

# San Carlos School District K-8 Technology Skills Scope and Sequence

## Introduction to the Scope and Sequence Document

This Scope and Sequence is adapted from the Fresno County Office of Education Recommended Digital Literacy and Technology Skills to Support the California Common Core State Standards.

The skills identified for each grade level align to the Common Core State Standards (CCSS) for Mathematics and English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects as well as skills required to take the Smarter Balanced Assessment Consortium's (SBAC) Computer Adaptive Assessments.

Additional skills identified in this Scope and Sequence are from the ISTE (International Society for Technology Education) Standards for Standards - 2014: Creativity and Innovation; Digital Citizenship; and Technology Operations and Concepts.

English Language Arts Anchor Standards	Mathematics Standards
<b>RL</b> - Reading Standards for Literature <b>RI</b> - Reading Standards for Informational Text <b>W</b> - Writing <b>SL</b> - Speaking and Listening <b>L</b> - Language	<b>MD</b> - Measurement and Data <b>G</b> - Geometry <b>EE</b> - Expressions and Equations <b>A</b> - Algebra <b>F</b> - Functions <b>SP</b> - Statistics and Probability <b>SMP</b> - Standards of Mathematical Practice

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Grade levels are not specified for the standards as they are indicated in the grade level columns.

Mathematics standards are focused mainly in grades 6-8 as there are no technology requirements in grades K-5. Most of the SBAC Testing Skills cover the skills that students will be required to have to take the online assessment. Mathematical Standards of Practice (SMP) are also referenced as they encompass use of appropriate technology tools across various standards.

The scope and sequence goes from K-8 but is broken up into sections for K-5 and 6-8. Even though students in grades K, 1, and 2 are not tested for CCSS, the skills help build basic technology competencies to support the grade levels at which the students are tested.

The Scope and Sequence identifies which grade levels the skills need to be Introduced (I), Reinforced (R) and Mastered (M). Skills identified as Optional for Grade Level (O) are left to the discretion of the teacher who may choose to teach the skills to the students.

The SCSD Strategic Plan calls for a rethinking of the research skills and conceptual tools critical for 21<sup>st</sup> Century learners to build technology proficiency and adroitness with information. The ISTE Standards for Research and information fluency emphasize the need for students to apply digital tools to gather, evaluate, and use information to plan strategies to:

- Plan strategies to guide inquiry
- Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- Evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- Process data and report results

This Scope and Sequence focuses on the foundational research and information fluency skills necessary to support the ISTE goals articulated in the ISTE Standards.

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## Keyboarding Skills

This Scope and Sequence calls for all students to develop benchmark levels of keyboarding skill to increase their productivity and effectiveness in utilizing technology in all academic areas. Students in kindergarten, first and second grades should begin to develop early keyboarding awareness. A more formal introduction to keyboarding should begin in the latter part of second grade with an increased focus in third, fourth and fifth grades.

California's Common Core State Standards in English-Language Arts articulate benchmarks for students keyboarding proficiency in grades four, five and six are as follows:

**4<sup>th</sup> Grade** – Students demonstrate sufficient command of keyboarding skills to type a minimum of **one page** in a single sitting. (SBAC English/Language Arts Writing Standard W 4.6)

**5<sup>th</sup> Grade** - Students demonstrate sufficient command of keyboarding skills to type a minimum of **two pages** in a single sitting. (SBAC English/Language Arts Writing Standard W 5.6)

**6<sup>th</sup> Grade** - Students demonstrate sufficient command of keyboarding skills to type a minimum of **three pages** in a single sitting. (SBAC English/Language Arts Writing Standard W 6.6)

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Digital Literacy Categories		Alignment to CCSS/ SBAC	Skills	K	1	2	3	4	5
Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying hardware, software and connectivity.	Basic Operations	SBAC test taking skills	Turn on a computer and login	I	R	M	M	M	M
		SBAC test taking skills	Use pointing device such as a mouse to manipulate shapes, icons; click on urls, radio buttons, check boxes; use scroll bar	I	R	M	M	M	M
		SBAC test taking skills	Use desktop icons, windows and menus to open applications and documents	I	R	M	M	M	M
		SBAC test taking skills	File management – saving documents	O	I	R	M	M	M
		SBAC test taking skills	Explain and use age-appropriate online tools and resources (e.g. tutorial, assessment, web browser)		I	R	M	M	M
		W 6	Keyboarding <ul style="list-style-type: none"><li>• Use proper posture and ergonomics</li><li>• Locate and use letter and numbers keys with left and right hand placement.</li><li>• Locate and use correct finger, hand for space bar, return/enter and shift key</li><li>• Gain proficiency and speed in touch typing</li></ul>	I	R	M	M	M	M
	Word Processing	W 5, W 6, W 10	Use a word processing application to write, edit, print and save simple assignments	I	R	M	M	M	M
		W 5, W 6, W 10	Use menu/tool bar functions (e.g. font/size/style/, line spacing, margins) to format, edit and print a document		I	R	M	M	M
		W.5, W6, W 10	Highlight text, copy and paste text		O	I	R	M	M
		W 5, W 6, W 10	<ul style="list-style-type: none"><li>• Copy and paste images within the document and from outside sources</li><li>• Insert and size a graphic in a document</li></ul>		I	R	M	M	M
		L 4	Proofread and edit writing using appropriate resources (e.g. dictionary, spell checker, grammar, and thesaurus).		O	I	R	M	M
I – Introduce      R – Reinforce      M – Mastery (ability to teach others)      O – Optional for grade level									

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Digital Literacy Categories		Alignment to CCSS/ SBAC	Skills	K	1	2	3	4	5
Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying hardware, software and connectivity.	Spreadsheet (Tables/ Charts and Graphs)	MD , SBAC testing skills	Demonstrate an understanding of the spreadsheet as a tool to record, organize and graph information.				I	R	M
		SBAC testing skills	Identify and explain terms and concepts related to spreadsheets (i.e. cell, column, row, values, labels, chart graph)			O	I	R	M
		MD , SBAC testing skills	Enter/edit data in spreadsheets and perform calculations using formulas			O	I	R	M
		MD , SBAC testing skills	Use mathematical symbols e.g. + add, - minus, *multiply, /divide, ^ exponents				I	R	M
		RI 7	Use spreadsheets and other applications to make predictions, solve problems and draw conclusions.				I	R	M
	Multimedia and Presentation Tools	W 6	Create, edit and format text on a slide		I	R	M	M	M
		W 6	Create a series of slides and organize them to present research or convey an idea			I	R	M	M
		W 6, SL 5	Copy and paste or import graphics; change their size and position on a slide			O	I	R	M
		W 6, SL 5	Use painting and drawing tools/ applications to create and edit work			I	R	M	M
		W 6, RL 7, SBAC testing skills	Watch online videos and use play, pause, rewind and forward buttons while taking notes	I	R	M	M	M	M
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Digital Literacy Categories		Alignment to CCSS/SBAC	Skills	K	1	2	3	4	5
Demonstrate the responsible use of technology and an understanding of ethics and safety issues in using electronic media at home, in school and in society.	Acceptable Use, Copyright and Plagiarism	Digital Citizenship	Explain and demonstrate compliance with classroom, school rules (Acceptable Use Policy) regarding responsible use of computers and networks	I	R	M	M	M	M
		Digital Citizenship	Explain responsible uses of technology and digital information; describe possible consequences of inappropriate use	I	R	M	M	M	M
		Digital Citizenship	Explain Fair Use Guidelines for the use of copyrighted materials,(e.g. text, images, music, video in student projects) and giving credit to media creators		I	R	M	M	M
		Digital Citizenship	Identify and explain the strategies for the safe and efficient use of computers (e.g. passwords, virus protection software, spam filters, popup blockers)		I	R	M	M	M
		Digital Citizenship	Demonstrate safe email practices, recognition of the potentially public exposure of email and appropriate email etiquette				I	R	M
		Digital Citizenship	Identify cyberbullying and describe strategies to deal with such a situation	I	R	M	M	M	M
		Digital Citizenship	Recognize and describe the potential risks and dangers associated with various forms of online communications		I	R	M	M	M
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Demonstrate the ability to use technology for research, critical thinking, decision making, communication and collaboration, creativity and innovation.	Research and Gathering Information	RI 5, RI 7	Use age appropriate technologies to locate, collect, organize content from media collection for specific purposes, citing sources	I	R	M	M	M	M
		RI 5, RI 7	Perform basic searches on databases, (e.g. library, card catalog, encyclopedia) to locate information.			I	R	M	M
		RI 5, RI 7	Evaluate teacher-selected or self-selected Internet resources in terms of their usefulness for research	I	R	M	M	M	M
		RI 7	Use content specific technology tools (e.g. environmental probes, sensors, and measuring devices, simulations) to gather and analyze data.			O	I	R	M
		RI 6, RI 7, RI 9	Use Web 2.0 tools (e.g. online discussions, blogs and wikis) to gather and share information			O	I	R	M
		RL 7	Identify and analyze the purpose of a media message (to inform, persuade and entertain)	I	R	M	M	M	M
	Communi- cation and Collaboration	W 6	Work collaboratively online with other students under teacher supervision			I	R	M	M
		W 6, W 10	Use a variety of age-appropriate technologies (e.g. drawing program, presentation software) to communicate and exchange ideas		I	R	M	M	M
		W 6, W 10 SL 2, SL 5	Create projects that use text and various forms of graphics, audio, and video, (with proper citations) to communicate ideas.			I	R	M	M
		W 6, W 10 SL 3	Use teacher developed guidelines to evaluate multimedia presentations for organization, content, design, presentation and appropriateness of citations.			O	I	R	M
		W 6, W 10 SL 1	Use district approved Web 2.0 tools for communication and collaboration			I	R	M	M
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Digital Literacy Categories		Alignment to CCSS/SBAC	Skills	6	7	8
Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying the hardware, software and connectivity.	Basic Operations	Technology Operations & Concepts	Identify successful troubleshooting strategies for minor hardware and software issues/problems (e.g., “frozen screen”).	I	R	M
		Technology Operations & Concepts	Independently operate peripheral equipment (e.g., scanner, digital camera, camcorder), if available.	I	R	M
		Technology Operations & Concepts	Compress and expand large files	I	R	M
		Technology Operations & Concepts	Identify and use a variety of storage media (e.g., CDs, DVDs, flash drives, school servers, and online storage spaces), and provide a rationale for using a certain medium for a specific purpose.	I	R	M
		W 6	Demonstrate automaticity in keyboarding skills by increasing accuracy and speed. (For students with disabilities, demonstrate alternate input techniques as appropriate.)	R	M	M
		Creativity & Innovation	Identify and assess the capabilities and limitations of emerging technologies.	I	R	M
	Word Processing	W 5, W 6, W 10	Demonstrate use of intermediate features in word processing application (e.g., tabs, indents, headers and footers, end notes, bullet and numbering, tables).	I	R	M
		W 5, W 6, W 10, SL 5	Apply advanced formatting and page layout features when appropriate (e.g., columns, templates, and styles) to improve the appearance of documents and materials.	I	R	M
		W.5, W6, W 10	Highlight text, copy and paste text	R	M	M
		W 5, W 6, W 10, SL 1	Use the Comment function in Review for peer editing of documents	I	R	M
		W 5, W 6, W 10, SL 1	Use the Track Changes feature in Review for peer editing of documents		O	I
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Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying hardware, software and connectivity.	Spreadsheet (Tables/Charts and Graphs)	F, SMP 5, RI 7	Use spreadsheets to calculate, graph, organize, and present data in a variety of real-world settings and choose the most appropriate type to represent given data	I	R	M
		F, SMP 5, RI 7	Enter formulas and functions; use the auto-fill feature in a spreadsheet application.	I	R	M
		F, EE, SMP 5, RI 7	Use functions of a spreadsheet application (e.g., sort, filter, find).	I	R	M
		EE, SMP 6	Use various number formats (e.g. scientific notations, percentages, exponents) as appropriate	I	R	M
		F, SMP 5, RI 7	Use advanced formatting features of a spreadsheet application (e.g., reposition columns and rows, add and name worksheets).	I	R	M
		SMP 5, RI 7	Differentiate between formulas with absolute and relative cell references.			I
		SMP 5, RI 7	Use multiple sheets within a workbook, and create links among worksheets to solve problems.		O	I
		SMP 5, RI 7	Import and export data between spreadsheets and other applications.		O	I
	Mathematical Applications	G, SMP 5	Draw two and three dimensional geometric shapes using a variety of technology tools	I	R	M
		EE, SMP 5	Use and interpret scientific notations using a variety of technology applications			I
		EE, A, F, SP, SMP 5 W 8, SL 5	Explain and demonstrate how specialized technology tools can be used for problem solving, decision making, and creativity in all subject areas (e.g., simulation software, environmental probes, computer aided design, geographic information systems, dynamic geometric software, graphing calculators).	I	R	M
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Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying hardware, software and connectivity.	Multimedia and Presentation Tools	SMP 3, SL 5	Create presentations for a variety of audiences and purposes with use of appropriate transitions and animations to add interest.	R	M	M
		SMP 5, W 6	Use a variety of technology tools (e.g., dictionary, thesaurus, grammar checker, calculator/graphing calculator) to maximize the accuracy of work.	R	M	M
		SL 5	Make strategic use of digital media to enhance understanding	R	M	M
		W 6, SL 5	Use painting and drawing tools/ applications to create and edit work	R	M	M
		RL 7, RI 7, SBAC testing skills	Use note-taking skills while viewing online videos and using the play, pause, rewind and stop buttons.	R	M	M
		SMP 3, SL 5	Independently use appropriate technology tools (e.g., graphic organizer, audio, visual) to define problems and propose hypotheses.	I	R	M
Demonstrate the responsible use of technology and an understanding of ethics and safety issues in using electronic media at home, in school and in society.	Acceptable Use, Copyright and Plagiarism	Digital Citizenship	Comply with the district's Acceptable Use Policy related to ethical use, cyberbullying, privacy, plagiarism, spam, viruses, hacking, and file sharing.	R	M	M
		Digital Citizenship	Explain Fair Use guidelines for using copyrighted materials and possible consequences (e.g., images, music, video, text) in school projects.	R	M	M
		Digital Citizenship	Analyze and explain how media and technology can be used to distort, exaggerate, and misrepresent information.	I	R	M
		Digital Citizenship	Give examples of hardware and applications that enable people with disabilities to use technology.	I	R	M
		Digital Citizenship	Explain the potential risks associated with the use of networked digital environments (e.g., internet, mobile phones, wireless, LANs) and sharing personal information.	R	M	M
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Demonstrate the ability to use technology for research, critical thinking, decision making, communication, collaboration, creativity and innovation.	Research (Gathering and Using Information)	RI 5, RI 7	Identify probable types and locations of Web sites by examining their domain names (e.g., edu, com, org, gov, au).	I	R	M
		RI 5, RI 7	Use effective search strategies for locating and retrieving electronic information (e.g., using syntax and Boolean logic operators).	R	M	M
		RI 5, RI 7	Use search engines and online directories. Explain the differences among various search engines and how they rank results.	I	R	M
		RI 7	Use appropriate academic language in online learning environments (e.g., post, thread, intranet, discussion forum, drop box, account, and password).	I	R	M
		RI 5, RI 7, SMP 3	Explain how technology can support communication and collaboration, personal and professional productivity, and lifelong learning.	I	R	M
		RI 5, RI 7	Write correct in-text citations and reference lists for text and images gathered from electronic sources.	I	R	M
		RI 5, RI 7	Use Web browsing to access information (e.g., enter a URL, access links, create bookmarks/favorites, print Web pages).	I	R	M
		RI 7, RI 10, SMP 5	Use and modify databases and spreadsheets to analyze data and propose solutions.	I	R	M
		RI 7, SMP 3	Develop and use guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects.	I	R	M
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Demonstrate the ability to use technology for research, critical thinking, decision making, communication, collaboration, creativity and innovation.	Communi- cation and Collaboration	W 6, W 10, SL 5, SMP 5, RI 7	Use a variety of media to present information for specific purposes (e.g., reports, research papers, presentations, newsletters, Web sites, podcasts, blogs), citing sources.	R	M	M
		W6, W 10, SL 2, SL 5, SMP 3	Demonstrate how the use of various techniques and effect (e.g., editing, music, color, rhetorical devices) can be used to convey meaning in media.	I	R	M
		RI 6, RI 7, RI 9, SMP 3, SL 5	Use a variety of district approved Web 2.0 tools (e.g., e-mail discussion groups, blogs, etc.) to collaborate and communicate with peers, experts, and other audiences using appropriate academic language.	R	M	M
		W 6, W 10 SL 3	Use teacher developed guidelines to evaluate multimedia presentations for organization, content, design, presentation and appropriateness of citations.	R	M	M
		RI 6, RI 7, RI 9, SMP 3	Plan and implement a collaborative project with students in other classrooms and schools using telecommunications tools (e.g., e-mail, discussion forums, groupware, interactive Web sites, video-conferencing).	I	R	M
I – Introduce                  R – Reinforce                  M – Mastery (ability to teach others)                  O – Optional for grade level						