

## Elementary Technology Standards, Benchmarks, and Content

I = Introductory Understanding/Use   D = Developing Understanding/Use   P = Proficient Understanding/Use   E = Expanding/Maintaining Proficient Understanding/Use

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**STANDARD 1: Students demonstrate a sound understanding of the nature and operation of technology systems. Students are proficient in the use of technology.**

<b>P 1.1 Use input devices and output devices to successfully operate technology.</b>							<b>INT 1.1 Use input devices and output devices (including keyboarding and adaptive devices when necessary) to operate technology efficiently and effectively.</b>
P 1.1.a — use and control a mouse, track pad, or other pointer device to move pointer on screen	I	P	E	E	E	E	INT 1.1.a — use and control a mouse, track pad, or other pointer device to move pointer on screen
P 1.1.b — locate placement of letters, etc. on keyboard, bilaterally	I	D	P	I	D	D	INT 1.1.b — demonstrate good form and accuracy in keyboarding
P 1.1.c — use special keys on keyboard (shift,tab, spacebar, return, delete, caps lock, arrow keys, command, keyboard shortcuts)	I	D	D	D	P	E	INT 1.1.c — use special keys on keyboard (control, option, escape, machine-specific keys)
P 1.1.d — identify keyboard, mouse, screen, printer, media (CDs, DVDs, floppies, tapes), drives, headphones, remote control	I	D	P	E	E	E	INT 1.1.d — identify keyboard, mouse, screen, printer, media (CDs, DVDs, floppies, tapes), drives, headphones, remote control
P 1.1.e — turn computers and other appropriate devices on/off	I	D	P	I	D	P	INT 1.1.e — use audio and video devices as appropriate for projects with teacher supervision
				I	D	D	INT 1.1.f — use data collection, calculation, and recording devices with teacher supervision as needed (calculators, temperature probes, frequency oscillator, etc.)
<b>P 1.2 Use a variety of media and technology resources for directed and independent learning activities.</b>							<b>INT 1.2 Use a variety of media and technology resources for directed and independent learning activities.</b>
P 1.2.a — locate and access computer and network directories	I	D	P	E	E	E	INT 1.2.a — locate and access computer and network directories
P 1.2.b — launch (open) and quit applications and documents	I	D	P	E	E	E	INT 1.2.b — launch (open) and quit applications and documents
P 1.2.c — move between active applications		I	D	D	D	P	INT 1.2.c — move between active applications
<b>P 1.3 Communicate about technology using developmentally appropriate and accurate terminology.</b>							<b>INT 1.3 Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide.</b>
P 1.3.a — verbalize the process of using a specific technology/application (relates to ability to transfer learning)		I	D	D	D	P	INT 1.3.a — verbalize the process of using a specific technology/application (relates to ability to transfer learning) (see also INT 2.1)
P 1.3.b — explain initial concept of network connectivity and their computer to people and computers elsewhere (e.g., like telephone)		I	D	D	D	D	INT 1.3.b — explain the concept of networking including the Internet and simple network architecture (servers, desktop computers, cabling, etc.) (see also INT 2.1)
<b>P 1.4 Use developmentally appropriate multimedia resources (e.g., interactive books, educational software, elementary multimedia encyclopedias, etc.) to support learning.</b>							<b>INT 1.4 Use developmentally appropriate multimedia resources (e.g., interactive books, educational software, elementary multimedia encyclopedias, etc.) to support learning.</b>
P 1.4.a — demonstrate initial search strategies for finding information (key words, topic listings, Internet search resources)		I	D	D	D	P	INT 1.4.a — demonstrate search strategies for finding information (key words, topic listings, Internet search resources)
P 1.4.b — use hyperlinks in CDs and web pages	I	D	P	E	E	E	INT 1.4.b — use hyperlinks in CDs and web pages

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<b>STANDARD 2: Students understand the ethical, cultural, and societal issues related to technology. Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.</b>							
							<b>INT 2.1 Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide</b>
				I	D	P	INT 2.1.a — verbalize the process of using a specific technology/application (relates to ability to transfer learning) (see also INT 1.2)
				I	D	D	INT 2.1.b — explain the concept of networking including the Internet and simple network architecture (servers, desktop computers, cabling, etc.) (see also INT 1.2)
<b>P 2.1 Work cooperatively and collaboratively with peers, family members, and others when using technology.</b>							<b>INT 2.2 Discuss basic issues and demonstrate responsible use of technology and information and acknowledge personal consequences of inappropriate use.</b>
P 2.1.a — show respect for privacy of individual passwords (see also P 2.2)	P	E	E	E	E	E	INT 2.2.a — show respect for the privacy of individual passwords
P 2.1.b — demonstrate compliance with Acceptable Use Policy (see also P 2.3)	P	E	E	E	E	E	INT 2.2.b — demonstrate compliance with Acceptable Use Policy
P 2.1.c — share ideas and skills related to technology with others		I	D	D	D	P	INT 2.2.c — share ideas and skills related to technology with others
P 2.1.d — share resources through collaborative use of computers and other technology equipment		I	D	D	D	P	INT 2.2.d — share resources through collaborative use of computers and other technology equipment
<b>P 2.2 Demonstrate positive social and ethical behaviors when using technology.</b>							
P 2.2.a — show respect for privacy/ownership of files	P	E	E	E	E	E	INT 2.2.e — show respect for privacy/ownership of files
P 2.2.b — acknowledge/reference the work of others (e.g., showing web address of source; giving title of CD ROM)		I	D	D	D	P	INT 2.2.f — acknowledge/reference the work of others (e.g., showing web address of source; giving title of CD ROM)
P 2.2.c — show respect for privacy of individual passwords (see also P 2.1)	P	E	E	E	E	E	INT 2.2.g — show respect for privacy of individual passwords (see also P 2.1)
				I	D	P	INT 2.2.h — explain and use accepted rules of netiquette when communicating online
<b>P 2.3 Practice responsible use of technology systems and software</b>							
P 2.3.a — demonstrate compliance with Acceptable Use Policy (see also P 2.1)	P	E	E	E	E	E	INT 2.2.i — demonstrate compliance with Acceptable Use Policy (see also P 2.1)
P 2.3.b — demonstrate proper care of equipment, software, etc.	I	D	P	E	E	E	INT 2.2.j — demonstrate proper care of equipment, software
P 2.3.c — recognize and respond appropriately to material or messages that are inappropriate or potentially compromise their safety.	I	D	P	E	E	E	INT 2.2.k — recognize and respond appropriately to material or messages that are inappropriate or potentially compromise their safety.

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<b>STANDARD 3: Students use technology tools to enhance learning, increase productivity, and promote creativity. Students use productivity tools to collaborate in constructing technology-enhanced models, preparing publications and producing other creative works.</b>							
<b>P 3.1 Use a variety of media and technology resources for directed and independent learning activities.</b>							<b>INT 3.1 Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum.</b>
P 3.1.a — use word processing (simple document with limited formatting -- e.g., font; styles; size; cut/copy/paste; tabs; save, print, and quit shortcuts)	I	D	D	D	D	D	INT 3.1.a — use word processing to create formatted documents (including setting margins and using a variety of formatting layouts such as multi-columns)
P 3.1.b — use desktop publishing (simple text and graphics layout)	I	D	D	D	D	D	INT 3.1.b — use desktop publishing to create text and graphics layouts
P 3.1.c — use data bases and spreadsheets to organize and analyze information.		I	D	D	D	D	INT 3.1.c — use data bases and spreadsheets to organize and analyze information.
P 3.1.d — use multimedia authoring (e.g., simple AppleWorks slide show or Hyperstudio card or Kid Pix presentation)	I	D	D	D	D	D	INT 3.1.d — use multimedia authoring to create presentations (e.g., Hyperstudio, AppleWorks, iMovie presentations, etc.)
P 3.1.e — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)	I	D	P	E	E	E	INT 3.1.e — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)
P 3.1.f — use web browser independently to navigate and use educational resources on the Internet			I	D	P	E	INT 3.1.f — use web browser independently to navigate and use educational resources on the Internet
<b>P 3.2 Use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories, and create developmentally appropriate multimedia products with support from teachers, family members, or student partners.</b>							<b>INT 3.2 Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities for audiences.</b>
P 3.2.a — use word processing (simple document with limited formatting -- e.g., font; styles; size; cut/copy/paste; tabs; save, print, and quit shortcuts)	I	D	D	D	D	D	INT 3.2.a — use word processing to create formatted documents (including setting margins and using a variety of formatting layouts such as multi-columns)
P 3.2.b — use desktop publishing (simple text and graphics layout)	I	D	D	D	D	D	INT 3.2.b — use desktop publishing to create text and graphics layouts
P 3.2.c — use multimedia authoring (e.g., simple AppleWorks slide show or Hyperstudio card or Kid Pix presentation)	I	D	D	D	D	D	INT 3.2.c — use multimedia authoring to create presentations (e.g., Hyperstudio, AppleWorks, iMovie presentations)
P 3.2.d — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)	I	D	P	E	E	E	INT 3.2.d — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)
P 3.2.e — use web browser independently to navigate and use educational resources on the Internet			I	D	P	E	INT 3.2.e — use web browser independently to navigate and use educational resources on the Internet
P 3.2.f — use problem-solving, logical, and critical thinking software programs	I	D	D	D	D	D	INT 3.2.f — use problem-solving, logical, and critical thinking software programs
P 3.2.g — use data bases and spreadsheets to organize and analyze information.		I	D	D	D	D	INT 3.2.g — use data bases and spreadsheets to organize and analyze information.
P 3.2.h — create simple hyperlinks within documents			I	D	D	D	INT 3.2.h — create hyperlinks within documents and construct simple web pages

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<b>STANDARD 4: Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences. Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.</b>							
<b>P 4.1 Use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories.</b>							<b>INT 4.1 Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities for audiences.</b>
P 4.1.a — use word processing (simple document with limited formatting -- e.g., font; styles; size; cut/copy/paste; tabs; save, print, and quit shortcuts)	I	D	D	D	D	D	INT 4.1.a — use word processing to create formatted documents (including setting margins and using a variety of formatting layouts such as multi-columns)
P 4.1.b — use desktop publishing (simple text and graphics layout)	I	D	D	D	D	D	INT 4.1.b — use desktop publishing to create text and graphics layouts
P 4.1.c — use multimedia authoring (e.g., simple AppleWorks slide show or Hyperstudio card or Kid Pix presentation)	I	D	D	D	D	D	INT 4.1.c — use multimedia authoring to create presentations (e.g., Hyperstudio, AppleWorks, iMovie presentations)
P 4.1.d — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)	I	D	P	E	E	E	INT 4.1.d — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)
P 4.1.e — use web browser independently to navigate and use educational resources on the Internet			I	D	P	E	INT 4.1.e — use web browser independently to navigate and use educational resources on the Internet
P 4.1.f — use email (teacher-directed; group/class account)	I	D	D	D	D	D	INT 4.1.f — use email (teacher-directed; group/class account)
P 4.1.g — use data bases and spreadsheets to organize and analyze information.		I	D	D	D	D	INT 4.1.g — use data bases and spreadsheets to organize and analyze information.
P 4.1.h — create simple hyperlinks within documents			I	D	D	D	INT 4.1.h — create hyperlinks within documents and construct simple web pages
<b>P 4.2 Gather information and communicate with others using telecommunications, with support from teachers, family members, or student partners.</b>							<b>INT 4.2 Use telecommunications efficiently and effectively to access remote information, communicate with others in support of direct and independent learning.</b>
P 4.2.a — use email (teacher-directed; group/class account)	I	D	D	D	D	D	INT 4.2.a — use email (teacher-supervised using group/class account)
P 4.2.b — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)	I	D	P	E	E	E	INT 4.2.b — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)
P 4.2.c — use web browser independently to navigate and use educational resources on the Internet			I	D	P	E	INT 4.2.c — use web browser independently to navigate and use educational resources on the Internet
P 4.2.d — use web-based communication tools under direct teacher supervision (e.g., Ask-an-Expert sites, web-based chats or bulletin boards for educational purposes)	I	D	D	D	D	D	INT 4.2.d — use web-based communication tools under direct teacher supervision (e.g., Ask-an-Expert sites, web-based chats or bulletin boards for educational purposes)
				I	D	D	INT 4.2.e — explain and use accepted rules of netiquette when communicating online
							<b>INT 4.3 Use telecommunications and online resources (e.g., e-mail, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for various audiences.</b>
				I	D	D	INT 4.3.a — evaluate information gathered from various resources on the Internet for credibility and accuracy independently and with teacher guidance.
				I	D	P	INT 4.3.b — use web page/site to explore and create projects

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<b>STANDARD 5: Students use technology to locate, evaluate, and collect information from a variety of sources. Students use technology tools to process data and report results. Students evaluate and select new information resources and technological innovations based on the appropriateness of specific tasks.</b>						
<b>P 5.1 Gather information and communicate with others using telecommunications, with support from teachers, family members, or student partners.</b>						<b>INT 5.1 Use technology and online resources (e.g., e-mail, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for various audiences.</b>
P 5.1.a — use web-based communication tools under direct teacher supervision (e.g., email, Ask-an-Expert sites, web-based chats or bulletin boards for educational purposes)	I	D	D	D	D	D
P 5.1.b — use teacher-selected and previewed web search resources to gather relevant information and search resources under direct teacher supervision (e.g., Yahoo!igans).	I	D	D	D	D	P
P 5.1.c — use web search strategies to gather relevant information with teacher guidance (including key words and delimiters such as quotation marks, commas, etc.).		I	D	D	D	D
P 5.1.d — evaluate information gathered from the Internet for credibility and accuracy with teacher guidance.		I	D	D	D	D
P 5.1.e — publish solutions or products using multimedia and/or a website appropriate for a target audience under teacher direction.	I	D	D	D	D	D
<b>P 5.2 Use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories.</b>						<b>INT 5.2 Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem-solving, self-directed learning, and extended learning activities.</b>
P 5.2.a — use word processing (simple document with limited formatting -- e.g., font; styles; size; cut/copy/paste; tabs; save, print, and quit shortcuts)	I	D	D	D	D	D
P 5.2.b — use desktop publishing (simple text and graphics layout)	I	D	D	D	D	D
P 5.2.c — use multimedia authoring (e.g., simple AppleWorks slide show or Hyperstudio card or Kid Pix presentation)	I	D	D	D	D	D
P 5.2.d — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)	I	D	P	E	E	E
P 5.2.e — use web browser independently to navigate and use educational resources on the Internet			I	D	P	E
P 5.2.f — use email (teacher-directed; group/class account)	I	D	D	D	D	D
P 5.2.g — use DVD, CD-ROM, laser disc, etc.	I	D	P	E	E	E
P 5.2.h — use electronic library tools (catalog, circulation, and reference)			I	D	D	D
P 5.2.i — use data bases and spreadsheets to organize and analyze information.		I	D	D	D	D
<b>P 5.3 Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.</b>						<b>INT 5.3 Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.</b>
				I	D	D
P 5.3.b — determine when a project may be enhanced by using technology with teacher direction	I	D	D	D	P	
INT 5.3.c — discriminate between Internet, email, and other technologies with teacher direction	I	D	P	E	E	
INT 5.3.d — evaluate appropriate use of Internet and traditional sources with teacher direction (e.g., books, magazines)	I	D	P	E	E	
				I	D	D
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<b>STANDARD 6: Students use technology resources for solving problems and making informed decisions. Students employ technology in the development of strategies for solving problems in the real world.</b>							
<b>P 6.1 Use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories.</b>							<b>INT 6.1 Use technology resources (e.g., data collection devices, videos, educational software) for problem-solving, self-directed learning, and extended learning activities.</b>
P 6.1.a — use word processing (simple document with limited formatting -- e.g., font; styles; size; cut/copy/paste; tabs; save, print, and quit shortcuts)	I	D	D	D	D	D	INT 6.1.a — use word processing to create formatted documents (including setting margins and using a variety of formatting layouts such as multi-columns)
P 6.1.b — use desktop publishing (simple text and graphics layout)	I	D	D	D	D	D	INT 6.1.b — use desktop publishing to create text and graphics layouts
P 6.1.c — use multimedia authoring (e.g., simple AppleWorks slide show or Hyperstudio card or Kid Pix presentation)	I	D	D	D	D	D	INT 6.1.c — use multimedia authoring to create presentations (e.g., Hyperstudio, AppleWorks, iMovie presentations)
P 6.1.d — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)	I	D	P	E	E	E	INT 6.1.d — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)
P 6.1.e — use web browser independently to navigate and use educational resources on the Internet			I	D	P	E	INT 6.1.e — use web browser independently to navigate and use educational resources on the Internet
P 6.1.f — use email (teacher-directed; group/class account)	I	D	D	D	D	D	INT 6.1.f — use email (teacher-directed; group/class account)
P 6.1.g — use DVD, CD-ROM, laser disc, etc.	I	D	P	E	E	E	INT 6.1.g — use DVD, CD-ROM, laser disc, etc.
P 6.1.h — use electronic library tools (catalog, circulation, and reference)			I	D	D	D	INT 6.1.h — use electronic library tools (catalog, circulation, and reference)
P 6.1.i — use data bases and spreadsheets to organize and analyze information.		I	D	D	D	D	INT 6.1.i — use data bases and spreadsheets to organize and analyze information.
P 6.1.j — use problem-solving, logical, and critical thinking software programs	I	D	D	D	D	D	INT 6.1.j — use problem-solving, logical, and critical thinking software programs
					I	D	INT 6.1.k — use devices for data collection activities (e.g., probes)
<b>P 6.2 Gather information and communicate with others using telecommunications, with support from teachers, family members, or student partners.</b>							<b>INT 6.2 Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.</b>
				I	D	D	INT 6.2.a — select and use tools (word processor, spreadsheet, and/or database, and multimedia authoring) consistent with nature of activity
				I	D	D	INT 6.2.b — select appropriate search resources for the intended purpose
P 6.2.a — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)	I	D	P	E	E	E	INT 6.2.c — use web browser (basic use including hyperlinks, forward, back, home, entering URLs, using and adding bookmarks)
P 6.2.b — use web browser independently to navigate and use educational resources on the Internet			I	D	P	E	INT 6.2.d — use web browser independently to navigate and use educational resources on the Internet
				I	D	D	INT 6.2.e — evaluate websites (media literacy including purpose, authorship, bias, etc.)
P 6.2.c — use email (teacher-directed; group/class account)	I	D	D	D	D	D	INT 6.2.f — use email (teacher-directed; group/class account)
<b>P 6.3 Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources</b>							<b>INT 6.3 Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources</b>
P 6.3.a — compare results from two or more search resources with teacher direction		I	D	D	D	D	INT 6.3.a — compare results from two or more search resources
P 6.3.b — evaluate information gathered from the Internet for accuracy, relevance, appropriateness, etc. with teacher direction		I	D	D	D	D	INT 6.3.b — evaluate information gathered from the Internet for accuracy, relevance, appropriateness, date of posting, bias, etc.