

Proposed Revisions

Texas Essential Knowledge and Skills

Technology Applications, Grades 3 to 5

Prepared by the State Board of Education TEKS Review Committees

November 2010

These documents have been formatted for consistency and ease of review.

Proposed additions are shown in green font with underlines and proposed deletions are shown in red font with strikethroughs.

Comments in the margin provide explanations for proposed changes. The following notations were used as part of the explanations:

CRS—information added or changed to align with College Readiness Standards

ER—information added, changed, or deleted based on expert reviewer feedback

MV—multiple viewpoints from within the committee

VA—information added, changed, or deleted to increase vertical alignment

21st—information updated to 21st century technology trends, applications, and uses

§126.3. Technology Applications, Grades 3-5.

(a) Introduction.

- (1) The technology applications curriculum has ~~four~~ six strands: ~~foundations, information acquisition, work in solving problems, and communication~~ based on the National Educational Technology Standards (NETS•S) and Performance Indicators for Students developed by the International Society for Technology in Education (ISTE): creativity and innovation; communication and collaboration; research and information fluency; critical thinking, problem solving, and decision making; digital citizenship; and technology operations and concepts.
- ~~(2) Through the study of technology applications foundations, including technology related terms, concepts, and data input strategies, students learn to make informed decisions about technologies and their applications. The efficient acquisition of information includes the identification of task requirements; the plan for using search strategies; and the use of technology to access, analyze, and evaluate the acquired information. By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create a solution, and evaluate the results. Students communicate information in different formats and to diverse audiences. A variety of technologies will be used. Students will analyze and evaluate the results.~~
- (2) Through the study of technology operations and concepts, students learn technology related terms, concepts, and data input strategies. Students practice digital citizenship by behaving responsibly while using technology tools and resources. Research and information fluency includes the acquisition and evaluation of digital content. Students collaborate and communicate both locally and globally to reinforce and promote learning. Students develop critical thinking, problem solving, and decision making skills by collecting, analyzing, and reporting digital information. By using creative thinking and innovative processes, students construct knowledge and develop products.

(b) Knowledge and skills.

- (1) Creativity and innovation. The student uses creative thinking and innovative processes to construct knowledge and develop digital products. The student is expected to:
 - (A) create original products using a variety of resources
 - (B) analyze trends and forecast possibilities developing steps for the creation of an innovative process or product
 - (C) use virtual environments to explore systems and issues
- ~~(2) Foundations. The student uses data input skills appropriate to the task. The student is expected to:~~
 - ~~(A) use a variety of input devices such as mouse, keyboard, disk drive, modem, voice/sound recorder, scanner, digital video, CD-ROM, or touch screen;~~
 - ~~(C) demonstrate touch keyboarding techniques for operating the alphabetic, numeric, punctuation, and symbol keys as grade level appropriate;~~
 - ~~(D) produce documents at the keyboard, proofread, and correct errors;~~

Comment [A1]: Due to VA across the grade levels

Comment [A2]: The technology dictates the input device, so it is a given that students will use it.

Comment [A3]: Covered in another SE

Comment [A4]: Covered in Communication strand

~~(E) — use language skills including capitalization, punctuation, spelling, word division, and use of numbers and symbols as grade level appropriate; and~~

Comment [A5]: Covered in ELA TEKS and Keyboarding SE

~~(F) — demonstrate an appropriate speed on short timed exercises depending upon the grade level and hours of instruction.~~

Comment [A6]: Included in keyboarding SE

~~(2)(10)~~ **Communication and collaboration.** The student ~~formats digital information for appropriate and effective communication~~ collaborates and communicates both locally and globally using digital tools and resources to reinforce and promote learning. The student is expected to:

Comment [A7]: Due to VA across the grade levels

~~(A) — use font attributes, color, white space, and graphics to ensure that products are appropriate for the defined audience;~~

~~(A) — draft, edit and publish products in different mediums individually and collaboratively;~~

(B) use font attributes, color, white space, and graphics to ensure that products are appropriate for the multiple communication media, including multimedia screen displays, Internet documents web, and printed materials; and

~~(C) — use appropriate applications including, but not limited to, spreadsheets and databases to develop charts and graphs by using data from various sources.~~

Comment [A8]: Included in SE 5A

(C) collaborate effectively through personal learning communities and social environments;

(D) choose and use appropriate collaboration tools;

~~(E)(12)(B)~~ evaluate the product for relevance to the assignment or task; and

(F) perform basic software application functions, including opening applications, creating, modifying, printing, and saving files.

~~(3)(4)~~ **Research and Information acquisition fluency.** The student acquires and evaluates digital content uses a variety of strategies to acquire information from electronic resources, with appropriate supervision. The student is expected to:

(A) use various apply appropriate electronic search strategies such as in the acquisition of information including keyword(s) and the Boolean identifiers and, or, and not, and use various search strategies appropriate to specific search engines; and

~~(B) — select appropriate strategies to navigate and access information on local area networks (LANs) and wide area networks (WANs), including the Internet and intranet, for research and resource sharing.~~

Comment [A9]: This was moved to Technology Operations and Concepts

~~(B)(5)(A)~~ collect and organize acquire information from a variety of formats including text, audio, video, and graphics;

~~(C)(6)(A)~~ apply critical analysis to resolve information conflicts and validate and evaluate the relevance and appropriateness of information; and

~~(D)(6)(B)~~ determine the success of strategies used to acquire electronic information appropriate to specific tasks. ; and

~~(4)(7)~~ **Critical thinking, problem solving, and decision making Solving Problems.** The student researches and evaluates projects using digital uses appropriate computer-based

Comment [A10]: Due to VA across the grade levels

~~productivity tools to create and modify solutions to problems and resources.~~ The student is expected to:

~~(A) use software programs with audio, video, and graphics to enhance learning experiences;~~

Comment [A11]: See new SE 5D

(A) identify knowledge regarding a problem and explain the steps toward the solution;

(B) collect, analyze, and represent data to use appropriate software to express ideas and solve problems using tools such as including the use of word processing, graphics, databases, spreadsheets, graphic organizers, charts, multimedia, simulations, and multimedia models; and

~~(C) use a variety of data types including text, graphics, digital audio, and video.~~

(C) evaluate student-created products through self and peer review for relevance to the assignment or task; and

(D) evaluate technology tools applicable for solving problems.

~~(5) Information acquisition. The student acquires electronic information in a variety of formats, with appropriate supervision. The student is expected to:~~

~~(B) use on-line help and documentation.~~

Comment [A12]: This was moved to the troubleshooting section

~~(5)(3) Digital Citizenship Foundations.~~ The student ~~complies with the laws and examines the issues regarding the use of technology in society~~ practices safe, responsible, legal, and ethical behavior while using digital tools and resources. The student is expected to:

Comment [A13]: Due to VA across the grade levels

(A) adhere to follow acceptable-use policies when using computers; and reflecting positive social behavior in the digital environment;

(B) ~~model respect of the intellectual property of others; by not illegally copying software or another individual's electronic work.~~

(C) abide by copyright law and the Fair Use Guidelines for Educational Multimedia;

(D) protect and honor individual privacy of oneself and others;

~~(E) follow the rules of digital etiquette;~~

Comment [A14]: ER

(F) practice safe, legal, and responsible use of information and technology; and
(G) comply with digital safety rules, fair use guidelines and digital safety rules.

~~(6) Information acquisition. The student evaluates the acquired electronic information. The student is expected to:~~

Comment [A15]: We condensed into one knowledge statement

~~(C) determine the usefulness and appropriateness of digital information. evaluate the relevance and appropriateness of information~~

~~(6)(4) Technology operations and concepts Foundations.~~ The student demonstrates ~~knowledge and appropriate use of hardware components, software programs, and their connections~~ knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to:

Comment [A16]: Due to VA across the grade levels

(A) demonstrate an understanding of use technology concepts, including terminology for the use of operating systems, network systems, virtual systems, and learning systems appropriate for grades 3-5 learning to the task;

Comment [A17]: ER

- (B) ~~manipulate save and delete files, uses menu options and commands, and work with more than one software application using appropriate naming conventions, file management including folder structures and tagging, and file conversions;~~
 - manipulate save and delete files, uses menu options and commands, and work with more than one software application using appropriate naming conventions, file management including folder structures and tagging, and file conversions;
- (C) ~~identify and describe the characteristics of digital input, processing, and output;~~
- (C) navigate systems and applications accessing peripherals both locally and remotely; and
- (D) ~~delineate and make necessary adjustments regarding compatibility issues including, but not limited to, digital file formats and cross-platform connectivity;~~
- (D) troubleshoot minor technical problems with hardware and software using available resources such as online help and knowledge bases; and
- (E) ~~access remote equipment on a network such as a printer or other peripherals.~~
- (E)(2)(B) use proper touch keyboarding techniques and ergonomic strategies such as correct hand and body positions, and smooth and rhythmic keystrokes, patterns;
- (8) ~~Solving problems. The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge. The student is expected to:~~
 - (A) ~~use communication tools to participate in group projects;~~
 - (B) ~~use interactive technology environments, such as simulations, electronic science or mathematics laboratories, virtual museum field trips, or on-line interactive lessons, to manipulate information; and~~
 - (C) ~~participate with electronic communities as a learner, initiator, contributor, or mentor.~~
- (9) ~~Solving problems. The student uses technology applications to facilitate evaluation of work, both process and product. The student is expected to:~~
 - (A) ~~use software features, such as on-line help, to evaluate work progress; and~~
 - (B) ~~use software features, such as slide show previews, to evaluate final product.~~
- (11) ~~Communication. The student delivers the product electronically in a variety of media, with appropriate supervision. The student is expected to:~~
 - (A) ~~publish information in a variety of media including, but not limited to, printed copy, monitor display, Internet documents, and video; and~~
 - (B) ~~use presentation software to communicate with specific audiences. communicate product results using technology~~
- (12) ~~Communication. The student uses technology applications to facilitate evaluation of communication, both process and product. The student is expected to:~~
 - (A) ~~select representative products to be collected and stored in an electronic evaluation tool;~~
 - (C) ~~create technology assessment tools to monitor progress of project such as checklists, timelines, or rubrics.~~

Comment [A18]: Want to make sure that this is covered in the classroom

Comment [A19]: These are implied in other standards

Comment [A20]: Combined with SE 1C

Comment [A21]: Combined with Strand 5 learning objective

Comment [A22]: Included in SE 4D

Comment [A23]: Included in SE 4C

Comment [A24]: Included in SE 4C

Comment [A25]: Included in Strand 5 learning objective

Comment [A26]: Not relevant

Comment [A27]: Included in SE 5B

Comment [A28]: Included in Strand 4 learning objective

Comment [A29]: Included in Strand 4 learning objective

Comment [A30]: Covered in SEs 4D and 5B