Communication • Collaboration • Critical Thinking • Creativity • Choices • Audio

Integration • Infusion • Common Core Standards • Assessment • Web 2.0 • Research Tools • Keyboarding

Virtual Reality   Videoconference • Podcast • Web Construction • Mapping (GIS)   STREAM

Think with Technology

Archdiocese of Philadelphia Technology Competencies

Kindergarten - Grade 8

Word Processing • Spreadsheet • Multimedia • Mobile Devices • Blogging • Internet Safety • Digital Citizenship

Maker Space   Verify • Analyze • Evaluate • Synthesize • Experiment Explore   Augmented Reality

Imagination • Curiosity • Investigation • Identity • History

Innovation • Discovery • Design • Graphics • Programming • Photography • Video

Archdiocese of Philadelphia Elementary Technology Competencies

Contents

Introduction

(Click/Control Click category to move to the list)

Technology Competencies

Introduction

Technology is a lifestyle for students in the twenty-first century. The technology competencies of the Archdiocese of Philadelphia emanate from a vision of learning where students are engaged empowered learners. The students are consumers and producers of learning. Technology is a tool that facilitates the process of gathering information, curating information, utilizing information, and creating products that will illustrate and extend understanding of information.

The technology competencies are based upon the International Technology in Education (ISTE) National Standards and research on standards from various states. They provide a platform for developing proficiency while encouraging the integration of technology with the curriculum through authentic avenues. Higher order thinking skills and project-based learning, creativity and innovation, collaboration and communication become part of the tapestry of a holistic learning experience for the students. The teacher is encouraged to use the technology competencies as a scaffolding device to build technology skills and afford opportunities for independent application and cooperative use of digital proficiencies.

The multitude of digital resources available to students, including computers, handheld devices, and online tools, requires that a teacher become familiar with technology operations and pedagogical techniques to assimilate technology into the everyday learning of the students.

The instructor is a guide and model for the use of technology for the students. The instructor should be familiar with aspects of digital citizenship including respectful use of equipment and privileges, careful thought before online interactions, adherence to copyright laws, and proper attribution of cited work. The Acceptable Use Policy of the Archdiocese of Philadelphia specifies details for technology use in the school communities. The policy is updated yearly and student and teacher access contracts are to be signed.

Technology is a dynamic vehicle for learning and a bridge to connections with the local and global communities. School personnel should be aware of technology innovations and their educational application. The Elementary Technology Curriculum Committee website is an extension of the technology competencies.

Education is a life-long excursion. Twenty-first century students require Digital Age Learning and a call to "Think with Technology" to navigate the journey. Let's share the journey together.

General Technology Competencies: Cross-Platform Skills

I	Introduction to Skill, Initial Instruction: Teacher Teaches
S	Skill Building, Acquisition and Development of Skill Through Practice: Student Learns with Teacher Assistance
R	Reinforcement and Maintenance of Skill: Student Is Competent; Skill Is Reinforced For Proficiency
NA	Skill Not Addressed

Competency	Competency Levels (suggested)				
General Technology Skills	K-1	2-3	4-5	6-8	Comment
Basic care of computer: cleanliness, no food, respect for property	I/S	S	R	R	
Name technology components: computer, digital devices, peripherals and explain functions.	I/S	I/S	R	R	
Become familiar with Technology Terms/Vocabulary	I	I/S	S/R	S/R	
Log on to digital devices with username and password	I	S	R	R	
Shut down device	I	S	R	R	
Open documents	I/S	S	R	R	
Save documents: *Save as* for newly created documents (select location (network, flash drive, cloud location), select folder, if appropriate, and provide descriptive name for file. Choose *Save* for subsequent changes.	I	I/S	S	R	
Understand Icons: Opens files, applications	I	S	R	R	
Locate and start a program	I	S	R	R	
Close a program	I	I/S	R	R	
Locate and use taskbar to switch between programs	I	I/S	R	R	

Uses menu to select appropriate tasks.					
Select printer, make selections, e.g. two copies, and print	I	I/S	S	R	
Use scroll bars to move up and down/left and right	I	S	R	R	
Read and Use application menus and toolbars	I	S	R	R	
Download an application on a computer or app on a tablet.	NA	NA	I/S	R	

Information Input Competencies: Keyboarding and Manipulation Skills

I	Introduction to Skill, Initial Instruction: Teacher Teaches
S	Skill Building, Acquisition and Development of Skill Through Practice: Student Learns with Teacher Assistance
R	Reinforcement and Maintenance of Skill: Student Is Competent; Skill Is Reinforced For Proficiency
NA	Skill Not Addressed

Competency	Competency Levels (suggested)				
Keyboarding Skills	K-1	2-3	4-5	6-8	Comment
Locate keys	I/S	S	R	R	
Use both hands: left hand/left side of keyboard; right hand/right side of keyboard	I	S	R		
Uses correct hand placement for alphabet and punctuation	N/A	I/S	R	R	
Uses functional keys: Enter, Spacebar, Tab, Backspace, Delete, Arrows, and Shift key (for alternating between upper and lower case letters).	N/A	I/S	R	R	
Strives for accuracy	N/A	S	S	R	
Strives for speed	N/A	N/A	I/S	R	
Manipulation Skills	(Competency Level is contingent upon introduction of the digital device)				
	K-1	2-3	4-5	6-8	Comment
Turn On/Off Digital Equipment	I	S	R	R	
Movement: Mouse – Click, double click, point, right click	I/S	S	R	R	
Movement: Swiping, Scrolling	I/S	S	R	R	
Selection: Tapping - Single, Double	I	S	R	R	
Writing/Drawing with finger, stylus	I	S	R	R	

Digital Citizenship: Safety and Ethical Behavior

I	Introduction to Skill, Initial Instruction: Teacher Teaches
S	Skill Building, Acquisition and Development of Skill Through Practice: Student Learns with Teacher Assistance
R	Reinforcement and Maintenance of Skill: Student Is Competent; Skill Is Reinforced For Proficiency
NA	Skill Not Addressed

Competency	Competency Levels (suggested)				
Safe and Ethical Actions	K-1	2-3	4-5	6-8	Comment
Follow instructions, obey rules	I	I	S	R	
Adhere to Acceptable Use Policy	I	I	S	R	
Read information on websites to avoid inappropriate choices.	N/A	I	S	R	
Cite sources; learn procedures	N/A	N/A	I	S	
Avoid plagiarism, observe proper use of other's material	I	I	S	S	
Treat others with respect online	I	I	S	R	
Do not communicate with unknown users online.	I	I	S	R	
Do not give personal information online.	I	I	S	R	
Report objectionable websites	I	I	S	R	
Report objectionable behavior	I	I	S	R	
Create a positive digital footprint	N/A	N/A	I	S	
Create safe/secure usernames and passwords that are not shared with others	N/A	I	S	R	

Communication Competencies: Word Processing Skills/Social Media Tools (Including but not limited to): Google Drive Documents, Microsoft Word, Open Office Writer, MAC IWorks Pages. Use of Blogs, Wikis, Email.	
I	Introduction to Skill, Initial Instruction: Teacher Teaches
S	Skill Building, Acquisition and Development of Skill Through Practice: Student Learns with Teacher Assistance
R	Reinforcement and Maintenance of Skill: Student Is Competent; Skill Is Reinforced For Proficiency
NA	Skill Not Addressed

Competency	Competency Levels (suggested)				
Word Processing Skills	K-1	2-3	4-5	6-8	Comment
Understand terms/vocabulary/purpose	I	I	I	I	
Create a new document	I	S	R	R	
Open a document	I	S	R	R	
Save a document	I	I	S	R	
Insert text (edit text without erasing full lines, use cursor to locate insertion point). Understand word wrap and new for new line (Enter key)	I	S	R	R	
Type with correct punctuation.	I	S	R	R	
Format text with font choice, size, color, style	I	S	R	R	
Understand and use correct alignment: left, right, center, newspaper justification.	N/A	I	S	R	
Highlight text	N/A	I	S	R	
Delete text	I	S	R	R	
Import graphics from clip art	N/A	I	S	R	
Prepare word art (if available)	N/A	I	S	R	
Gather graphic from outside source, e.g. Internet (citation), save to file.	N/A	I	S	R	
Import graphics from file	N/A	I	S	R	

Format graphics/pictures	N/A	I	S	R	
Use find and replace	N/A	N/A	I	S	
Use cut, copy, and paste	N/A	N/A	I	S	
Create an outline: use bullets, numbering, outline function	N/A	N/A	I	S	
Select symbols	N/A	N/A	I	S	
Understand and choose appropriate visual modes: normal, print mode, web mode	N/A	N/A	I	S	
Use page setup for portrait/landscape choice, margins, paper choices	N/A	I	S	R	
Choose line spacing, single, double, multiple line spacing	N/A	N/A	I/S	R	
Use spell check and thesaurus to enhance writing.	N/A	I	S	R	
Insert date, time	N/A	I	S	R	
Insert page numbering	N/A	N/A	I/S	I/S	
Insert headers and footers	N/A	N/A	I/S	R	
Insert hyperlink	N/A	N/A	N/A	I/S	
Use draw tools	N/A	N/A	I/S	R	
Create a table	N/A	N/A	I/S	R	
Format a table, spacing, color, header rows, sizing.	N/A	N/A	I/S	R	
Uses a blog to communicate, inserts text, saves, posts when required (monitored by teacher).	N/A	N/A	I/S	R	
Participates in web design. Can be a wiki, wordpress, other tool. Uses word processing style menu items.	N/A	N/A	I/S	R	
Understands the purpose for and uses email effectively (if permitted by the school).	N/A	N/A	I/S	R	

Investigative Competencies: Research Skills/Interactive Discovery Tools (Including but not limited to): Browsers, Search Engines, Web 2.0 Tools					
I	Introduction to Skill, Initial Instruction: Teacher Teaches				
S	Skill Building, Acquisition and Development of Skill Through Practice: Student Learns with Teacher Assistance				
R	Reinforcement and Maintenance of Skill: Student Is Competent; Skill Is Reinforced For Proficiency				
NA	Skill Not Addressed				
Competency	Competency Levels (suggested)				
Research Skills	K-1	2-3	4-5	6-8	Comment
Student understand purpose of research	I	I	S	S/R	
Student reads and follows the Acceptable Use Policy	I	I	S	S/R	
Student learns search terms.	N/A	I	I/S	S/R	
Understands there are many browsers	N/A	I	I/S	R	
Uses a browser, uses links	I	I	I/S	R	
Inserts web address	N/A	I	I/S	R	
Understand and uses keyword search	N/A	I	I/S	R	
Uses advanced search techniques	N/A	N/A	I	S/R	
Uses Boolean operations (and/or/*/not)	N/A	I	I/S	S/R	
Evaluates a website for content, accuracy, legitimacy	N/A	I	S	S/R	
Understands rudiments of copyright rules	N/A	I	I/S	R	
Cites Information	N/A	I	I/S	R	
Uses Web 2.0 Use Skills for Discovery	I	I	I/S	S/R	
Tablet (iPAD/Android) Apps for Inquiry	I	I	I/S	S/R	

Data Analysis Competencies: Spreadsheet and Database Skills Tools (Including but not limited to): Microsoft Excel, Open Office Calc and Base, Google Drive Spreadsheet, MAC IWorks Numbers.					
I	Introduction to Skill, Initial Instruction: Teacher Teaches				
S	Skill Building, Acquisition and Development of Skill Through Practice: Student Learns with Teacher Assistance				
R	Reinforcement and Maintenance of Skill: Student Is Competent; Skill Is Reinforced For Proficiency				
NA	Skill Not Addressed				
Data Analysis Skills	K-1	2-3	4-5	6-8	Comment
Understands the structure of a spreadsheet: columns, rows, cells	N/A	N/A	I	S	
Enters data	N/A	N/A	I	S	
Modifies spreadsheet: height, width, size, text, alignment	N/A	N/A	I	S	
Formats cells/spreadsheet using borders, shading, patterns, text wrap.	N/A	N/A	I	S	
Uses "number" correctly: general, dates, currency, decimals	N/A	N/A	I	S	
Use merge and split cells	N/A	N/A	I	S	
Uses "drag" to populate cells with same (copy) or successive data in a range.	N/A	N/A	I	S	
Uses functions: Sum, Average, and more	N/A	N/A	I	S	
Creates charts: labels, interprets	N/A	N/A	I	S	
Database (limited to basic understanding)	K-1	2-3	4-5	6-8	Comment
Understand the purpose of a	N/A	N/A	I	S	

database					
Understand terminology of a database: record, field	N/A	N/A	I	S	
Insert data	N/A	N/A	I	S	
Sort data	N/A	N/A	I	S	
Read database report	N/A	N/A	I	S	

Presentation Competencies: Multimedia Skills Tools (Including but not limited to): Microsoft PowerPoint, Open Office Impress, Google Drive Presentation, MAC IWorks Keynote					
I	Introduction to Skill, Initial Instruction: Teacher Teaches				
S	Skill Building, Acquisition and Development of Skill Through Practice: Student Learns with Teacher Assistance				
R	Reinforcement and Maintenance of Skill: Student Is Competent; Skill Is Reinforced For Proficiency				
NA	Skill Not Addressed				
Presentation Skills	K-1	2-3	4-5	6-8	Comment
Choose layout, slide style	I	I/S	R	R	
Create text	I	I/S	R	R	
Format text	I	I/S	R	R	
Choose bullets, symbols	I	I/S	R	R	
Choose new slide, new duplicate slide	I	I/S	R	R	
Insert background: color, patterns, pictures	I	I/S	R	R	
Import graphics, pictures, video	I	I/S	R	R	
Format graphics: resize, layout	I	I/S	R	R	
Insert sound	N/A	I/S	R	R	
Prepare transitions	N/A	I/S	R	R	
Prepare custom animations	N/A	I/S	S/R	R	
Insert/create button	N/A	I/S	S/R	R	
Switch between views: editing mode, viewing modes	N/A	I/S	S/R	R	
Apply timings	N/A	I/S	S/R	R	
Navigate slides during presentation	N/A	I/S	S/R	R	
Check presentation for readability, coherence, applicability, attractiveness, uniformity	N/A	I/S	S/R	R	

Design Competencies: Illustration, Photo Editing, Web Design Skills

Tools (Including but not limited to): Microsoft Powerpoint, Open Office Impress, Google Drive Presentation, Prezi (online), MAC Keynotes, Wikispaces, Windows Paint, Tux Paint, Sketchup, Scratch, Alice, Audacity.

I	Introduction to Skill, Initial Instruction: Teacher Teaches
S	Skill Building, Acquisition and Development of Skill Through Practice: Student Learns with Teacher Assistance
R	Reinforcement and Maintenance of Skill: Student Is Competent; Skill Is Reinforced For Proficiency
NA	Skill Not Addressed

Design Skills	K-1	2-3	4-5	6-8	Comment
Understand vocabulary of presentation tools.	I	I	S	S/R	
Student creates a simple illustration.	I	I	S	S/R	
Uses the menu/toolbars (ribbons)	I	I	S	S/R	
Student can open, save, print	I	I	S	S/R	
Student inserts "slides"	N/A	I	S	S/R	
Student inserts text, background color/images, images, sound (music and narration, animation (motion).	N/A	I	S	S/R	
Student understands and uses various layouts/designs	N/A	I	S	S/R	
Student rearranges material	N/A	I	S	S/R	
Student adds hyperlinks to the project.	N/A	N/A	I/S	S/R	
Student uses transitions, controls timing, and animation of text/images.	N/A	N/A	I/S	S/R	
Student can create a simple animation using transition and timing.	N/A	N/A	I/S	S/R	

Students create images from created material:
  a. Save slides as a jpg – image file
  b. Take print screen from computer
	N/A	N/A	I/S	S/R	

Student create a podcast (audio recording with microphone and device on computer or mobile device)	N/A	N/A	I/S	S/R	
Student can use a simple photo editing program: follow menu items	N/A	N/A	I/S	S/R	
Student can create use an animation program.	N/A	N/A	I/S	S/R	
Student can use a programming/illustration tool (Alice, Sketchup, Scratch)	N/A	N/A	I/S	S/R	
Student can create a simple video and edits the video with editing tools (program, online, or mobile application).	N/A	N/A	I/S	S/R	

Contents

Immersive Experiences: (STEM, STEAM, STREAM), Augmented Reality, Virtual Reality, Makerspaces, Robotics

I	Introduction to Skill, Initial Instruction: Teacher Teaches
S	Skill Building, Acquisition and Development of Skill Through Practice: Student Learns with Teacher Assistance
R	Reinforcement and Maintenance of Skill: Student Is Competent; Skill Is Reinforced For Proficiency
NA	Skill Not Addressed

Immersive Experiences	K-1	2-3	4-5	6-8	Comment
Augmented Reality					
Virtual Reality					
STEM/STEAM/STREAM Activities					
Robotics					
Maker Activities					
Uncharted Territory					

Resources for Educators (use as a Guide for Further Learning)		

Comfort Level
  1. Never heard of or used the resource
  2. Would like to learn about the resource
  3. Comfortable enough to try the resource
  4. Feeling good about using the resource
  5. Willing and able to teach the resource to others		

Competency	Competency Levels (suggested)	
	Comfort Level	Comment
General Technology Competencies: Cross-Platform Skills		
Information Input Competencies: Keyboarding and Manipulation Skills		
Digital Citizenship: Safety and Ethical Behavior		
Communication Competencies: Word Processing Skills, Social Media		
Investigative Competencies: Research Skills/Interactive Discovery		
Data Analysis Competencies: Spreadsheet and Database Skills		
Presentation Competencies: Multimedia Skills		
Design Competencies: Illustration, Photo Editing, Web Design Skills		
Immersive Experiences: (STEM, STEAM, STREAM), Augmented Reality, Virtual Reality, Makerspaces, Robotics		