

Chapter 126. Texas Essential Knowledge and Skills for Technology Applications

Subchapter A. Elementary

Statutory Authority: The provisions of this Subchapter A issued under the Texas Education Code, §7.102(c)(4) and §28.002, unless otherwise noted.

§126.1. Technology Applications, Kindergarten, Adopted 2022.

- (a) Implementation. The provisions of this section shall be implemented by school districts beginning with the 2024-2025 school year.
 - (1) No later than August 1, 2024, the commissioner of education shall determine whether instructional

settings, including through a stand-alone course or by integrating the technology applications standards in the essential knowledge and skills for one or more courses or subject areas.

- (4) Statements containing the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
- (c) Knowledge and skills.
- (1) Computational thinking--foundations. The student explores the core concepts of computational thinking, a set of problem-solving processes that involve decomposition, pattern recognition, abstraction, and algorithms. The student is expected to:
 - (A) identify a problem or task such as making a sandwich and break it down (decompose) into smaller pieces;
 - (B) identify simple patterns and make predictions based on the patterns; and
 - (C) identify algorithms (step-by-step instructions) using a sequential process such as first, next, then, and last.
 - (2) Computational thinking--applications. The student, with guidance from an educator, applies the fundamentals of computer science. The student is expected to create a sequence of code with or without technology such as solving a maze using drag-and-drop programming or creating step-by-step directions for student movement to a specific location.
 - (3) Creativity and innovation--innovative design process. The student takes an active role in learning by using a design process to solve authentic problems for a local or global audience, using a variety of technologies. The student is expected to:
 - (A) practice personal skills, including following directions, needed to successfully implement design processes; and
 - (B) use a design process with components such as asking questions, brainstorming, or storyboarding to identify and solve authentic problems with adult assistance.
 - (4) Data literacy, management, and representation--collect data. The student defines data and explains how data can be found and collected. The student is expected to:
 - (A) communicate an understanding that data is information collected about people, events, or objects such as computer searches and weather patterns; and

- (A) explain and demonstrate the importance of acceptable use of digital resources and devices as outlined in local policies or acceptable use policy (AUP); and
 - (B) communicate an understanding that all digital content has owners and explain the importance of respecting others' belongings as they apply to digital content and information.
- (8) Digital citizenship--privacy, safety, and security. The student practices safe, legal, and ethical digital behaviors to become a socially responsible digital citizen. The student is expected to:
- (A) identify ways to keep a user account safe, including not sharing login information and logging off accounts and devices;
 - (B) identify and discuss what information is safe to share online such as hobbies and likes and dislikes and what information is unsafe such as identifying information; and
 - (C) discuss and define cyberbullying with teacher support and guidance.
- (9) Practical technology concepts--skills and tools. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to:
- (A) select and use a variety of applications, devices, and online learning environments to create an original product;
 - (B) describe basic computer hardware, including a variety of input and output devices, and software using accurate terminology;

- (c) Knowledge and skills.
- (1) Computational thinking--foundations. The student explores the core concepts of computational thinking, a set of problem-solving processes that involve decomposition, pattern recognition, abstraction, and algorithms. The student is expected to:
 - (A) decompose story problems into smaller, manageable subproblems and identify a solution to the problems;
 - (B) identify simple and complex patterns in story problems;
 - (C) develop a plan collaboratively and document a plan that outlines specific steps taken to complete a project; and
 - (D) debug simple algorithms (set of procedures) by identifying and removing errors.
 - (2) Computational thinking--applications. The student applies the fundamentals of computer science. The student is expected to:
 - (A) use variables within a program to store data; and
 - (B) use a design process to create programs that include sequences, loops, and conditionals to express ideas or address a problem.
 - (3) Creativity and innovation--innovative design process. The student takes an active role in learning by using a design process to solve authentic problems for a local or global audience, using a variety of technologies. The student is expected to:
 - (A) explain the importance of and demonstrate personal skills and behaviors, including metacognition, effective communication, following directions, and mental agility, needed to implement the design process successfully; and
 - (B) apply an appropriate design process using components such as peer and teacher feedback to create new and useful solutions to authentic problems.
 - (4) Creativity and innovation--emerging technologies. The student demonstrates an understanding that technology is dynamic and impacts different communities. The student is expected to define emerging technologies.
 - (5) Data literacy, management, and representation--collect data. The student uses digital strategies to collect and identify data. The student is expected to:
 - (A) identify and collect numerical data such as the price of goods or temperature; and
 - (B) use various search strategies with adult assistance.
 - (6) Data literacy, management, and representation--organize, manage, and analyze data. The student uses data to answer questions. The student is expected to analyze data in graphs to identify and discuss trends and inferences.
 - (7) Data literacy, management, and representation--communicate and publish results. The student communicates data through the use of digital tools to inform an audience. The student is expected to use digital tools to communicate and publish results to inform an intended audience.
 - (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:
 - (A) define digital footprint;
 - (B) define digital etiquette; and
 - (C) define digital collaboration.
 - (9) Digital citizenship--ethics and laws. The student recognizes and practices responsible, legal, and ethical behavior while using digital tools and resources. The student is expected to:

each subsequent school year whether instructional materials funding has been made available. If

- (A) use variables within a program to modify data; and
- (B) use a design process to create programs that include sequences, loops, and conditionals to express ideas or address a problem.

