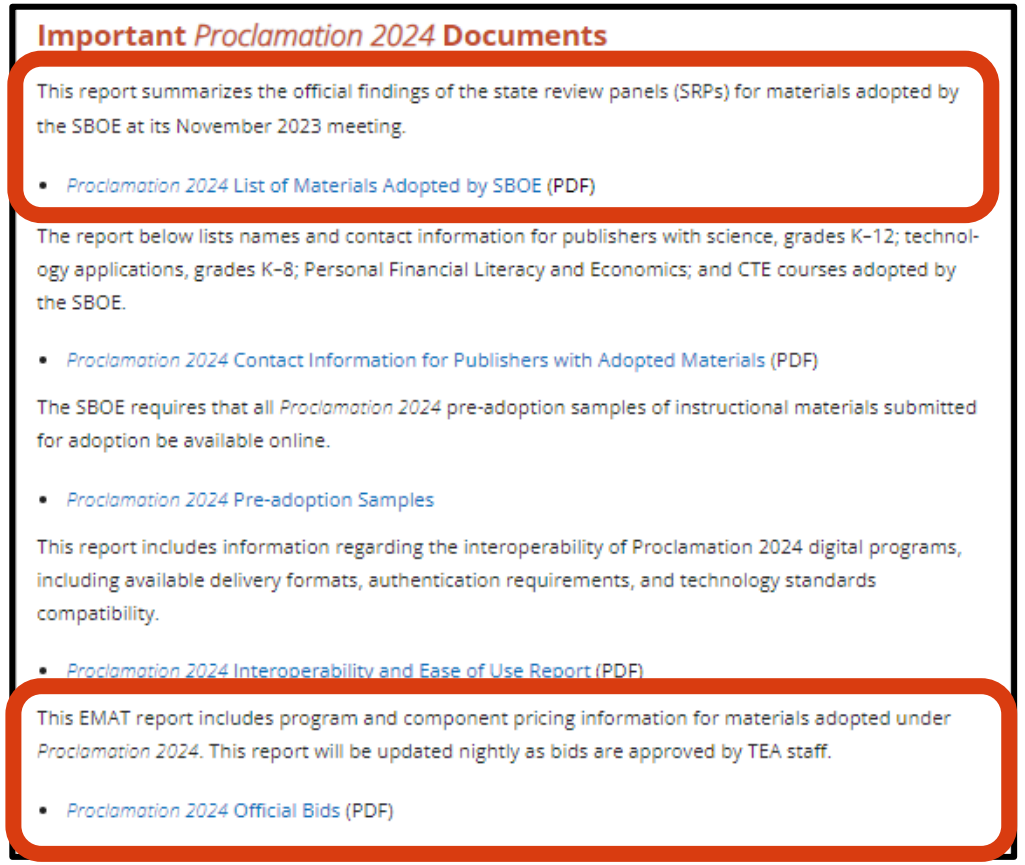
Other Resources

The list of SBOE-adopted instructional materials can be found online.

Materials adopted as part of ***Proclamation 2024***

- Materials are located on the **TEA Proclamations webpage**.
- Pricing details located on **Official Bids Detail Report for Proclamation 2024.**

https://tea.texas.gov/academics/instructional-materials/review-and-adoption-process/proclamations



Important *Proclamation 2024* Documents

This report summarizes the official findings of the state review panels (SRPs) for materials adopted by the SBOE at its November 2023 meeting.

- *Proclamation 2024* List of Materials Adopted by SBOE (PDF)

The report below lists names and contact information for publishers with science, grades K–12; technology applications, grades K–8; Personal Financial Literacy and Economics; and CTE courses adopted by the SBOE.

- *Proclamation 2024* Contact Information for Publishers with Adopted Materials (PDF)

The SBOE requires that all *Proclamation 2024* pre-adoption samples of instructional materials submitted for adoption be available online.

- *Proclamation 2024* Pre-adoption Samples

This report includes information regarding the interoperability of Proclamation 2024 digital programs, including available delivery formats, authentication requirements, and technology standards compatibility.

- *Proclamation 2024* Interoperability and Ease of Use Report (PDF)

This EMAT report includes program and component pricing information for materials adopted under *Proclamation 2024*. This report will be updated nightly as bids are approved by TEA staff.

- *Proclamation 2024* Official Bids (PDF)

2b

Teacher certifications are addressed in 19 TAC Chapter 231.

- Elementary requirements are addressed in **19 TAC §231.29**.

https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=19&pt=7&ch=231&rl=29

- Middle school requirements are addressed in **19 TAC §231.77**.

https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=19&pt=7&ch=231&rl=77

Submit a help desk ticket to Educator Certification and CPE for certification questions.

https://helpdesk.tea.texas.gov/EducatorCertificationandCPE/

Texas Administrative Code

TITLE 19	EDUCATION
PART 7	STATE BOARD FOR EDUCATOR CERTIFICATION
CHAPTER 231	REQUIREMENTS FOR PUBLIC SCHOOL PERSONNEL ASSIGNMENTS
SUBCHAPTER C	GRADES 6-8 ASSIGNMENTS
RULE §231.77	Technology Applications, Grades 6-8

An assignment in a departmentalized classroom for Technology Applications, Grades 6-8, is allowed with one of the following certificates.

(1) Elementary teacher certificate plus verification of competency to teach computer literacy.

(2) Grades 6-12 or Grades 6-8--Computer Information Systems.

(3) Information Processing Technologies Endorsement (Level I or II).

(4) Junior High School or High School--Computer Information Systems.

(5) Secondary Computer Information Systems (Grades 6-12).

(6) Secondary teacher certificate plus verification of competency to teach computer literacy.

(7) Technology Applications: Early Childhood-Grade 12.

(8) Technology Applications: Grades 8-12 (Grade 8 only).

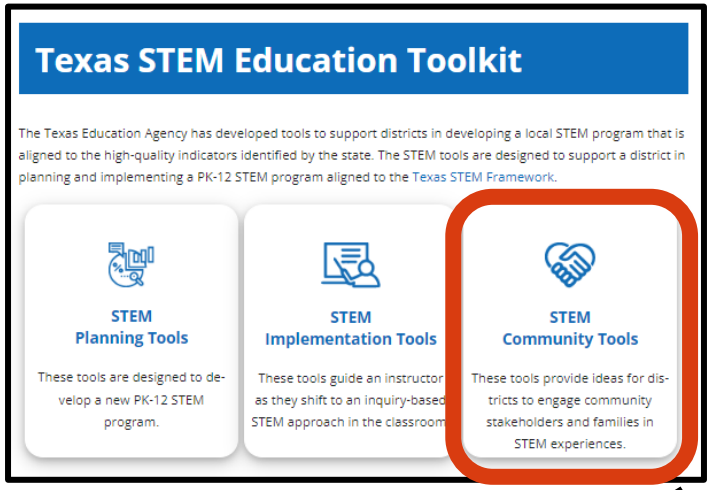
(9) Mathematics/Physical Science/Engineering: Grades 6-12.

(10) Mathematics/Physical Science/Engineering: Grades 8-12.

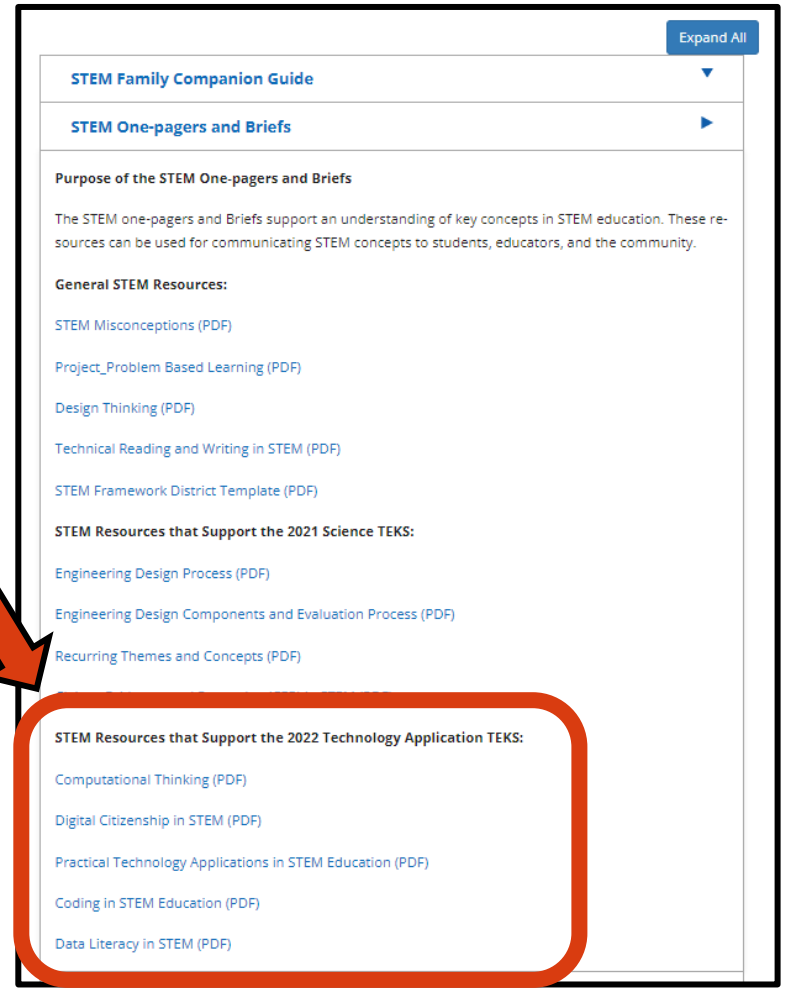
2b

STEM instructional resources are located in the STEM Education Toolkit.

- **Webpage dedicated to STEM education**, including technology applications
- Series of STEM one-pagers and briefs to support key concepts in STEM education
- Resources that **align with K–8 technology applications TEKS**



https://tea.texas.gov/academics/college-career-and-military-prep/texas-stem-education-toolkit



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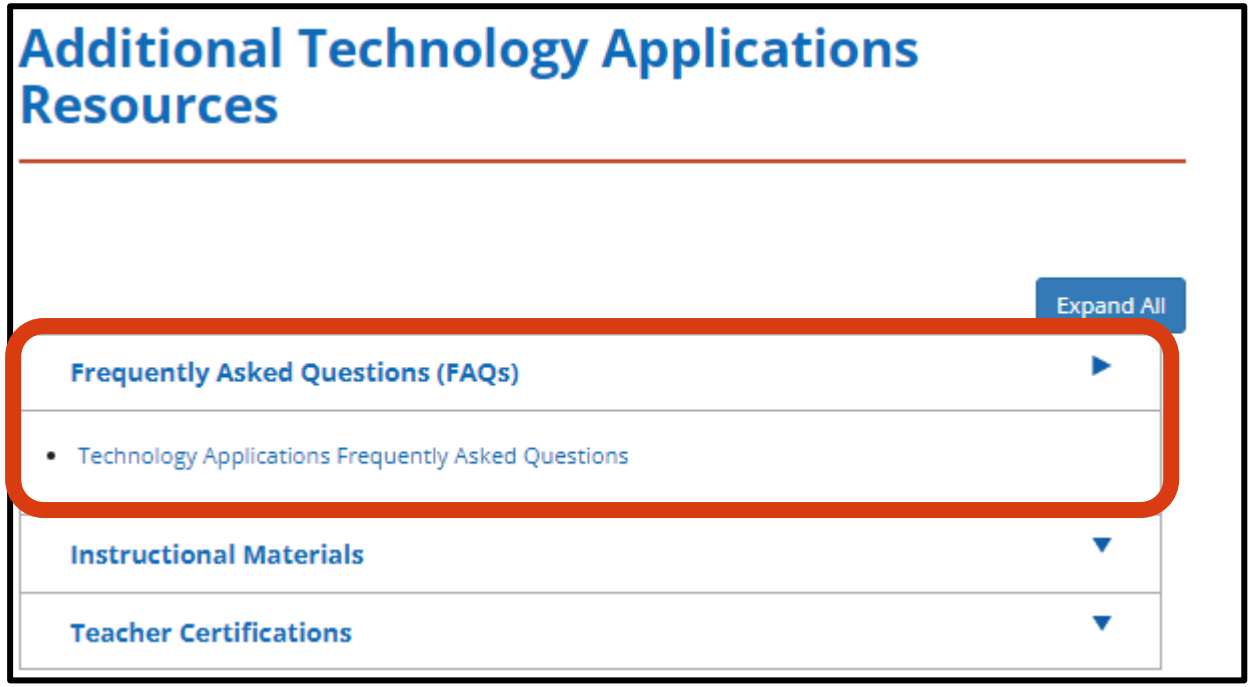
Frequently asked questions (FAQs) are provided on the technology applications webpage.

Topics include, but are not limited to–

- curriculum requirements;
- TEKS questions; and
- stand-alone courses versus embedded standards.



https://tea.texas.gov/academics/subject-areas/technology-applications

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Common Questions Related to Technology Applications

Did the teacher certification requirements for technology applications change?

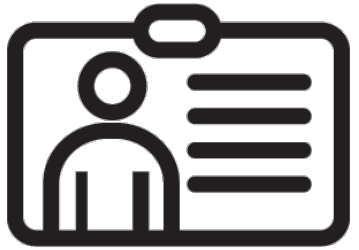
No, the requirements for personnel assignments for technology applications have not changed.

- Teachers who are instructing the TEKS for technology applications as a **standalone course must be certified** in technology applications.
- Teachers who are instructing the TEKS for technology applications as an **embedded course must be certified** in both technology applications and the content area of the course in which it is embedded.

3

How should LEAs conduct the "verification of competency" on the list of certifications for technology applications?

The list of certifications to allow an assignment in technology applications for PK–grade 6 and grades 6–8 can be found in the following subchapters Texas Administrative Code:



- **19 TAC §231.29 Technology Applications, Prekindergarten-Grade 6**
- **19 TAC §231.77 Technology Applications, Grades 6-8**

In both lists, the phrase "**verification of competency**" is left intentionally broad to provide LEAs the **flexibility to locally determine the competency of an instructor**. This may be done through many various methods. Neither TEA nor the State Board for Educator Certification (SBEC) define how LEAs should make this determination.

For additional questions related to educator certifications, please contact Educator Certification and CPE by submitting a **TEA Help Desk ticket**.

3

Do LEAs have to provide stand-alone courses for technology applications?

No, although instruction in the TEKS for technology applications is required for students in grades K, 1, 2, 3, 4, 5, 6, 7, and 8, districts and open-enrollment charters have the flexibility of offering technology applications in a variety of settings, including through a **standalone course or by integrating** the technology applications standards in the essential knowledge and skills for one or more courses or subject areas (**19 TAC Ch. 126**).

3

What settings can LEAs use to embed technology applications into other content areas?

- LEAs may embed standards in a **variety of settings**.
- Many technology applications concepts are **shared by other content areas**.
- Districts/Charters may wish to **map the technology applications standards** to concepts in other content areas.

Illustrative Example #1

Tech Apps, Grade 5

(1)(B) identify patterns in real-world problems and make predictions based on the pattern;

Science, Grade 5

(5)(A) identify and use patterns to explain scientific phenomena or to design solutions;

Illustrative Example #2

Tech Apps, Grade 5

(5)(A) identify and collect quantitative and qualitative data with digital tools; and

Social Studies, Grade 5

(23)(A) differentiate between, locate, and use valid primary and secondary sources such as technology; interviews; biographies; oral, print, and visual material; documents; and artifacts to acquire information about the United States;

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Use the TEA Help Desk to ask us questions.

1. Visit our website at **tea.texas.gov**.
2. Click on the "**Help Desk**" icon in the top left of the webpage.
3. Click on "**Curriculum**."
4. Proceed until you see a button that says, "**Submit a Request**."

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