


# PUSD K - 12 TECHNOLOGY SKILLS SCOPE AND SEQUENCE



This scope and sequence is aligned to the California State Standards (CCSS) for Mathematics and English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects, the International Standards for Technology in Education National Education Technology Standards for Students (ISTE NETS) as well as skills required to take the California Assessment of Student Performance and Progress (CAASPP) annual assessment.



## Introduction to the Scope and Sequence Document

Our students will inherit a world that is exponentially more digital than the one in which we live today. To prepare our students to compete in the global marketplace, we must ensure they develop skills that include the ability to collaborate with others, think critically, communicate effectively, and adapt to a changing world landscape. To develop these skills they will need access to a wide range of learning opportunities. Poway Unified School District is committed to providing teaching and learning experiences that evolve along with the most current tools, resources, and skill sets. We want to ensure all of our students can reach their full potential. With these goals in mind, we recognize the need to outline a scope and sequence of technology skills all students should be exposed to along with a specific time frame for mastering critical skills and concepts.





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 and the Long Beach Unified School District Common Core State Standards K-12 Technology Skills Scope and Sequence. Only minor modifications were made to include Transitional Kindergarten in the scope and sequence.

The skills identified for each grade level align to the California State Standards (CCSS) for Mathematics and English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects, the International Standards for Technology in Education National Education Technology Standards for Students (ISTE NETS) as well as skills required to take the California Assessment of Student Performance and Progress (CAASPP) annual test.

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## Standards

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

English Language Arts Anchor Standards ( <a href="http://www.cde.ca.gov">http://www.cde.ca.gov</a> )	Mathematics Standards ( <a href="http://www.cde.ca.gov">http://www.cde.ca.gov</a> )
<p><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</p> <p style="text-align: right;"></p>	<p><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</p> <p style="text-align: right;"></p>
Technology Integration Focus Strands	ISTE Standards for Students ( <a href="http://www.iste.org/">http://www.iste.org/</a> )
<p>1. Foundational Skills                  2. Digital Citizenship                  3. Research and Information Literacy                  4. Document Creation                  5. Digital Presentation                  6. Communication and Collaboration</p> <p style="text-align: right;"></p>	<p>1. Empowered Learner                  2. Digital Citizen                  3. Knowledge Constructor                  4. Innovative Designer                  5. Computational Thinker                  6. Creative Communicator                  7. Global Collaborator</p> <p style="text-align: right;"></p>

The Scope and Sequence identifies which grade levels the skills need to be Introduced (I), Reinforced (R), Mastered (M) and Independently Used (IU). 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.

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<b>FOUNDATIONAL KNOWLEDGE ~ Ability to...</b>	<b>ISTE Student Standards</b>	<b>TK-K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6-8</b>	<b>9-12</b>
Turn on and off all technology devices	• Empowered Learner	I/R	I/R	IU	IU	IU	IU	IU	IU
Use pointing device or trackpad to manipulate and/or select content	• Empowered Learner	I/R	R	R	M	IU	IU	IU	IU
Keyboard/touch type using proper fingering placement (WPM speed and accuracy defined by grade level goals. Use alternative input techniques when appropriate.)	• Empowered Learner	I/I	I	R	R	R	M	M	IU
Log in and out of devices and applications	• Empowered Learner	I/R	M						
Know and use proper method to close and/or open and access applications	• Empowered Learner	I/R	R	M					
Access District portals – MyPlan and the learning management system (LMS) – MyConnect	• Empowered Learner	I/I	I	R	R	M	M	M	IU
Access District/school technology resources	• Empowered Learner	I/I	I	R	R	R	R	M	
Select the appropriate browser based on application requirements	• Empowered Learner		I	I	R	R	R	M	
Use file management skills to name and save files to appropriate locations and storage media (school servers and cloud locations)	• Empowered Learner	I/I	I	I/R	R	R	R	M	
Operate relevant tools and/or devices when available (i.e. scanner, digital camera, printer)	• Empowered Learner	I/I	I	R	R	R	R	M	
Use basic troubleshooting strategies for minor hardware/software issues	• Empowered Learner		I	I	R	R	R	M	

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<b>RESEARCH AND INFORMATIONAL LITERACY ~ Ability to...</b>	<b>ISTE Student Standards</b>	<b>Alignment to CA State Standards</b>	<b>TK-K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6-8</b>	<b>9-12</b>
Use Web browsing to access information (e.g., enter a URL, access links, create bookmarks/favorites, print Web pages)	<ul style="list-style-type: none"> <li>Knowledge Constructor</li> <li>Empowered Learner</li> </ul>	CCSS W.8			I	R	R	R	M	M
Use advanced search strategies for locating and retrieving electronic information (e.g., using syntax and Boolean logic operators)	<ul style="list-style-type: none"> <li>Knowledge Constructor</li> <li>Critical Thinking, Problem Solving and Decision Making</li> </ul>	CCSS W.8				R	R	R	R	M
Perform searches using databases, (e.g., library, card catalog, encyclopedia) to locate, evaluate, and collect information or data for specific learning projects or research	<ul style="list-style-type: none"> <li>Knowledge Constructor</li> <li>Critical Thinking, Problem Solving and Decision Making</li> </ul>	CCSS W.7 CCSS W.8				I	R	R	R	M
Identify and analyze the purpose of a media message (to inform, persuade, and entertain). Evaluate collected resources in terms of their validity and usefulness for research including the examination of the domain names (e.g., .edu, .com, .org, .gov, .au).	<ul style="list-style-type: none"> <li>Knowledge Constructor</li> <li>Digital Citizen</li> </ul>	CCSS RI.6				I	R	R	R	M
Use note-taking/annotation features with digital resources	<ul style="list-style-type: none"> <li>Knowledge Constructor</li> <li>Empowered Learner</li> </ul>	CCSS W.8					I	R	R	M
Use age appropriate tools to organize collected content including identifying and citing sources. Use correct in-text citations and reference lists for text and images gathered from electronic sources	<ul style="list-style-type: none"> <li>Knowledge Constructor</li> </ul>	CCSS W.8				I	I	R	R	M
Use content specific technology tools (e.g., environmental probes, sensors, and measuring devices, simulations) to gather and analyze data	<ul style="list-style-type: none"> <li>Knowledge Constructor</li> <li>Empowered Learner</li> </ul>	SMP 5	I	I	I	I	R	R	R	M
Develop and/or use rubrics or guidelines to evaluate the content, organization, design, use of citations and presentation of technologically enhanced projects	<ul style="list-style-type: none"> <li>Knowledge Constructor</li> <li>Digital Citizen</li> </ul>	CCSS W.5 CCSS W.6		I	I	I	R	R	M	M
Cite and/or document sources using appropriate technology tools as necessary	<ul style="list-style-type: none"> <li>Knowledge Constructor</li> <li>Digital Citizen</li> </ul>	CCSS W.8 SMP 5		I	I	I	R	R	M	M

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<b>DIGITAL CITIZENS ~ Ability to...</b>	<b>ISTE Student Standards</b>	<b>Alignment to CA State Standards</b>	<b>TK-K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6-8</b>	<b>9-12</b>
Comply with District Acceptable Use policy, school and/or classroom rules regarding responsible use of computers/devices and networks including but not limited to ethical use, cyberbullying, privacy, plagiarism, spam, viruses, hacking and file sharing.	<ul style="list-style-type: none"> <li>Digital Citizen</li> </ul>	N/A	I/R	R	R	R	R	R	M	M/IU
Explain the possible social, emotional, and physical consequences of inappropriate use, including personal safety	<ul style="list-style-type: none"> <li>Digital Citizen</li> <li>Creative Communicator</li> </ul>		I/I	R	R	R	R	R	M	M
Identify cyberbullying activity and describe strategies to deal with such situations	<ul style="list-style-type: none"> <li>Digital Citizen</li> </ul>		I/I	R	R	R	R	R	R	M
Explain and demonstrate strategies for managing privacy and personal user account information (passwords, personal information, avatars)	<ul style="list-style-type: none"> <li>Digital Citizen</li> </ul>		I/I	R	R	R	R	M	M	M
Demonstrate safe and responsible use of communication tools (inbox, email, chat tools within District provided systems)	<ul style="list-style-type: none"> <li>Digital Citizen</li> </ul>			I	I	R	M	M	M	M
Recognize, model, and use appropriate academic language and tone when participating in online learning environments (e.g., post, thread, intranet, discussion forum, dropbox, account, and password)	<ul style="list-style-type: none"> <li>Digital Citizen</li> <li>Creative Communicator</li> <li>Global Collaborator</li> </ul>	CCSS L.6		I	I	R	R	M	M	M
Demonstrate ability to analyze and explain how media and technology can be used to distort, exaggerate, and misrepresent information.	<ul style="list-style-type: none"> <li>Digital Citizen</li> <li>Creative Communicator</li> </ul>	CCSS RI.6 CCSS RI.7				I	I	R	R	M
Explains Fair Use Guidelines for the use of copyrighted materials, (e.g., text, images, music, video in student projects) and giving credit to media creators	<ul style="list-style-type: none"> <li>Digital Citizen</li> </ul>			I	R	R	R	R	R	M
Access and use materials which are licensed under Creative Commons	<ul style="list-style-type: none"> <li>Digital Citizen</li> </ul>					I	R	R	R	M
Correctly assigns creative commons licensing attributes to their personal intellectual property when publishing	<ul style="list-style-type: none"> <li>Digital Citizen</li> </ul>						I	I	R	M/IU
Develop and use guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects.	<ul style="list-style-type: none"> <li>Digital Citizen</li> <li>Knowledge Constructor</li> <li>Creative Communicator</li> </ul>	CCSS SL.5				I	R	R	R	M

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<b>DOCUMENT CREATION ~ Ability to...</b>	<b>ISTE Student Standards</b>	<b>Alignment to CA State Standards</b>	<b>TK-K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6-8</b>	<b>9-12</b>
<b>Word Processing</b>										
Select & use appropriate applications to create, write, edit, and/or share digital work	<ul style="list-style-type: none"> <li>• Creative Communicator</li> <li>• Innovative Designer</li> </ul>	CCSS W.6	I/R	R	R	R	R	R	M	M
Incorporate and/or resize visual elements within documents	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>	CCSS 8.G.4	I	I	R	R	M	IU	IU	IU
Use application menus & toolbar functions to apply formatting and page layout features (e.g., line spacing, margins, columns, templates, & styles) to improve the appearance of documents & materials	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>			I	I	R	R	R	M	M
Use features in various applications such as bullets & numbering, headers and/or footers, endnotes, & page numbering	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>				I	I	R	R	R	M
Use review tools for proofreading & collaborative work	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>	CCSS W.6				I	R	R	R	M
Use the comment function & track changes feature for peer editing	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>					I	R	R	M	M
<b>Tables, Spreadsheets, Charts and Graphs</b>										
Demonstrate an understanding of the spreadsheet as a tool to gather, record, organize, and graph data	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>	CCSS SP.8.1 SP.8.4			I	I	R	R	R	M
Identify and explain terms and concepts related to a spreadsheet tool (i.e. cells, columns, rows, values, labels, charts, and graphs)	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>				I	I	R	R	R	M
Apply mathematical symbols e.g., + add, - minus, *multiply, /divide, and ^ exponents to create formulas and calculations	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>	CCSS HS. SP.4				I	I	R	R	M
Enter/edit data in spreadsheets or tables & perform calculations using formulas in order to analyze data, solve problems, & draw conclusions	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>	CCSS HS. SP.4			I	I	R	R	R	M
Select the appropriate tool (table or spreadsheet application) based on the purpose of the data analysis	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>	CCSS HS. SP.4				I	R	R	R	M
Import & export data between spreadsheets & other applications	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>								I/R	M
Use advanced features of a spreadsheet application (e.g., reposition columns or rows, insert formulas, sort and/or filter and absolute/relative cell references)	<ul style="list-style-type: none"> <li>• Empowered Learner</li> </ul>						I	I	R	M

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<b>DIGITAL PRESENTATION ~ Ability to...</b>	<b>ISTE Student Standards</b>	<b>Alignment to CA State Standards</b>	<b>TK-K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6-8</b>	<b>9-12</b>
Use a variety of age-appropriate technologies (e.g., drawing program, presentation software) to communicate and exchange ideas	<ul style="list-style-type: none"> <li>• Creative Communicator</li> <li>• Global Collaborator</li> </ul>	CCSS SL.5	I/I	I	I/R	R	R	R	M	M
Design presentations or projects which include text, audio, and/or visual media (with proper citations) to communicate a topic or idea for a variety of audiences and purposes	<ul style="list-style-type: none"> <li>• Empowered Learner</li> <li>• Knowledge Creator</li> <li>• Creative Communicator</li> </ul>	CCSS SL.5	I/I	I	I/R	R	R	R	M	M
Use fonts, color, graphics, effects, transitions, and animations to enhance the purpose rather than distract from it.	<ul style="list-style-type: none"> <li>• Empowered Learner</li> <li>• Innovative Designer</li> <li>• Creative Communicator</li> </ul>	CCSS SL.5	I/I	I	I/R	R	R	R	M	M
Use appropriate technology tools (e.g., graphic organizer, audio, visual) to organize thinking, define problems, propose hypotheses and present learning visually to enhance understanding	<ul style="list-style-type: none"> <li>• Empowered Learner</li> <li>• Creative Communicator</li> <li>• Innovative Designer</li> <li>• Computational Thinker</li> <li>• Global Collaborator</li> </ul>	CCSS SL.5	I	I	I/R	R	R	R	R	M
Use basic graphic editing tools to create or modify photos and drawings	<ul style="list-style-type: none"> <li>• Empowered Learner</li> <li>• Digital Citizen</li> </ul>	CCSS SL.5		I	I	I	R	M	M	S
Import/export graphics for use with other applications	<ul style="list-style-type: none"> <li>• Empowered Learner</li> <li>• Digital Citizen</li> </ul>	CCSS SL.5		I	I/R	R	R	R	M	M
Capture and edit videos to communicate ideas more effectively	<ul style="list-style-type: none"> <li>• Empowered Learner</li> <li>• Digital Citizen</li> <li>• Innovative Designer</li> <li>• Creative Communicator</li> </ul>	CCSS SL.5		I	I	I/R	R	R	R	M

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<b>COMMUNICATION &amp; COLLABORATION ~ Ability to...</b>	<b>ISTE Student Standards</b>	<b>Alignment to CA State Standards</b>	TK-K	1	2	3	4	5	6-8	9-12
Use a variety of web based resources to communicate, exchange ideas and share information	<ul style="list-style-type: none"> <li>• Empowered Learner</li> <li>• Digital Citizen</li> <li>• Creative Communicator</li> <li>• Global Collaborator</li> </ul>	CCSS SL.5	I/R	R	R	R	R	R	R	M
Implement a collaborative project with peers using communications tools	<ul style="list-style-type: none"> <li>• Empowered Learner</li> <li>• Digital Citizen</li> <li>• Creative Communicator</li> <li>• Global Collaborator</li> </ul>	CCSS SL.5 SMP 3			I	R	R	R	R/M	M
Demonstrate proper etiquette when communicating in a variety of mediums (voice, grammar, structure, forms of address, spelling punctuation)	<ul style="list-style-type: none"> <li>• Empowered Learner</li> <li>• Digital Citizen</li> </ul>	CCSS L.3	I/I	I	I	R	M	M	M	M

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