DRAFT Proposed Revisions

Texas Essential Knowledge and Skills

Technology Applications Grades 3–5

Prepared by the State Board of Education TEKS Review Committees

First Draft—July 2010

These documents have been combined from grade-level team drafts and formatted for consistency and ease of review.

Proposed additions are shown in greed font with underlines and proposed deletions are shown in red font with strike throughs.

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~~ technology operations and concepts; digital citizenship; research and information acquisition; critical thinking, problem solving ~~problems~~, and decision making; communication and collaboration; creativity and innovation.

(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.

(b) Knowledge and skills.

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

~~(A) use technology terminology appropriate to the task~~

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

~~(B) save and delete files, uses menu options and commands, and work with more than one software application;~~

(B) manipulate files using appropriate naming conventions, file management such as folder structures and tagging, and file conversion;

~~(C) identify and describe the characteristics of digital input, processing, and output;~~

> **Comment [A1]:** These are implied in other standards

(C) navigate systems and application accessing peripherals both locally and remotely;

~~(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.~~

> **Comment [A2]:** Combined with SE 1C

~~(2)(B)~~(E) use proper touch keyboarding techniques and ergonomic strategies such as correct hand and body positions, smooth and rhythmic keystrokes ~~patterns;~~ to prevent personal injury.

~~(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;

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

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

(3)(2) Foundations Digital Citizenship. 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:

(A)   follow adhere to 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 the Copyright Law and Fair Use Guidelines for Educational Multimedia;

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

(E)   follow the rules of Netiquette; and

(F)   advocate and practice safe, legal, and responsible use of information and technology.

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

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

(A)   apply appropriate electronic use various search strategies such as in the acquisition of information including keyword(s) and the Boolean identifiers *and, or, but*; search strategies; 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.

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

(6)(A)(C) apply critical analysis to resolve information conflicts and validate information and sources;

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

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

Comment [A3]: The technology dictates the input device, so it is a given that students will use it.

Comment [A4]: Covered in above SE

Comment [A5]: Covered in Communication strand

Comment [A6]: Covered in ELA TEKS and Keyboarding SE above

Comment [A7]: Included in keyboarding SE above

Comment [A8]: We condensed into one knowledge statement

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

~~(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 [A10]:** This was moved to the troubleshooting section

~~(10)~~(4) 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:

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

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

(B) use font attributes, color, white space, and graphics to ensure that products are appropriate for ~~the~~ multiple communication ~~media~~ mediums including ~~multimedia screen~~ displays~~,~~ ~~Internet documents~~ web, and print~~;~~ ~~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 [A11]:** Included in SE 5A

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

(D) choose and use appropriate collaboration tools; and

(C) communicate product results using technology;

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

~~(7)~~(5) Critical Thinking, Problem Solving ~~problems,~~ and Decision Making. The student ~~uses appropriate computer-based productivity tools to create and modify solutions to problems~~ applies critical thinking skills to solve problems, guide research, and evaluate projects using digital tools and resources. The student is expected to:

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

> **Comment [A12]:** See new SE 5D

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

~~(B)~~ ~~use appropriate software to express ideas and solve problems including the use of word processing, graphics, databases, spreadsheets, simulations, and multimedia; and~~

(B) collect, analyze, and represent data to solve problems using tools such as word processing, databases, spreadsheets, graphic organizers, charts, multimedia and simulations;

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

(C) evaluate student created products through self and peer review; and

(D) evaluate technology tools applicable for solving problems.

~~(8)~~ ~~Solving problems. The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge. The student is expected to:~~

> **Comment [A13]:** Combined with Strand 5 learning objective

(A)   ~~use communication tools to participate in group projects;~~

          Comment [A14]: Included in SE 4D

(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~~

          Comment [A15]: Included in SE 4C

(C)   ~~participate with electronic communities as a learner, initiator, contributor, or mentor.~~

          Comment [A16]: Included in SE 4C

(9)   ~~Solving problems. The student uses technology applications to facilitate evaluation of work, both process and product. The student is expected to:~~

          Comment [A17]: Included in Strand 5 learning objective

(A)   ~~use software features, such as on-line help, to evaluate work progress; and~~

          Comment [A18]: Not relevant

(B)   ~~use software features, such as slide show previews, to evaluate final product.~~

          Comment [A19]: Included in SE 5B

(11)   ~~Communication. The student delivers the product electronically in a variety of media, with appropriate supervision. The student is expected to:~~

          Comment [A20]: Included in Strand 4 learning objective

(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.~~

(12)   ~~Communication. The student uses technology applications to facilitate evaluation of communication, both process and product. The student is expected to:~~

          Comment [A21]: Included in Strand 4 learning objective

(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 [A22]: Covered in SEs 4D and 5B

(6)   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; and

(C)   use virtual environments to explore systems and issues.