

Computer Applications Skills Continuum (4th Grade)

Standard 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

Students will continue to practice skills introduced in earlier grade(s) and be introduced to and practice:

Explain the uses of productivity tools

(P)

Explain an integrated software package

(P)

KEYBOARDING

Use proper posture:

Proper body position (sit up straight)

(C)

Proper position of keyboard (center with body)

(C)

Correct wrist & elbow placement

(C)

Use two hands while typing:

Left hand for keys on left side of keyboard

(C)

Right hand for keys on right side of keyboard

(C)

Key in Network ID and Password

(C)

Identify home row keys:

ASDF JKL;

(C)

Use thumbs for spacebar

(C)

Use home row keys

Use correct finger positioning

(C)

Use keys other than home row:

M

(C)

C

(C)

I

(C)

B

(C)

P

(C)

W

(C)

G

(C)

Q

(C)

U

(C)

Use appropriate fingers:

Left Shift

(P)

Right Shift

(P)

Backspace

(P)

Tab

(P)

Use caps lock key properly

(P)

Use punctuation keys correctly:

. Period

(P)

' Apostrophe

(P)

, Comma

(P)

" Quotation Marks

(P)

; Semicolon

(P)

: Colon

(P)

Use special keys:

Enter

(C)

Ctrl-Alt-Delete

(C)

Esc (escape)

(C)

Use number keys		(C)
Keyboard with a speed of 10 wpm		(C)
WORD PROCESSING		
Recognize a word processing document		(C)
Identify the purposes of a word processing document		(C)
Answer questions relating to a word processing document		(C)
Edit a word processing document		(C)
Use upper and lower case letters appropriately		(C)
Use correct spacing:	One space between words	(C)
	One space after punctuation	(C)
	Enter key to create blank lines	(C)
	Delete key to delete individual letter/character to the right	(C)
	Backspace to delete individual letter/character to the left	(C)
	Backspace or Delete key to delete blank lines	(C)
	Line Spacing	(P)
Point and click with mouse		
Place the cursor for editing purposes		(C)
Highlight/Select text and apply changes:	Change the font	(C)
	Change the size of text	(C)
	Change the text color	(C)
Highlight/Select text and apply style changes:	Bold	(C)
	Underline	(C)
	Italics	(C)
Set alignments:	Center	(P)
	Left	(P)
	Right	(P)
	Justified	(I)
Use formats:	Bulleted	(P)
	Numbered	(P)
	List	(P)
	Drop Cap	(I)
Use spell check to check a document		(C)
Use thesaurus		(I)
Format a document with two or more columns		(P)
Insert breaks:	Page	(P)
	Section	(P)
	Column	(P)
Create a Header		(P)
Create a Footer		(P)
Use the Show/Hide Invisibles		(P)
Set page margins		(P)
Change page orientation:	Landscape	(P)
	Portrait	(P)
Insert a page number		(P)
Use tab key to indent paragraph		(C)
Use Wizards		(I)
Utilize Toolbars:	Drawing	(P)

	Standard	(P)
	Formatting	(P)
Use Assistants		(I)
Insert picture/clip art		(C)
Format picture/clip art		(C)
Align picture/clip art		(C)
Format picture/clip art using Layout Wrapping Styles		(I)
Insert hyperlinks		(I)
Create:	Brochure	(P)
	Newsletter	(P)
SPREADSHEET		
Recognize a spreadsheet document:	Cell	(C)
	Cell Address	(C)
	Row	(C)
	Column	(C)
	Label	(C)
Identify	Entry Bar/Formula Bar	
Answer questions using a spreadsheet		(C)
Identify purposes of a spreadsheet		(C)
Given specific directions, enter data into a spreadsheet:	Using a template	(C)
	Titles	(C)
	Column labels	(C)
	Row labels	(C)
	Formulas	(P)
	Use a blank spreadsheet	(P)
Identify the active cell		
Move cell data:	Cut	(C)
	Copy	(C)
	Paste	(C)
	Delete	(C)
	Insert row(s)	(P)
	Insert column(s)	(P)
	Insert a chart	(P)
	Delete row(s)	(P)
	Delete column(s)	(P)
	Move data in columns and/or rows	(P)
Format data in a cell:	Font	(C)
	Size	(C)
	Color	(C)
	Style	(C)
	Numbers	(P)
	Currency	(P)
Select/Highlight data in a spreadsheet	Select cells, entire row, entire column, and cells for making a chart/graph	(P)
Format cells:	Alignment	(P)
	Row Height	(P)
	Column Width	(P)
	Wrap Text	(P)
	Borders	(P)
	Fill Colors	(P)
Freeze row and column headings		(P)

Display and print spreadsheet:	With gridlines	(P)
	Without gridlines	(P)
	With column & row headings	(P)
	Without column & row headings	(P)
Formulas:	Explain the concept of formulas	(P)
Identify the symbols used in formulas:	+ (addition)	(P)
	= (equal sign)	(P)
	- (subtraction)	(P)
	* (multiplication)	(P)
	/ (division)	(P)
	() (parentheses)	(P)
Create formulas using:	+, -, *, /	(P)
	Use Sum, AutoSum	(P)
Use existing functions or create formulas to solve mathematical problems	Sum	(I)
Printing:	Specific and/or non-consecutive pages	(P)
Sort data:	In descending/ascending order	(P)
Charts/Graphs:	Answer questions using a computer-generated chart/graph	(C)
	As a class introduce electronic graphic organizers (Venn diagrams)	(P)
	Use charts/graphs	(P)
	Identify the purpose of charting data	(P)
	Column	(P)
	Bar	(P)
Format a basic chart/graph:	Resize charts	(P)
	Move charts	(P)
Use a prepared spreadsheet to create a graph		
As a class, use a graph to produce results and make informed decisions to answer real life questions		(C)
Format various parts of a chart:	Title the chart	(P)
	Label the X and Y axes	(P)
Format the text appearance in a chart:	Font and Size	(P)
	Style	(P)
	Color	(P)
Insert a spreadsheet and/or chart into a presentation		(C)
PRESENTATION		
Create multimedia projects individually or as a class activity using age-appropriate software		(C)
Create a simple presentation		(C)
Insert:	New slide	(C)
	Textboxes	(C)
	Picture from clip art	(C)
	Picture from a file	(C)
	Movie	(P)
	Word Art	(C)
	Diagram	(P)
	Sound	(P)
	Table	(P)
	Slide numbers	(P)
	Date and time	(P)

	Hyperlink	(P)
Format:	Background color	(C)
	Text (appropriate font, size & color)	(P)
	Bullets and numbering	(P)
	Slide design	(C)
	Slide design – Color schemes	(C)
	Alignment	(P)
Use sizing handles	Picture (size & shape)	(P)
Setup presentation/show:	Slide Show	(C)
	Slide Transitions	(P)
Delete	Slide	(C)
Save in different formats:	html, ppt, pps	(P)
Choose appropriate layout:	Title Slide	(P)
	Title and Text	
	Bulleted List	(P)
Use slide view(s):	Slide order	(P)
Use rules of good presentations:	Content is clearly stated	(P)
	Design is pleasing to the eye	(P)
	Design is consistent	(P)

DATABASE

Define database	Record	
	Field	
Identify fields that make up a single record		(P)
Enter information into appropriate fields		(P)
Search a database to retrieve specific information		(P)
Use logical operators to refine searches:	= , < , > , And, Or, Not	(P)
Answer comprehension questions using a given electronic resource		(C)
Analyze data from an electronic resource and present conclusions		(C)
Analyze data from a data table		
Sort by field type		(P)
Sort by:	Descending	(P)
	Ascending	(P)
Navigate through records		(P)
Learn the similarities of a database and a spreadsheet by practicing database skills using a spreadsheet		(P)

Standard 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:

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

Students will continue to practice skills introduced in earlier grade(s) and be introduced to and practice:

TELECOMMUNICATIONS

Define telecommunications		
Use templates to present written communication		(C)
Identify how the community uses telecommunications in everyday activities:	Business, library, educational institutions & government	(P)
List advantages and disadvantages of using telecommunications		(P)
Describe ways in which telecommunications tools promote collaboration, research, publication, communication and productivity		(P)
Explain the use of cell phones		
Explore finished products that have been electronically created:	Graphs, charts, signs, banners, cards, portfolio piece, technical writing	(P)
As a class, participate in collaborative problem-solving activities using interactive communications and online resources:	E-mail, online	(P)
Design, create and participate in projects which will be published or monitored on the web by the teacher		(I)

E-MAIL

Define e-mail		(C)
Define netiquette		
Understand and use netiquette:	Use language that does not include profanity, socially insensitive remarks or insults	(P)
Give examples of the appropriate use of e-mail and/or purpose of e-mail:	Ask an expert, permission to use another's work, collaboration with peers around the world, communication, submit assignments to teachers, communicate with prospective colleges	(P)
Give examples of the inappropriate use of e-mail:	Chain mail, flaming, personal gain, junk mail, phishing	(P)
Explain why a password needs to be kept secret		(P)

PRESENTATION

Explain the purpose of a presentation:	Communication	(C)
	Show knowledge of content subject	(C)
	Publish/Share information	(C)
Create and publish products collaboratively for audiences inside and outside the classroom using technology tools	Multimedia or presentation	

Use technology communication to participate in online group projects and learning activities:	CSILE, JCPSONline	(C)
Use interactive communications to access remote information and to communicate with others in support of direct and independent learning		(P)
Use templates to present written communication		(C)
Create and/or modify multimedia projects individually or as a class activity using age-appropriate software:	Photo Story, etc.	(P)
Identify and discuss the use of multimedia tools to report content area information:	United Streaming, BrainPOP	(P)

Standard 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

Students will continue to practice skills introduced in earlier grade(s) and be introduced to and practice:

Demonstrate knowledge of appropriate use of the Internet:	Education-based research (e.g. gathering data)	(C)
	Define appropriate, inappropriate web sites	
Identify and/or use Internet terms:	Home Page	(C)
	Favorites/Bookmarks	(C)
	Home Icon/Home Button	(C)
	Address Bar	(C)
	Links	(C)
	Back	(C)
	Forward	(C)
	Stop	(C)
	Refresh	(C)
	World Wide Web	(C)
	Browser	
	URL	(C)
	Search Engine	(P)
	Keywords	(P)
Identify parts of a URL:	http://	(C)
	www	(C)
	.com	(P)
	.gov	(P)
	.edu	(P)
	.org	(P)
	.html	(P)
	.mil	(P)
	.net	(P)
	.tv	(P)
	.mobi	(P)
	.info	(P)

	.us	(P)
	.biz	(P)
Explain the function of a filter server to block/filter objectionable material		(I)
Open web browser; use Home, Back & Forward buttons		(C)
Identify JCPS Home Page		(C)
Enter a URL		(C)
Favorites/Bookmarks:	Add favorites/bookmarks	(P)
	Remove a favorites/bookmark	(P)
	Create folders to organize favorites/bookmarks	(P)
Understand the function of links (hyperlinks)		(C)
Use links	Displayed in text & graphic format	(C)
Use search engine(s) to find specific information		(P)
Use keywords when searching		(P)
As a class, discuss when an Internet search may be effective		(P)
Use appropriate bibliographic citations for electronic resources:	Web page, data source, picture, music, video, journal article	(P)
Define Plagiarism		
Critique web resources for validity of information:	Reliability (Does it come from a personal web site or a recognized web domain?)	(P)
	Bias (Is the author reputable? What are the author's credentials?)	(P)
	Corroboration (Do similar sources present similar information?)	(P)
Identify and explain the difference between fact and opinion		(P)
As a class/group, use teacher-selected Internet resources to locate, discuss, and compare information within content areas		(P)
Use web activities for problem-solving and critical thinking		(P)
Demonstrate knowledge of Information Technology:	JCPSONline scrimmages, quizzes, etc.	(C)
Discuss the various types of technology used in careers:	Barcode scanners, handhelds/PDAs	(P)
As a class activity, use electronic databases to conduct keyword search/filters to meet information needs	Online card catalog	(P)
Use multimedia resources to support learning:	Interactive books, educational software, elementary multimedia	(C)
Discuss the Internet as a source of information at school, home and at the public library		(C)
As a class activity, use other resources for gaining information to answer essential questions:	Electronic, print, people	(P)
Gather and use information from a variety of resources:	Web sites, CD-ROM encyclopedia, video, audio	(P)

Standard 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:

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

Students will continue to practice skills introduced in earlier grade(s) and be introduced to and practice:

As a team or individually, employ technology in the development of strategies for solving problems in the real world:	Use an electronic database to gather resources to answer essential questions	(C)
	Use spreadsheets to organize & calculate data and create graphs to answer a real-life question	(I)
	Use a word processing document with an embedded table to report results & organize information	(I)
	Use presentation software to report & present information	(I)
	Use problem-solving, simulation software and web activities to answer real-world questions	(I)
Use appropriate technology tools to successfully engage in higher-order thinking activities		(P)
Define Technology Integration		(I)

Standard 5: Digital Citizenship

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

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

Students will continue to practice skills introduced in earlier grade(s) and be introduced to and practice:

Identify and demonstrate knowledge of the Nine Elements of Digital Citizenship:	Digital Communication (e.g. e-mail, cell phones, videoconferencing, instant messaging, text messaging, blogs, wikis)	(I)
	Digital Literacy (e.g. online courses, blogs, web sites, podcasts)	(I)
	Digital Etiquette (e.g. flaming, bullying, solicitation, phone on vibrate)	(P)
	Digital Law (e.g. BitTorrent, LimeWire, pirating software, hacking, stealing identity)	(P)
	Digital Rights & Responsibilities (e.g. AUP, citing sources, cheating, cyberbullying)	(P)
	Digital Health & Wellness (e.g. carpal tunnel, eye strain, poor posture, addiction)	(P)

	Digital Security (e.g. virus protection, backups, personal information, hackers, identity theft)	(P)
Acknowledge ownership of own work:	Put name on work, etc.	(C)
Explain that one must have permission to use another person's work or any part of that person's work		(C)
Identify and cite sources:	Photographs (Resource must be on same page with picture)	(P)
	Web sites	(P)
Identify the copyright symbol	©	(C)
Demonstrate knowledge of Copyright Materials		(P)
Demonstrate legal use of software		(P)
Demonstrate knowledge of:	Commercial Software	X
	Public Domain/Freeware	X
	Shareware	X
	Freeware	X
Explain the legal implications of viruses, hacking, offensive material and vandalism		(P)
Explain the social implications of viruses, hacking, offensive material and vandalism:	Economic impact of business attacked, etc.	(P)
Define:	Virus	(I)
	Hacker	
	Piracy	
Sign and discuss the JCPSNet User Agreement Form		(C)
Explain acceptable & unacceptable computer use for students in JCPS according to the JCPSNet User Agreement Form		(P)
Explain the consequences of violating the JCPSNet User Agreement		(P)
Compare attributes of the physical community (where we live) and the cybercommunity		(P)
Describe online situations that may make you feel uncomfortable		(P)
Compare rules in the physical community with the cybercommunity that concern communications between strangers and trusted adults		(P)
Explain that a good citizen is a person who follows rules in a community. A cyber citizen obeys the rules of the online cyber community.		(C)
Discuss how a stranger can pretend to be a friend in cyberspace		(C)
Identify a stranger as someone whom you and your parents don't know		(C)
Identify the characteristics of personal information		(P)
Explain potential risks to personal safety when supplying personal information, choosing a screen name and selecting a password		(C)
Discuss the importance of ethical, responsible and safe behavior when using networked digital information		(C)
As a class/group or individual, recognize, discuss and model responsible and safe behavior using online resources		(P)

Recognize and discuss the differences between e-mail, instant messaging, online bulletin boards, blogs, social chat rooms and online communities		(P)
Describe what to do when an unintended web site is entered		(C)
Explain why a password needs to be kept secret:	Someone could delete your files	(C)
	Someone could send an offensive message from your e-mail account	(C)
	Someone could change your password and you could no longer log on	(C)
Discuss the importance of being a responsible citizen when using technology		(P)
Participate in Internet projects		(P)
Discuss and follow the five Safety Tips published by the FBI for protecting oneself online:	Never give out personal information such as your name, home address, school name or telephone number in a chat room or on bulletin boards. Also, never send a picture of yourself to someone you chat with on the computer without your parent's permission.	(C)
	Never write to someone who has made you feel uncomfortable or scared.	(C)
	Never meet someone or have them visit you without the permission of your parents.	(C)
	Tell your parents right away if you read anything on the Internet that makes you feel uncomfortable.	(C)
	Remember that people online may not be who they say they are. Someone who says that "she" is a "12-year-old girl" could really be an older man.	(C)
Use internet safety skills		(C)
Respect other people's point of view and ideas when completing a class project		(C)
Explain why computers and/or other technologies are used for learning		(C)
Define cyberbullying		
Compare and contrast the critical attributes of bullying:	Real-world & virtual world	(C)
Understand the procedures of how to report cyberbullying		(C)

Standard 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

Students will continue to practice skills introduced in earlier grade(s) and be introduced to and practice:

Integrate resources from different types of audio and video equipment to present information:	Scanner, computer, airliner, video camera, digital camera	(I)
Distinguish between hardware and software:	Identify CPU, Hand-held computer, RAM, Palmtop	(C)
Identify:	Monitor	
	Mouse	
	Disk drive	
	External disk drive	
	Projector	
Demonstrate Computer Literacy		
Describe and demonstrate proper care of equipment:	Keep food, drinks & magnets away from equipment	(C)
	Keep your hands clean	(C)
	Not writing on equipment	(C)
APPLICATIONS		
Identify the purpose of productivity tools such as word processing, spreadsheet and presentation software		(P)
Create products for content area assignments using appropriate technology		(C)
Follow on-screen directions		(C)
Use proofreading and electronic editing skills		(C)
Start up and shut down computer		(C)
Log on/in:	Ctrl-Alt-Delete	(C)
	UserID/Password	(C)
Use mouse click to make selections		
Use click & drag to move items on a page		
Use right & left click when applicable		
Select an item from :	Menu bar	(C)
	Drop down menu	
	Toolbar - Quick Launch	(C)
Use Start button to navigate to documents		
Open applications:	File – Open	(C)
	Start - Program Files	(C)
Quit applications:	File – Quit/Exit	(C)
	Click “X” on Windows	(C)
Identify open application on taskbar		
Close document leaving application open		(C)
Save		(C)
Save with assistance		(C)
Identify the recycle bin & explain its purpose		
Explain the difference between Save and Save As		(P)
Navigate to open a file from different sources and save to specific location:	Disk, folder, etc.	(C)

Open a new document		(C)
Navigate to open a saved document		(C)
Print with assistance		
Print documents		(C)
REMOVABLE MEDIA		
Care and Handling:	Compact Disc, Digital Video Disc, Data Disk	(C)
	Load correctly	(C)
	Remove correctly	(C)
	Explain the use of a disk, CD & DVD	(P)
FILES		
Navigate to open a file from different sources:	Application	(C)
	Disk	
	CD	(C)
	Desktop	(C)
	Folders (different names)	(P)
Identify file formats:	.doc	(P)
	.xls	(P)
	.ppt	(P)
	.rtf	(P)
	.docx	(P)
	.xlsx	(P)
	.pptx	(P)
	.txt	(P)
Save documents as a variety of file types to move data across platforms:	.doc	(P)
	.xls	(P)
	.ppt	(P)
	.rtf	(P)
Use basic troubleshooting techniques:	Determine if all equipment is turned on & plugged in	(C)
	Check mouse connection	(C)
	Check keyboard connection	(C)
	Restart	(I)
	Check plugs/cables (plug in both ends; check for loose plugs)	(P)
Printer troubleshooting	Check to be sure correct printer is selected	(P)
Print with options:	Print a specific page	(C)
	Print a specific # of copies	(C)
	Change page orientation	(C)
	Select printer (printer name)	(P)
Use multiple open files and applications:	Several word processing documents	(P)
	Open/Use Window Menu or Taskbar	(P)
	Multiple files of the same type	(P)
	Navigate between browser and/or word processing, database	(P)
Demonstrate knowledge of components and functions of a computer system:	Define Network	(I)