

Peru Public School District #124
Instructional Technology Scope and Sequence

The following scope and sequence can be used to provide ideas and suggestions to teachers for future planning when integrating technology into the curriculum. These proposed technology skills or concepts are not meant to be an “add-on”, but rather as ‘support’ for teachers and students to better accomplish goals as lifelong learners in all curricular areas. These skills are aligned with the NET (National Educational Technology) standards for students. Hopefully, with staff development and support, this scope and sequence can be implemented with ease. Development and refinement of the scope and sequence will take place on an annual basis.

1. Basic Technology Operations and Concepts
2. Productivity Tools
3. Research Tools
4. Technology Communication Tools
5. Ethical/Legal Issues

I = Introduce (First time to expose students to a concept or skill. This means the concept or skill will be implemented and used before the student exits the grade level.)

D = Developing (Using previously introduced skills with additional help.)

M = Master (Proficient at skills, needs no additional help.)

A = Apply (Implement various skills in projects or real-world applications with proficiency.)



1. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- a. apply existing knowledge to generate new ideas, products, or processes.
- b. create original works as a means of personal or group expression.
- c. use models and simulations to explore complex systems and issues.
- d. identify trends and forecast possibilities.

2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- c. develop cultural understanding and global awareness by engaging with learners of other cultures.
- d. contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- a. plan strategies to guide inquiry.
- b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- d. process data and report results.

4. Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:

- a. identify and define authentic problems and significant questions for investigation.
- b. plan and manage activities to develop a solution or complete a project.
- c. collect and analyze data to identify solutions and/or make informed decisions.
- d. use multiple processes and diverse perspectives to explore alternative solutions.

5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- a. advocate and practice safe, legal, and responsible use of information and technology.
- b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
- c. demonstrate personal responsibility for lifelong learning.
- d. exhibit leadership for digital citizenship.

6. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

- a. understand and use technology systems.
- b. select and use applications effectively and productively.
- c. troubleshoot systems and applications.
- d. transfer current knowledge to learning of new technologies.

Basic Technology Operations and Concepts

I = Introduce D= Developing M = Master A = Apply

	NETS (S)	K	1	2	3	4	5	6	7	8
Keyboarding										
a. Identify on the keyboard, letters, numbers, spacebar, enter, delete, period, question mark, caps lock, arrow, shift and symbol keys and describe their use.	6(A)	I	D	D	D	M	A	A	A	A
b. Model correct keyboarding posture while sitting at the computer.	6(A)	I	D	D	D	M	M	A	A	A
c. Identify/key the home row using proper hand position.	6(A)		I	D	D	M	M	A	A	A
d. Key in sentences putting in proper punctuation and spacing to compose a paragraph.	6(A)		I	D	D	D	M	M	A	A
e. Successfully accomplish keyboarding programs with associated lessons.	6(A)		I	D	D	M	M	M	A	A
f. Develop speed and accuracy.	6(A)				I	D	D	D	D	D
Basic Computer Hardware Components and Peripheral Devices										
Identify and/or Operate the following:										
a. Identify basic computer components: Keyboard; Mouse; Monitor; Headphones/Speakers; DVD/CD-ROM drive; Wireless devices	6(A,D)	I	D	M	A	A	A	A	A	A
b. Laptop	6(A,D)			I	D	D	M	M	A	A
c. Printer	6(A,D)	I	D	D	D	M	M	A	A	A
d. Digital Camera/Memory card	6(A,D)		I	D	D	D	M	M	A	A
e. Video Camera	6(A,D)		I	D	D	D	M	M	A	A
f. Scanner	6(A,D)		I	D	D	D	D	M	M	A
g. LCD Projector	6(A,D)		I	D	M	A	A	A	A	A
h. Internal Computer Parts (processor, hard drive, network card, RAM, video/sound card; power supply, etc.)	6(A,D)						I	D	M	M
Basic Computer Networking Concepts/Skills										
Identify and/or use the network in the following ways:										
a. Login correctly with name/numbers	6(A)	I	D	D	M	M	A	A	A	A
b. Identify the operating system. (Windows/Apple OS; Control Panel; Taskbar; Various Icons; etc.)	6(A)						I	D	D	M
c. Networking concepts: (LAN, WAN, Server, switch, routers, wireless, access points)	6(A)						I	D	D	M
d. Save/Retrieve files from appropriate locations (Home Directory, Shared, etc.)	6(A)		I	D	D	D	M	M	A	A
e. Access network printers	6(A)		I	D	D	D	M	M	A	A
File Management										
a. Types of internal/external drives: Hard drives, DVD/CD-Recordable, USB Keys/Flash Drives, Memory Card Readers, etc.	6(A)		I	I	D	D	M	M	A	A
b. Appropriate care of removable storage media (DVD/CD-ROM, USB Keys, Memory Sticks, etc.)	6(A)		I	I	D	D	D	M	M	A
c. File Transfer: Cut/copy/paste to different locations	6(A)			I	I	D	D	D	M	M
d. Understand basic file extensions (doc, xls, ppt, gif, avi, jpg) and icons	6(A)					I	D	D	M	M

Basic Technology Operations and Concepts Continued

Care and Appropriate Use of Hardware	NETS(S)	K	1	2	3	4	5	6	7	8
Demonstrate appropriate care and use of the following: (includes safety precautions)	5(A,D) 6(A)									
a. Keyboard & Mouse		I	D	M	A	A	A	A	A	A
b. Monitor & Drives/Storage Devices (DVD/CDROM, USB, Card Readers, etc.)	5(A,D) 6(A)	I	D	M	A	A	A	A	A	A
c. Area around computer	5(A,D)	I	D	M	A	A	A	A	A	A
d. Turn equipment on/off properly	5(A,D) 6(A)	I	D	M	A	A	A	A	A	A
e. Printer Etiquette	5(A,D) 6(A)	I	D	D	D	M	M	A	A	A
f. Laptop and Storage Cart (Screen care, Plugging in, etc.)	5(A,D) 6(A)			I	D	D	M	M	A	A
Basic Computer Management Skills										
a. Basic mouse functions: movement; clicking left/right side; cursor placement; hour-glass/busy	6(A)	I	D	M	A	A	A	A	A	A
b. Clicking icons; opening/closing a program; use scroll bar	6(A)	I	D	M	A	A	A	A	A	A
c. Navigate menus and toolbars	6(A)	I	D	D	D	M	M	A	A	A
d. Maximize/Minimize	6(A)	I	D	D	M	M	A	A	A	A
e. Program troubleshoot....what to do when you are stuck: ctrl-Alt-Del; Esc; check keyboard/hard drive lights	6(A,C)						I	D	D	M
f. Move between windows	6(A)	I	D	D	M	M	A	A	A	A
g. Organize files....create folders	6(A,B)					I	D	D	M	M
h. Use computer and/or software utilities: add/remove programs; display settings; defrag; scandisk; virus protection; etc.	6(A,B,C)							I	D	D

Activities: (include any software or websites used)

Productivity Tools

I = Introduce D= Developing M = Master A = Apply

	NETS(S)	K	1	2	3	4	5	6	7	8
Create/Save Documents										
a. Identify Use and Type	6(A,B)	I	D	D	M	M	A	A	A	A
b. Use Save and Save As	6(A)		I	D	D	D	M	M	A	A
c. Location of Saved document	6(A,C)		I	D	D	D	M	A	A	A
d. Use Templates (Word, Publisher, Printshop, etc.)	1(A,B,C) 6(A,B)					I	D	D	M	A
Access, View and Print Documents										
a. Open documents in various locations.	6(A,C)	I	D	D	D	D	M	M	A	A
b. Movement through a document (cursor; arrows; scroll)	6(A)	I	D	D	M	M	A	A	A	A
c. Print Preview and Zoom Text	6(A)		I	D	D	D	M	M	A	A
d. Print Setup: Printer; Print Selection; #copies	6(A)		I	D	M	M	M	A	A	A
e. Toolbars - Access and View	6(A)				I	D	D	D	M	A
Format Documents										
a. Select Font style and size	1(B) 6(A)	I	D	D	D	M	A	A	A	A
b. Word spacing and indenting	6(A)	I	D	D	M	M	A	A	A	A
c. Text alignment (Right, Center, Left aligned)	1(B) 6(A)	I	D	D	D	M	A	A	A	A
d. Line spacing (single, double, etc.)	1(B) 6(A)			I	D	D	M	M	A	A
e. Paper size and orientation (landscape/portrait)	1(B) 6(A)			I	D	D	D	M	A	A
f. Bullets; Numbering	1(B) 6(A)			I	D	D	D	M	A	A
g. Setting Margins; Page numbering	1(B) 6(A)						I	D	D	D
h. Using Headers, Footers, Page Breaks, Page Numbers	1(B) 6(A)								I	D
i. Ruler Indents, Page Border	1(B) 6(A)								I	D
Edit Text										
a. Font- change upper and lower case; size	1(B) 6(A)	I	D	D	D	M	A	A	A	A
b. Font- change color, bold, italicize, underline	1(B) 6(A)	I	D	D	D	M	A	A	A	A
c. Cut, Copy, Paste, and Delete Text	1(B) 6(A)		I	D	D	M	M	M	A	A
d. 'Undo' and 'Redo' as a troubleshooting technique	6(A,B)	I	D	D	M	M	A	A	A	A
e. Use spell check	6(A)			I	D	D	M	A	A	A
f. Use Thesaurus	6(A)						I	D	D	M
g. Use quick keys – Ctrl-P; Ctrl-C; Ctrl-V; etc.	6(A,B)						I	D	D	M

Productivity Tools Continued

Desktop Publishing	NETS(S)	K	1	2	3	4	5	6	7	8
a. Insert graphics: clipart; file	1(B) 6(A)	I	D	D	D	M	M	A	A	A
b. Size graphics	6(A)	I	D	D	D	M	M	A	A	A
c. Create WordArt	1(B) 6(A)		I	D	D	M	M	M	A	A
d. Create/Manipulate shapes	1(B) 6(A)			I	D	D	M	M	M	A
e. Create columns	1(B) 6(A)							I	D	D
f. Create borders/shading/page borders	1(B) 6(A)						I	D	D	M
g. Insert text box	1(B) 6(A)		I	D	D	M	M	M	A	A
h. Insert table (manipulate cells...)	1(B) 6(A)					I	D	D	D	M
i. Wrap text with graphic	1(B) 6(A)						I	D	D	M
Use Word Processor/Desktop Publishing in a Real World context to:		K	1	2	3	4	5	6	7	8
a. Create Presentations	1(A,B) 6(B,D)	I	D	D	D	D	M	M	M	M
b. Generate Letters	1(A,B) 6(B,D)		I	D	D	D	D	M	M	M
c. Type sentences, poems, stories or reports	1(A,B) 6(B,D)			I	D	D	M	M	A	A
d. Create Presentations (PowerPoint)	1(A,B) 6(B,D)				I	D	D	M	M	A
e. Lab Report (Science)	1(A,B,C) 4(B) 6(B,D)							I	D	D
f. Add entries to a Bibliography	5(A)						I	D	D	D
g. Create a Newsletter/Brochure	1(A,B) 4(B) 6(B)							I	D	D
h. Create a Resume	1(B,C) 6(B)									I
Graphing/Spreadsheet		K	1	2	3	4	5	6	7	8
a. Identify intended use (may use wizard/template)	3(C) 6(B)		I	D	D	D	D	M	M	M
b. Basic Spreadsheet Terminology: Columns; Rows, Cells, Worksheet; Workbook; etc.	6(B)						I	D	D	D
c. Specify data organization	3(B)		I	D	D	D	D	D	D	D
d. Determine columns and rows	6(A)		I	D	D	D	M	A	A	A
e. Enter and edit data	6(A,B)		I	D	M	A	A	A	A	A
f. Set cell attributes (Font size, etc.)	1(A,B) 6(A,B)					I	D	M	A	A
g. Create simple calculation formulas	6(B)							I	D	D
h. Create Charts	1(B) 6(B)		I	D	D	D	D	M	M	M
i. Sort data	3(B) 6(B)						I	D	M	M
j. Print data	6(B)		I	D	D	M	A	A	A	A
k. Insert column or row	6(B)					I	D	D	M	M
l. Delete column or row	6(B)					I	D	D	M	M
m. Use fill down/across	6(B)							I	D	D
n. Incorporate graphs in word processing	1(B) 4(B) 6(B)								I	D
o. Create tables/graphs to use in real-world context: marketing; financial; etc.	1(A,B,C,D) 2(D) 3(A,B,C,D) 4(A,B,C,D) 5(A) 6(B)							I	D	D

Activities: (include any software or websites used)

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Technology Communication Tools

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Multimedia Tools (Kidpix; PowerPoint; SmartNotebook, etc.)	NETS(S)	K	1	2	3	4	5	6	7	8
Prepare, Edit, and Save:										
a. Create and edit slides/screens	1(A,B) 6(B)		I	D	D	M	M	M	A	A
b. Add and edit text (font, size, color)	1(A,B) 6(B)		I	D	D	M	M	M	A	A
c. Insert graphics, clipart, animation, and digital pictures.	1(A,B) 2(B) 6(B)		I	D	D	D	M	M	A	A
d. Arrange objects (rotate, stretch, etc.) and/or slides	1(B) 6(B)		I	D	D	D	M	M	A	A
f. Save presentation as new and/or existing file	6(A)		I	D	D	D	D	M	M	A
e. Use WordArt	1(B) 6(B)		I	D	D	D	M	M	A	A
g. Save presentation to new location for viewing	6(A)					I	D	D	M	M
Customize:										
a. Customize the background	1(B) 6(B)	K	I	D	D	D	M	M	A	A
b. Add transitions	1(B) 6(B)		I	D	D	D	M	M	A	A
c. Arrange slides/screens in a logical and appropriate order	4(B)		I	D	D	D	D	M	M	A
d. Use sounds to enhance presentation	1(B) 6(B)		I	D	D	M	M	A	A	A
e. Create layouts for tables and/or charts	6(A,B)					I	D	D	D	M
f. Create hyperlinks to websites, documents, spreadsheets, etc.	6(B)					I	D	D	M	A
g. Place video in the presentation	6(B)								I	D
Present:										
a. Open existing presentation	6(A)		I	D	D	M	M	A	A	A
b. Deliver presentation using multimedia tools.	2(B) 3(D) 6(A,B)					I	D	M	A	A
c. Create notes to have for final presentation	6(B)						I	D	M	A

Technology Communication Tools Continued

Multimedia/Productivity Peripherals and Software		K	1	2	3	4	5	6	7	8
Utilize peripherals/software to support personal productivity, group collaboration, communication, and learning:	2(A,B,D) 5(B) 6(A,B,D)									
a. Smartboard		I	D	D	D	M	M	A	A	A
b. Digital Camera			I	D	D	D	M	M	A	A
c. Video Camera							I	D	D	M
d. Scanner							I	D	D	M
e. Photo Editing Software(Printshop; PhotoImpact; etc.)				I	D	D	D	M	A	A
f. Audio/Video Editing Software										I
Internet Communication Tools		K	1	2	3	4	5	6	7	8
Understand the different types of Internet communication that leads to group collaboration, socialization and learning:	2(A,B,C) 5(A,B,C,D) 6(B,D)									
a. Blogs							I	D	D	M
b. Wikis								I	D	D
c. Social Networking - Facebook, MySpace, etc.						I	D	D	M	A
d. YouTube				I	D	D	M	M	A	A
E-Mail		K	1	2	3	4	5	6	7	8
Understand and/or Use Electronic Mail:	5(A,B,C,D) 6(A,B)									
a. What is it?			I	D	D	M	A	A	A	A
b Rules/Internet Safety regarding E-mail (Personal use; District policy; SPAM)			I	D	D	M	A	A	A	A
c. E-mail address structure					I	D	D	M	M	A
d. Composing/sending an e-mail					I	D	D	M	M	A
e. Reply; Forward					I	D	D	M	M	A
f. Send attachments							I	D	D	M
g. Email Etiquette			I	D	D	M	A	A	A	A

Activities: (include any software or websites used)

Ethical/Legal Issues

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Shows Understanding of ethical/legal issues by:		K	1	2	3	4	5	6	7	8
a. Demonstrating appropriate use and care of technology equipment and software.	5(A)	I	D	D	D	M	M	A	A	A
b. Practicing safety when involved with use of the Internet. (personal information, privacy, and security)	5(A,C)	I	D	D	D	M	M	A	A	A
c. Identifying the unethical behaviors and consequences regarding cyberbullying and the misuse of social networking sites and cell phones.	5(A,D)			I	D	D	M	A	A	A
d. Respecting the privacy of all users by following security rules: log-in properly; do not give out passwords; do not manipulate other's files; etc.	5(A,D)	I	D	D	D	M	M	A	A	A
e. Obeying copyright laws concerning software, internet sources, image retrieval, and web page development.	5(A)					I	D	D	M	A
f. Using appropriate citation formats for electronic information.	5(A)						I	D	D	M
g. Understanding and abiding by the Peru District #124 Acceptable Use/Internet Policy.	5(A)	I	D	D	M	M	A	A	A	A

Activities: (include any software or websites used)