Educational Technology Curriculum Framework

The ISTE

National Educational Technology Standards (NETS•S)and Performance Indicators for Students

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.
b. 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.
c. 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.

ISTE/ Archdiocese of Louisville (AL) Performance Indicators	Kindergarten	Grade One	Grade Two
Technology Operations and Concepts			
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.	01Identify computer hardware: monitor, keyboard, mouse, disk drive, CD drive, printer. 02 Distinguish between hardware and software. 03 Log on, log off 04Use proper posture. 05 Use spacebar, enter , backspace, caps lock and arrow keys. 06 Use letter and number keys. ~~07~~ Open, use and quit applications. ~~08~~Select an option from a menu. 09 Navigate inside a graphical user interface (gui) e.g., Windows, MAC OS Productivity Tools A. Word Processing/Desktop Publishing Enter text. Use one space between words. Place cursor for editing purposes. B. Database C. Spreadsheet D. Use content appropriate software. 01 Use content appropriate software. 02 Use content appropriate Internet sites.	10 Use shift key. 11 Use vertical and horizontal scroll bars. 12 Use save, print and menu options. Productivity Tools E. Word Processing/Desktop Publishing 04 Recognizes a word processing document. 05 Distinguishes between upper and lower case letters**.** 06 Use punctuation marks. 07 Use one space after punctuation. 08 Use capital letters correctly. 09 Insert graphics and clip art. 10 Insert graphics from a file. F. Database G. Spreadsheet H. Use content appropriate software. I. Use grade appropriate drawing tools. J. Use alternate technologies to reinforce content curriculum. (ie geoSafari, Leap Frog, Leapster)	13 Introduce home row keys . 14 Use two hands while typing or adaptation for special needs students. 15 Use maximize and minimize. Productivity Tools K. Word Processing/Desktop Publishing 11 Use word wrap. 12 Use editing skills. 13 Use enter key. L. Database M. Spreadsheet 01 Identify the purpose of a spreadsheet. 02 Create a pie, bar, and line chart. N. Use content appropriate software. O. Use grade appropriate drawing tools. P. Use alternate technologies to reinforce content curriculum.

Technology Operations and Concepts (cont.)			
	Q. Use grade appropriate drawing tools. 01 Use grade appropriate drawing tools. R. Use alternate technologies to reinforce content curriculum. 01 Use alternate technologies to reinforce content curriculum.		
Digital Citizenship			
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.	01 Recognize ownership of own work. 02 Recognize ownership of other people's work. 03 Sign and discuss the Acceptable Use Policy. 04 Participate in an Internet Safety program (iSafe).	05 Recognize another person's right to privacy. *** Sign and discuss the Acceptable Use Policy. *** Participate in an Internet Safety program (iSafe).	06 Recognize that one must have permission to copy another person's work. *** Signs and discusses the Acceptable Use Policy. *** Participate in an Internet Safety program (iSafe).

Performance Indicators	Kindergarten	Grade One	Grade Two
Creativity and Innovation			
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.			
Communication and Collaboration			
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.	01 Illustrate ideas using software, e.g., counting books, picture books, alphabet books, etc.	02 Write and illustrate stories. 03 Slide show software to present ideas. (Templates may be used.)	

Performance Indicators	Kindergarten	Grade One	Grade Two
Research and Information Fluency			
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.		A. Internet use/ information retrieval 01 Recognize a web browser. 02 Relate web pages to URL. 03 Recognize the school home page. 04 Open a web browser and use the Home, Back, Forward and Print features. 05 Use links to go to a web page. 06 Use web page to practice content skills. B. Research Skills 01 Use the automated catalog to select library materials.	A. Internet use/ information retrieval 07 Understand the function of a home page on the web. B. Research Skills
Critical Thinking, Problem Solving, and Decision Making			
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.	01 Use grade appropriate problem-solving software. 02 Use grade appropriate videos for decision making. 03 Use content appropriate electronic tools. 04 Integrate productivity tools for problem-solving.	***Use grade appropriate problem-solving software. *** Use grade appropriate videos for decision making. *** Use content appropriate electronic tools. *** Integrate productivity tools for problem-solving.	***Use grade appropriate problem-solving software. *** Use grade appropriate videos for decision making. *** Use content appropriate electronic tools. ***Integrate productivity tools for problem-solving.

ISTE/ Archdiocese of Louisville (AL)

Performance Indicators	Grade Three	Grade Four	Grade Five
Technology Operations and Concepts			
A. Use keyboards and other common input and output devices (including adaptive devices when necessary) efficiently and effectively. B. Discuss common uses of technology in daily life and the advantages those uses provide.	16 Introduce proper finger/key placement. 17 Keyboard with a speed of 10 words per minute with 75% accuracy. 18 Use shift key to access symbol keys. Productivity Tools S. Word Processing/Desktop Publishing 14 Adjust font, style, (bold, underline, italics), size of text, color. 15 Justify text. 16 Spell checks. 17 Use tab key. 18 Use quotation marks. 19 Use print preview, zoom, etc. 20 Print specific pages of a multi-page document. 21 Copy and paste; cut and paste. 22 Delete words in a document. 23 Use paragraph formatting (spacing). T. Database 01 Recognize a database document.	19 Keyboard with a speed of 12 words per minute with 75% accuracy. 20 Identify appropriate mathematics operation symbols (+, -, *, /) on a keyboard. 21 Identify computer hardware, hard drive, server, network. Productivity Tools Z. Word Processing/Desktop Publishing 24 Use multicolumn layout. AA. Database 11 Use find and sort to search for specific information. 09 Use status panel to determine the number of selected records. 10 Create a simple database. 11 Define fields by typing a field name and selecting a field type (text only). 12 Save and retrieve database documents. BB. Spreadsheet 05 Recognize a spreadsheet	22 Keyboard with a speed of 15 words per minute with 75% accuracy. Productivity Tools FF. Word Processing/ Desktop Publishing 25 Use find/replace. 26 Use thesaurus. 27 Create a table. 28 Use intermediate formatting: create borders, adjust margins, change page orientation, insert text boxes, word art, drawing tools. GG. Database 16 Create a report. 17 View data in multiple layouts. 18 Print database documents. HH. Spreadsheet 08 Use sort. 09 Use functions: sum and average. 10 Format cell attributes: (font, size, color, alignment, number, style, row height and column width, borders)

	02 Use terms "field" and "record". 03 Enter data on a template. 04 Identify the purpose of a database. 05 Use layout menu to view sample data in different ways: browse mode, list mode. 06 Use find mode to search for specific information. 07 Use status panel to determine the number of found records. 08 Show all records. 09 Add a new record. 10 Delete records. U. Spreadsheet 03 Create an original spreadsheet. 04 Save, print, and retrieve spreadsheet documents. V. Use content appropriate software. W. Use grade appropriate drawing tools. X. Use alternate technologies to reinforce content curriculum Y. Use graphic organizer software. (ie Kidspiration, Inspiration)	document, cell, row, column, cell address, active cell and entry. 06 Enter/edit cell data on a template. 07 Use formulas for addition, subtraction, multiplication, and division. CC. Use content appropriate software. DD. Use grade appropriate drawing tools. EE. Use alternate technologies to reinforce content curriculum. 02 Use digital camera, scanner, video equipment.	II. Use content appropriate software. JJ. Use grade appropriate drawing tools. KK. Use alternate technologies to reinforce content curriculum. 03 Use multimedia projector.

Digital Citizenship			
A. Discuss common uses of technology in daily life and the advantages those uses provide. B. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.	07 Recognize the necessity of citing sources. 08 Understand term: copyright. *** Sign and discuss the Acceptable Use Policy. *** Participate in an Internet Safety program (iSafe).	13 Understand and respect software laws. 14 Recognize and respect basic copyright laws. 15 Recognize copyright symbol. ***Sign and discuss the Acceptable Use Policy. ***Participate in an Internet Safety program (iSafe).	12 Understand terms: virus, virus protection, piracy and security. *** Sign and discuss the Acceptable Use Policy. *** Participate in an Internet Safety program (iSafe).

Performance Indicators	Grade Three	Grade Four	Grade Five
Creativity and Innovation			
A. Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum. B. Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom.			

Communication and Collaboration			
A. Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom. B. Use telecommunications efficiently and effectively to access remote information, communicate with others in support of direct and independent learning, and pursue personal interests. C. Use telecommunications and online resources (e.g., email, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom.	04 Use basic digital photography.	05 Create basic multimedia presentations with text and graphics. 06 Use video for internal broadcast.	07 Create a multimedia presentation with transitions, animation, and audio. 08 Understand and use appropriate Internet etiquette (netiquette).

Performance Indicators	Grade Three	Grade Four	Grade Five
Research and Information Fluency			
A. Use telecommunications and online resources (e.g., email, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom. B. Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem solving, self-directed learning, and extended learning activities. C. Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.	A. Internet use/information retrieval 08 Enter a URL to find specific information. 09 Use WebQuests to retrieve information. 10 Use scavenger hunts to retrieve information. 11 Recognize and use links to find specific information. 12 Use online encyclopedia and dictionary with keyword search.) 13 Search for images and download B. Reference Software	A. Internet use/ information retrieval 14 Use age appropriate search engines to find specific information. 15 Add/remove favorite/bookmark. 16 Find, retrieve, and save graphics, pictures, audio clips, video clips. 17 Identify parts of a URL. B. Research Skills 02 Use grade appropriate reference software.	C. Internet use/information retrieval 18 Use multiple search engines to research a variety of topics. D. Research Skills ***Use grade appropriate reference software.

Performance Indicators	Grade Three	Grade Four	Grade Five
Critical Thinking, Problem Solving , and Decision Making			
A. Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem solving, self-directed learning, and extended learning activities. B. Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems. C. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources.	*** Use grade appropriate problem-solving software. *** Use grade appropriate videos for decision-making. *** Use content appropriate electronic tools. *** Use productivity tools for problem-solving.	05 Evaluate appropriateness of a web site based on a web search description. *** Use grade appropriate problem-solving software. *** Use grade appropriate videos for decision-making. *** Use content appropriate electronic tools. ***Use productivity tools for problem-solving.	06 Evaluate accuracy of information on web sites. ***Use grade appropriate problem-solving software. *** Use grade appropriate videos for decision-making. *** Use content appropriate electronic tools. ***Use productivity tools for problem-solving.

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Performance Indicator	Grade Six	Grade Seven	Grade Eight
Technology Operations and Concepts			
A. Apply strategies for identifying and solving routine hardware and software problems that occur during everyday use. B. Demonstrate an understanding of concepts underlying hardware, software, and connectivity, and of practical applications to learning and problem solving.	23 Keyboard with a speed of 20 words per minute with 75% accuracy. 24 Multitasking by using several active files. 25 Apply strategies for troubleshooting hardware and software problems. Productivity Tools LL. Word Processing/Desktop Publishing 29 Insert headers and footers. 30 Use advanced formatting to edit menus, to insert date, time and page number. 31 Insert/adjust columns, page and section breaks. 32 Incorporate spreadsheet into word processing document. 33 Save document in alternate format. 34 Create a two-sided, three-column brochure. MM. Database 19 Use field types: date, number, calculation, summary, multimedia. 20 Add/edit fields to an existing database. NN. Spreadsheet	26 Keyboard with a speed of 25 words per minute with 75% accuracy. Productivity Tools RR. Word Processing/Desktop Publishing SS. Database TT. Spreadsheet 13 Create header rows for multi-page reports. 14 Use Print Preview for optimal orientation and paper size. UU. Use content appropriate software. VV. Use grade appropriate drawing tools. WW. Use alternate technologies to reinforce content curriculum.	27 Keyboard with a speed of 30 words per minute with 75% accuracy. Productivity Tools XX. Word Processing/Desktop Publishing YY. Database 21 Generate multiple reports from the same database. ZZ. Spreadsheet AAA. Use content appropriate software. BBB. Use grade appropriate drawing tools. CCC. Use alternate technologies to reinforce content curriculum.

	11 Insert/delete cells, rows, columns. 12 Use functions (MIN, MAX, DATE, RAND,ROUND, COUNT.) 13 Use fill commands (down, right, special.) OO. Use content appropriate software. PP. Use grade appropriate drawing tools. QQ. Use alternate technologies to reinforce content curriculum.		
Digital Citizenship			
A. Demonstrate knowledge of current changes in formation technologies and the effect those changes have on the workplace and society. B. Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse. C. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems.	***Sign and discuss the Acceptable Use Policy. ***Participate in an Internet Safety program (iSafe).	15 Recognize the social and legal implications of propagating viruses, hacking, sending or posting offensive materials and vandalism. ***Sign and discuss the Acceptable Use Policy. ***Participate in an Internet Safety program (iSafe).	***Sign and discuss the Acceptable Use Policy. ***Participate in an Internet Safety program (iSafe).

Performance Indicators	Grade Six	Grade Seven	Grade Eight
Creativity and Innovation			
A. Use content-specific tools, software, and simulations (e.g., environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research. B. Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum.			

Performance Indicators	Grade Six	Grade Seven	Grade Eight
Communication and Collaboration			
A. Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom. B. Collaborate with peers, experts, and others using telecommunications and collaborative tools to investigate curriculum-related problems, issues, and information , and to develop solutions or products for audiences inside and outside the classroom.	09 Create web pages for publication on the intranet/Internet.	10 Participate in videoconferencing, web enabled software, online courseware, podcasting, and blogging (in a controlled environment.)	11 Create advanced multimedia presentations that involve video and audio editing.

Performance Indicators	Grade Six	Grade Seven	Grade Eight
Research and Information Fluency			
A. Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom. B. Collaborate with peers, experts, and others using telecommunications and collaborative tools to investigate curriculum-related problems, issues, and information , and to develop solutions or products for audiences inside and outside the classroom. C. Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems. D. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems.	A. Internet use/information retrieval B. Research Skills ***Use grade appropriate reference software.	E. Internet use/information retrieval F. Research Skills ***Use grade appropriate reference software.	G. Internet use/information retrieval H. Research Skills ***Use grade appropriate reference software.

Performance Indicators	Grade Six	Grade Seven	Grade Eight
Technology Problem-Solving and Decision-Making			
A. Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems. B. Demonstrate an understanding of concepts underlying hardware, software, and connectivity, and of practical applications to learning and problem solving. C. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems.	***Use grade appropriate problem-solving software. *** Use grade appropriate videos for decision-making. *** Use content appropriate electronic tools. ***Use productivity tools for problem-solving.	***Use grade appropriate problem-solving software. *** Use grade appropriate videos for decision-making. *** Use content appropriate electronic tools. ***Use productivity tools for problem-solving.	***Use grade appropriate problem-solving software. *** Use grade appropriate videos for decision-making. *** Use content appropriate electronic tools. *** Use productivity tools for problem-solving.