



TECHNOLOGY SKILLS SCOPE & SEQUENCE

GRADES 9-12



Fresno Unified School District

Grades 9-12 Technology Scope and Sequence

CCSS Standards Alignment and Skill Progression

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

English language arts anchor standards	Mathematics standards
RL - Reading Standards for Literature	MD – Measurement and Data
RI - Reading Standards for Informational Text	G - Geometry
W - Writing	EE - Expressions and Equations
SL - Speaking and Listening	A - Algebra
L - Language	F - Functions
	SP - Statistics and Probability
	MP - Standards for Mathematical Practice

Feedback

[Submit feedback or
get help](#)



Mathematics standards are focused mainly in grades 6-12 as there are no technology requirements in grades K-5. Standards for Mathematical Practice (MP) are also referenced as they encompass use of appropriate technology tools across various standards.

The Scope and Sequence identifies at which grade levels the skills need to be Introduced (I), Developed (D) and Proficient (P).

ISTE Student Standards Alignment

The student technology skills are grouped within the [ISTE Students Standards](#) categories defined below.

1. Empowered Learner (Foundational skills such as computer input devices, word processing, and troubleshooting)
2. Digital Citizen (Acceptable use, copyright and plagiarism)
3. Knowledge Constructor (Internet research skills including search strategies, source evaluation, and content organization)
4. Innovative Designer (Multimedia and Presentation design skills)
5. Computational Thinker (Spreadsheets, data sets, charts, and algorithmic thinking)
6. Creative Communicator (Digital communication skills)
7. Global Collaborator (Digital collaboration skills both within and beyond borders)

Grades 9-12 Technology Scope and Sequence

How to use the Technology Scope and Sequence within Lesson Planning

1. Begin with the Standards and Objectives of your lesson.
2. Plan your Student Tasks aligned to the Standards and Objectives.
3. Consider integrating Technology Skills and resources into the student tasks where appropriate.
4. The Supporting Resources can be used to support either your learning/planning or the student's learning.

Note: The technology skills can be integrated at anytime during a lesson or unit.



Grades 9-12 Technology Scope and Sequence

Empowered Learner (Grades 9-12)

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.

Alignment to CCSS	Skills	Additional Resources	9	10	11	12
W.6, SL.2	Explain how to correctly and safely connect to wireless networks.	Internet Basics	P	P	P	P
Key: I = Introducing D = Developing P = Proficient						

Digital Citizen (Grades 9-12)

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model digital citizenship in ways that are safe, legal and ethical.

Alignment to CCSS	Skills	Additional Resources	9	10	11	12
W.6, SL.5	Monitor personal content (online and offline) for digital safety.	Online Safety Tutorials	D	D	P	P
Key: I = Introducing D = Developing P = Proficient						

Grades 9-12 Technology Scope and Sequence

Knowledge Constructor (Grades 9-12)

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.

Alignment to CCSS	Skills	Additional Resources	9	10	11	12
R.8, R.6	Explore digital-resources to investigate topics, record questions, and build my background knowledge while being mindful of potential source bias and generative AI errors.	AI Revolution Tutorial	P	P	P	P
W.7, W.8, W.9	Write complex AI prompts to deepen research and investigation on academic topics, and cite AI as a source.	AI Revolution Tutorial	P	P	P	P
W.7, W.8,	Use advanced search functions of search engines and databases (e.g., Boolean Operators, filters, etc.)	Search Better Tutorial	I	D	P	P
W.7, W.8, W.9	Focus on bibliographies, references and works cited to determine relevance of sources.	Use Information Correctly Tutorial	I	D	P	P
Key: I = Introducing D = Developing P = Proficient						

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Innovative Designer (Grades 9-12)

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.

Alignment to CCSS	Skills	Additional Resources	9	10	11	12
W.5, W.6	Modify or create a new technology to solve a problem or meet a need. (Example: build an app, customize font size for reading, etc.) - (Succinct: Modify or Create New Technology to Solve Problems)		D	D	P	P
R.7, R.9	Find, understand, select and compare virtual simulations.	PHET Simulator	I	D	P	P
R.1, R.2, R.3	Explore cause & effect of a virtual simulation.	PHET Simulator	I	D	P	P
Key: I = Introducing D = Developing P = Proficient						

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Computational Thinker (Grades 9-12)

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

Alignment to CCSS	Skills	Additional Resources	9	10	11	12
MP.5	Collect and analyze data in a spreadsheet or table.	Excel Tutorials	P	P	P	P
EE, MP.5	Use and interpret scientific notations using a variety of technology applications.		P	P	P	P
MP.5, RI7	Differentiate between formulas with absolute and relative cell references.	Excel Formulas Tutorial	D	P	P	P
MP.5, RI7	Use multiple sheets within a workbook, and create links among worksheets to solve problems.	Excel Tips Tutorial	D	P	P	P
MP.5, RI7	Import and export data between spreadsheets and other applications.	Excel Tips Tutorial	D	P	P	P
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Creative Communicator (Grades 9-12)

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

Alignment to CCSS	Skills	Additional Resources	9	10	11	12
W.6, W.8, SL.5	Combine multiple technologies to create and share products from multiple content areas.	Microsoft Office Tutorials	I	D	P	P
W.6, W.8	Create digital products for culminating projects or inclusion in portfolios.	Microsoft Office Tutorials	I	D	P	P
SL.1, SL5, W.6	Select and create an appropriate online forum for communicating and collaborating with a chosen audience.	Social Media Tutorial	I	D	P	P
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Global Collaborator (Grades 9-12)

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

Alignment to CCSS	Skills	Additional Resources	9	10	11	12
SL.1, SL5, W.6	Select and create an appropriate online forum for communicating and collaborating with a chosen audience.	Social Media Tutorial	I	D	P	P
R.7, W.8	Choose global digital content to identify a local or global issue.	Search Better Tutorial	P	P	P	P
SL.1, SL.2, W.6, W.7	Participate in an online community to solve a local or global issue		I	D	P	P
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