

Collinsville Community Unit School District No. 10
K-12 Technology Scope and Sequence
Revised June 2005

The Collinsville Community Unit School District No. 10's technology plan is directly aligned to the *National Educational Technology Standards for Students*, part of ISTE's NETS Project (www.iste.org).

Several quotes from ISTE (International Society for Technology in Education) regarding the NETS Project include:

"The primary goal of the ISTE National Educational Technology Standards (NETS) project is to enable stakeholders in PreK-12 education to develop national standards for the educational uses of technology that will facilitate school improvement in the United States. The NETS Project will develop standards to guide educational leaders in recognizing and addressing the essential conditions for effective use of technology to support PreK-12 education."

"Technology Foundation Standards for Students describes what students should know about technology and be able to do with technology."

Explanation of Terms Used in CUSD Technology Plan:

I – Introduce (Beginning)

The concept should be introduced at this grade level. The student begins to understand facts, concepts and/or principles to complete tasks but requires teacher assistance

D – Developing

The student develops an understanding of facts, concepts, and/or principles to complete tasks and often works independently.

S – Secure (Mastery)

The student demonstrates a thorough knowledge of essential facts, concepts and/or principles relative to a topic and is applying knowledge and skills independently.

R – Reinforce

The student continues to strengthen their mastery of concepts, knowledge and skills by applying technology to solve academic and real-world problems.

Collinsville Community Unit School District No. 10
K-12 Technology Scope and Sequence

1. Basic Operations and Concepts: Literacy & Application

Students will demonstrate a sound understanding of the nature and operation of technology systems and will become proficient in the use of technology.

1. Basic Operations and Concepts – Literacy & Application														
Benchmark	K	1	2	3	4	5	6	7	8	9	10	11	12	
1.1 Identify main computer components: monitor, keyboard, mouse and CPU (disk drives & on/off switch).	I	D	S	R	R	R	R	R	R	R	R	R	R	
1.2 Identify computer peripherals: printer, headphones, microphone, scanner, digital camera, projector, large screen monitor and other electronic devices.	I	D	D	D	S	R	R	R	R	R	R	R	R	
1.3 Demonstrate proper use of storage devices to access data and execute programs (floppy disks, CD-R, DV-R, USB Flash Drive, Memory Stick, etc.).	I	I	I	D	D	D	S	R	R	R	R	R	R	
1.4 Understand and use computer terms including menu, icon, start, close, save, save as, file, scroll bar, cursor, click, double-click, desktop, right-click, minimize, and maximize.	I	I	I	D	S	R	R	R	R	R	R	R	R	
1.5 Understand and use basic network terms including login, username, password, server, home directory and shared network directory.	I	I	D	D	S	R	R	R	R	R	R	R	R	
1.6 Understand and use Windows operating system elements: program icons, start menu, and task bar.	I	D	S	R	R	R	R	R	R	R	R	R	R	
1.7 Use basic Internet terms: Internet, WWW (World Wide Web), web/home page, links, URL (location/address), and favorites.	I	D	D	S	R	R	R	R	R	R	R	R	R	
1.8 Identify and use keyboard functions: alphanumeric & directional arrow keys, Backspace, Tab, Return/Enter, Delete, Shift, Caps Lock, Alt, Control, ESC, spacebar and Num(ber) Lock.	I	I	I	D	D	S	R	R	R	R	R	R	R	
1.9 Basic Procedures														

I - Introduce **D** - Develop **S** – Secure (Master) **R** - Reinforce

1. Basic Operations and Concepts – Literacy & Application														
Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12
1.9	Basic Procedures (continued).													
	a.	Turn computer on/off following correct startup and shutdown procedures.	I	D	S	R	R	R	R	R	R	R	R	R
	b.	Login with network account name.	I	D	S	R	R	R	R	R	R	R	R	R
	c.	Enter password for network access.					I	D	S	R	R	R	R	R
	d.	Use mouse skills (single, double, right & left clicks, drag, drop).	I	D	D	D	S	R	R	R	R	R	R	R
	e.	Launch and run various computer applications.	I	D	D	S	R	R	R	R	R	R	R	R
	f.	Locate program menu bar and select menu item.	I	D	D	D	D	D	S	R	R	R	R	R
	g.	Quit various computer applications using the close button	I	D	S	R	R	R	R	R	R	R	R	R
	h.	Save and retrieve work to a student network directory.		I	D	S	R	R	R	R	R	R	R	R
	i.	Save and retrieve work from removable storage media (i.e., floppy disk, CD-R, DV-R, USB Flash Drive, Memory Stick, etc.)			I	I	I	D	D	S	R	R	R	R
	j.	Resize window using minimize/maximize button.	I	I	D	D	S	R	R	R	R	R	R	R
1.10	Insert and run CD-ROM software.													
			I	D	D	S	R	R	R	R	R	R	R	R

2. Social, ethical and human issues

Students will understand the ethical, cultural and societal issues related to technology. They will practice responsible use of technology systems, information and software. These activities will encourage students to develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits and productivity.

2. Social, ethical and human issues														
Benchmark	K	1	2	3	4	5	6	7	8	9	10	11	12	
2.1 Describe some uses of technology in society (i.e., cash registers, grocery scanners, employee tags, hotel keys, credit cards, etc.).				I	D	D	D	D	D	D	D	D	D	D
2.2 Understand and adhere to:														
a. Appropriate copyright laws.				I	D	D	D	D	D	D	D	S	R	R
b. Hardware and software licensing agreements.						I	D	D	D	D	S	R	R	
c. Established district, school, classroom and computer lab policies.	I	D	D	D	D	D	S	R	R	R	R	R	R	
2.3 Respect privacy of staff and student files.					I	D	S	R	R	R	R	R	R	
2.4 Demonstrate appropriate care and use of all technology systems equipment.	I	D	D	S	R	R	R	R	R	R	R	R	R	
2.5 Understand appropriate Internet communication social and safety issues (i.e., instant messaging, email, chat rooms, blogging, and text messaging, etc.).	I	D	D	D	D	D	D	D	D	D	D	D	D	
2.6 Work cooperatively and collaboratively with others when using technology.	I	D	D	D	D	D	D	D	D	S	R	R	R	

3. Technology productivity tools: Word Processing and Visual Arts

Students will use productivity tools to enhance learning, increase productivity and promote creativity.

While using these tools students will collaborate in constructing technology-enhanced models, prepare publications and produce other creative work.

3. Productivity Tools - Word Processing (Microsoft Word) and Visual Arts (Kid Pix, Microsoft Paint and Microsoft Word Draw)		K	1	2	3	4	5	6	7	8	9	10	11	12
Benchmark														
3.1	Understand and use the following word processing skills:													
a.	Access and open a program.		I	D	D	S	R	R	R	R	R	R	R	R
b.	Open a new document by clicking on the New document icon.		I	D	D	S	R	R	R	R	R	R	R	R
c.	Enter text.	I	D	D	D	D	D	D	D	D	S	R	R	R
d.	Delete text using the delete or backspace keys.		I	D	S	R	R	R	R	R	R	R	R	R
e.	Change the text size.			I	D	S	R	R	R	R	R	R	R	R
f.	Save, retrieve & close a document.		I	D	S	R	R	R	R	R	R	R	R	R
g.	Select text.			I	D	S	R	R	R	R	R	R	R	R
h.	Edit the text of a document by changing font and emphasis (bold, italic, & underline).			I	D	S	R	R	R	R	R	R	R	R
i.	Edit the alignment/justification of a document (left, right, and center).				I	D	S	R	R	R	R	R	R	R
j.	Edit the line spacing of a document.					I	D	S	R	R	R	R	R	R

3. Productivity Tools - Word Processing (Microsoft Word) and Visual Arts (Kid Pix, Microsoft Paint and Microsoft Word Draw)														
Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12
3.1	Understand and use the following word processing skills (continued):													
k.	Manipulate a document's layout by changing margin settings.						I	D	D	D	S	R	R	R
l.	Cut, copy and paste text in a document.					I	D	D	D	D	S	R	R	R
m.	Use the Spelling checker.				I	D	D	D	D	D	S	R	R	R
n.	Use the Grammar checker.						I	D	D	D	S	R	R	R
o.	Use page breaks.										I	D	D	D
p.	Import, position and manipulate relevant graphics into a word processing document.				I	D	D	D	D	D	S	R	R	R
q.	Use the "save as" feature to create copies or new versions of documents.										I	D	D	D
r.	Use the find/replace command.										I	S	R	R
s.	Insert, position and remove tabs.										I	D	D	D
t.	Use the thesaurus.						I	D	D	D	S	R	R	R
u.	Insert and customize headers and footers.										I	S	R	R

3. Productivity Tools - Word Processing (Microsoft Word) and Visual Arts (Kid Pix, Microsoft Paint and Microsoft Word Draw)																
Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12		
3.1	Understand and use the following word processing skills (continued):															
	v.	Create and insert a table.										I	S	R	R	R
	w.	Format a table										I	S	R	R	R
	x.	Enter and modify page numbers.										I	S	R	R	R
	y.	Import a digital camera image.						I	D	S	R	R	R	R	R	R
	z.	Print a document.	I	D	D	D	S	R	R	R	R	R	R	R	R	R
	aa.	Use undo and redo features.			I	D	S	R	R	R	R	R	R	R	R	R
	ab.	Move or copy text between two or more documents.										I	S	R	R	R
3.2	Understand and use the following visual arts program skills:															
	a.	Access and open a program.	I	D	D	D	S	R	R	R	R	R	R	R	R	R
	b.	Access and use program tools (pencil, eraser, paintbrush, spray can, paint bucket, line tool, shape tools, text tool).	I	D	D	D	S	R	R	R	R	R	R	R	R	R
	c.	Create a graphic.	I	D	D	D	S	R	R	R	R	R	R	R	R	R

3. Productivity Tools - Word Processing (Microsoft Word) and Visual Arts (Kid Pix, Microsoft Paint and Microsoft Word Draw)															
Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12	
3.2	Understand and use the following visual arts program skills (continued):														
d.	Edit color and pattern.	I	D	D	D	S	R	R	R	R	R	R	R	R	
e.	Add text to a graphic.	I	D	D	D	S	R	R	R	R	R	R	R	R	
f.	Select and manipulate a graphic using tools to resize, move, copy, paste, rotate, flip & delete.				I	D	D	D	D	D	S	R	R	R	
g.	Use a scanner or digital camera to capture an image.						I	D	D	D	D	D	D	D	

4. Technology communication tools: Electronic Mail, Multimedia and Web-Based Communications

Students will use a variety of telecommunications media and formats to collaborate, publish and interact with peers, experts and others to communicate information and ideas effectively to multiple audiences.

4. Communication Tools - Electronic Mail, Multimedia (KidPix—Kindergarten; MS PowerPoint—Grades 1 – 12), and Web-Based Communications															
Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12	
4.1	Understand electronic mail.														
a.	Identify the main components of an electronic mail message, including: To, From, CC, BCC, Subject line, Body, and Attachments.					I	D	S	R	R	R	R	R	R	
b.	Understand the concepts of forwarding and replying to an email.					I	D	S	R	R	R	R	R	R	
c.	Understand the importance of saving and deleting email.					I	D	S	R	R	R	R	R	R	

4. Communication Tools - Electronic Mail, Multimedia (KidPix—Kindergarten; MS PowerPoint—Grades 1 – 12), **and Web-Based Communications**

Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12
4.2	Enter and organize information using a multimedia presentation. (KidPix—Kindergarten; MS PowerPoint—Grades 1-12)													
a.	Access and open a multimedia program.	I	I	D	D	S	R	R	R	R	R	R	R	R
b.	Open/start a new presentation.	I	I	D	D	S	R	R	R	R	R	R	R	R
c.	Add text to a slide.	I	I	D	D	S	R	R	R	R	R	R	R	R
d.	Create an additional slide.			I	D	S	R	R	R	R	R	R	R	R
e.	Add bulleted and numbered text to a slide.				I	D	D	S	R	R	R	R	R	R
f.	Insert relevant graphics from a variety of sources to a slide. (clip art, CD-R, disk, or saved, scanned, and digital images).	I	D	D	D	D	D	S	R	R	R	R	R	R
g.	Add student-produced graphs to a slide.						I	D	D	D	S	R	R	R
h.	Add video and/or digitized movie clips to a slide.						I	D	D	D	S	R	R	R
i.	Add background elements to a slide.				I	D	S	R	R	R	R	R	R	R
j.	Add transitions to a slide.				I	D	S	R	R	R	R	R	R	R
k.	Add sound effects to a slide.	I	I	D	D	D	S	R	R	R	R	R	R	R

4. Communication Tools - Electronic Mail, Multimedia (KidPix—Kindergarten; MS PowerPoint—Grades 1 – 12), **and Web-Based Communications**

Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12	
4.2	Enter and organize information using a multimedia presentation (continued).														
	i.				I	D	D	S	R	R	R	R	R	R	
	m.				I	D	S	R	R	R	R	R	R	R	
	n.				I	D	D	D	D	D	S	R	R	R	
	o.				I	D	D	S	R	R	R	R	R	R	
4.3	Communicate information using a multimedia presentation (KidPix—Kindergarten; MS PowerPoint—Grades 1-012)														
	a.				I	D	D	D	D	D	S	R	R	R	
	b.				I	D	S	R	R	R	R	R	R	R	
	c.						I	D	D	S	R	R	R	R	
4.4	Access staff-posted reference material from the district's web site.	I	I	D	S	R	R	R	R	R	R	R	R	R	

5. Technology research tools: CD-ROM Reference and Internet

Students will use technology to locate, evaluate and collect data information from a variety of sources. These tools will also be used to process the data and report results. Students will evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

5. Research Tools - CD-ROM Reference (Encyclopedia, Reader's Guide, Atlas, etc.) and Internet															
Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12	
5.1	Locate reference material using electronic media.														
	a.	Gather and research information using a reference CD-ROM.										I	D	S	S
	b.	Access and open a reference CD-ROM.										I	D	S	S
	c.	Browse and navigate the contents of a reference CD-ROM.										I	D	S	S
	d.	Identify major headings or groupings for a search.										I	D	S	S
	e.	Identify key words, names, and phrases for a search.										I	D	S	S
	f.	Perform a single-field word search.										I	D	S	S
	g.	Perform a title search.										I	D	S	S
	h.	Perform a Boolean word search.										I	D	S	S
	i.	Scroll through CD-based articles for major ideas.										I	D	S	S
	j.	Print an article from a reference CD.										I	D	S	S

5. Research Tools - CD-ROM Reference (Encyclopedia, Reader's Guide, Atlas, etc.) and Internet														
Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12
5.3	Perform information searches (continued).													
e.	Print a page from an Internet site.				I	D	D	S	R	R	R	R	R	R

6. Technology problem-solving and decision-making tools: Spreadsheets, Graphing, Mapping/Webbing, Databases and Programming

Students will use technology resources for the development of strategies for solving problems and making informed decisions in the real world.

6. Problem-solving and Decision-making Tools – Spreadsheets (MS Excel), Graphing (Graph Club—Grades K-3; MS Excel—Grades 4-12) Mapping/Webbing (Inspiration), Databases (MS Access), and Programming.														
Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12
6.1	Understand and use the following spreadsheet skills (MS Excel):													
a.	Access and open a spreadsheet program.					I	S	R	R	R	R	R	R	R
b.	Recognize the elements of a spreadsheet.					I	D	D	D	D	S	R	R	R
c.	Move between cells on a spreadsheet.					I	S	R	R	R	R	R	R	R
d.	Enter text and numbers into a spreadsheet.					I	D	D	D	D	S	R	R	R
e.	Select a cell or block of cells on a spreadsheet.					I	D	D	D	D	S	R	R	R
f.	Insert and delete rows and columns.						I	D	D	D	S	R	R	R
g.	Format a cell or block of cells.					I	D	D	D	D	S	R	R	R

6. Problem-solving and Decision-making Tools – Spreadsheets (MS Excel), **Graphing** (Graph Club—Grades K-3; MS Excel—Grades 4-12) **Mapping/Webbing** (Inspiration), **Databases** (MS Access), **and Programming**.

Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12
6.1	Understand and use the following spreadsheet skills (continued):													
	h. Save and retrieve spreadsheet files.					I	D	D	D	D	S	R	R	R
	i. Reorder columnar data by sorting.					I	D	D	D	D	S	R	R	R
	j. Insert and format column and row headings.					I	D	D	D	D	S	R	R	R
	k. Change column widths.						I	S	R	R	R	R	R	R
	l. Enter a formula into a cell.										I	D	D	D
	m. Copy and paste values and formulas.										I	D	D	D
	n. Protect cells from changes.										I	D	D	D
	o. Enter a function into a cell.										I	D	D	D
	p. Format page setup (margins, orientation & scaling).										I	S	R	R
	q. Add header and footer to spreadsheet.										I	S	R	R
	r. Print spreadsheet.						I	D	D	D	S	R	R	R
6.2	Evaluate the spreadsheet results (MS Excel)										I	D	D	D

6. Problem-solving and Decision-making Tools – Spreadsheets (MS Excel), **Graphing** (Graph Club—Grades K-3; MS Excel—Grades 4-12) **Mapping/Webbing** (Inspiration), **Databases** (MS Access), **and Programming**.

Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12	
6.3	Design an original spreadsheet.										I	D	D	D	D
6.4	Understand and use the following graphing program skills (Graph Club—Grades K-3; MS Excel—Grades 4-12):														
a.	View & contribute to a group-created graph.	I	D	D	D	D	D	D	D	D	D	D	D	D	D
b.	Understand the type of graph to use based on the type of data to be displayed.				I	D	D	D	D	D	D	D	D	D	D
c.	Access and open a graphing program.		I	D	D	S	R	R	R	R	R	R	R	R	R
d.	Enter data into the graphing program.		I	D	D	S	R	R	R	R	R	R	R	R	R
e.	Create a picture graph.		I	D	D	S	R	R	R	R	R	R	R	R	R
f.	Create a bar graph.		I	D	D	D	D	D	D	D	S	R	R	R	R
g.	Create a pie graph.		I	D	D	D	D	D	D	D	S	R	R	R	R
h.	Create a line graph.		I	D	D	D	D	D	D	D	S	R	R	R	R
i.	Add a title to a graph.		I	D	D	D	D	D	D	D	S	R	R	R	R
j.	Add a legend (key) to a graph.					I	D	D	D	D	S	R	R	R	R
k.	Add data labels to a chart.					I	D	D	D	D	S	R	R	R	R

6. Problem-solving and Decision-making Tools – Spreadsheets (MS Excel), **Graphing** (Graph Club—Grades K-3; MS Excel—Grades 4-12) **Mapping/Webbing** (Inspiration), **Databases** (MS Access), **and Programming**.

Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12	
6.4	Understand and use the following graphing program skills (continued):														
	l.										I	S	R	R	R
	m.										I	S	R	R	R
	n.					I	D	S	R	R	R	R	R	R	
	o.		I	D	D	S	R	R	R	R	R	R	R	R	
	p.										I	S	R	R	R
	q.										I	S	R	R	R
6.5	Understand and use the following concept mapping/webbing skills (Inspiration):														
	a.		I	D	D	D	D	D							
	b.				I	D	S	R	R	R	R	R	R	R	
	c.				I	D	S	R	R	R	R	R	R	R	
	d.				I	D	D	D							

6. Problem-solving and Decision-making Tools – Spreadsheets (MS Excel), **Graphing** (Graph Club—Grades K-3; MS Excel—Grades 4-12) **Mapping/Webbing** (Inspiration), **Databases** (MS Access), **and Programming**.

Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12
6.5	Understand and use the following concept mapping/webbing skills (continued):													
e.	Change main & supporting concept box shapes.				I	D	D	D						
f.	Convert a concept map into a text outline.				I	D	S	R	R	R	R	R	R	R
g.	Save a concept map.				I	D	S	R	R	R	R	R	R	R
h.	Print a concept map.				I	D	S	R	R	R	R	R	R	R
i.	Create a chronological timeline.						I	D	D	S	R	R	R	R
j.	Save a chronological timeline.						I	D	D	S	R	R	R	R
k.	Print a chronological timeline.						I	D	D	S	R	R	R	R
6.6	Understand and use the following database skills (MS Access):													
a.	Access and open a database program										I	S	R	R
b.	Recognize elements of database										I	S	R	R
c.	Plan a database										I	D	D	D
d.	Create a table										I	D	D	D

7. Problem-solving and Decision-making Tools – Spreadsheets (MS Excel), Graphing (Graph Club—Grades K-3; MS Excel—Grades 4-12) Mapping/Webbing (Inspiration), Databases (MS Access), and Programming.

Benchmark		K	1	2	3	4	5	6	7	8	9	10	11	12
6.6	Understand and use the following database skills (continued):													
d.	Create a table										I	D	D	D
e.	Create a form										I	D	D	D
f.	Create a query										I	D	D	D
g.	Create a report										I	D	D	D
h.	Enter data into a table.										I	S	R	R
i.	Find records										I	S	R	R
j.	Filter a table										I	D	D	D
k.	Use the expression builder										I	D	D	D
l.	Format controls										I	D	D	D
m.	Add graphics to a form										I	S	R	R
n.	Group records in a report										I	D	D	D
o.	Create labels										I	S	R	R

I - Introduce **D** - Develop **M** - Master **R** - Reinforce