

- **CF.TEC.K-2.1 - Basic Operations and Concepts**
 - **CF.TEC.K-2.1.1** - understand that people use many types of technologies in their daily lives (e.g., computers, cameras, audio/video players, phones, televisions)
 - **CF.TEC.K-2.1.2** - identify common uses of technology found in daily life
 - **CF.TEC.K-2.1.3** - recognize, name, and will be able to label the major hardware components in a computer system (e.g., computer, monitor, keyboard, mouse, and printer)
 - **CF.TEC.K-2.1.4** - identify the functions of the major hardware components in a computer system
 - **CF.TEC.K-2.1.5** - discuss the basic care of computer hardware and various media types (e.g., diskettes, CDs, DVDs, videotapes)
 - **CF.TEC.K-2.1.6** - use various age-appropriate technologies for gathering information (e.g., dictionaries, encyclopedias, audio/video players, phones, web resources)
 - **CF.TEC.K-2.1.7** - use a variety of age-appropriate technologies for sharing information (e.g., drawing a picture, writing a story)
 - **CF.TEC.K-2.1.8** - recognize the functions of basic file menu commands (e.g., new, open, close, save, print)
 - **CF.TEC.K-2.1.9** - proofread and edit their writing using appropriate resources including dictionaries and a class developed checklist both individually and as a group
- **CF.TEC.K-2.2 - Social, Ethical, and Human Issues**
 - **CF.TEC.K-2.2.1** - identify common uses of information and communication technologies
 - **CF.TEC.K-2.2.2** - discuss advantages and disadvantages of using technology
 - **CF.TEC.K-2.2.3** - recognize that using a password helps protect the privacy of information
 - **CF.TEC.K-2.2.4** - discuss scenarios describing acceptable and unacceptable uses of age-appropriate technology (e.g., computers, phones, 911, internet, email) at home or at school
 - **CF.TEC.K-2.2.5** - discuss the consequences of irresponsible uses of technology resources at home or at school
 - **CF.TEC.K-2.2.6** - understand that technology is a tool to help complete a task
 - **CF.TEC.K-2.2.7** - understand that technology is a source of information, learning, and entertainment
 - **CF.TEC.K-2.2.8** - identify places in the community where one can access technology
- **CF.TEC.K-2.3 - Technology Productivity Tools**
 - **CF.TEC.K-2.3.1** - know how to use a variety of productivity software (e.g., word processors, drawing tools, presentation software) to convey ideas and illustrate concepts
 - **CF.TEC.K-2.3.2** - be able to recognize the best type of productivity software to use for certain age-appropriate tasks (e.g., word processing, drawing, web browsing)
 - **CF.TEC.K-2.3.3** - be aware of how to work with others when using technology tools (e.g., word processors, drawing tools, presentation software) to convey ideas or illustrate simple concepts relating to a specified project
- **CF.TEC.K-2.4 - Technology Communications Tools**
 - **CF.TEC.K-2.4.1** - identify procedures for safely using basic telecommunication tools (e.g., e-mail, phones) with assistance from teachers, parents, or student partners
 - **CF.TEC.K-2.4.2** - know how to use age-appropriate media (e.g., presentation software, newsletters, word processors) to communicate ideas to classmates, families, and others
 - **CF.TEC.K-2.4.3** - know how to select media formats (e.g., text, graphics, photos, video), with assistance from teachers, parents, or student partners, to communicate and share ideas with classmates, families, and others
- **CF.TEC.K-2.5 - Technology Research Tools**
 - **CF.TEC.K-2.5.1** - know how to recognize the Web browser and associate it with accessing resources on the internet
 - **CF.TEC.K-2.5.2** - use a variety of technology resources (e.g., CD-ROMs, DVDs, search engines, websites) to locate or collect information relating to a specific curricular topic with assistance from teachers, parents, or student partners
 - **CF.TEC.K-2.5.3** - interpret simple information from existing age-appropriate electronic databases (e.g., dictionaries, encyclopedias, spreadsheets) with assistance from teachers, parents, or student partners
 - **CF.TEC.K-2.5.4** - provide a rationale for choosing one type of technology over another for completing a specific task
- **CF.TEC.K-2.6 - Technology Problem-Solving and Decision-Making Tools**
 - **CF.TEC.K-2.6.1** - discuss how to use technology resources (e.g., dictionaries, encyclopedias, search engines, websites) to solve age-appropriate problems
 - **CF.TEC.K-2.6.2** - identify ways that technology has been used to address real-world problems (personal or community)

- **CF.TEC.3-5.1 - Basic Operations and Concepts**
 - **CF.TEC.3-5.1.1** - discuss ways technology has changed life at school and at home
 - **CF.TEC.3-5.1.2** - discuss ways technology has changed business and government over the years
 - **CF.TEC.3-5.1.3** - recognize and discuss the need for security applications (e.g., virus detection, spam defense, popup blockers, firewalls) to help protect information and to keep the system functioning properly
 - **CF.TEC.3-5.1.4** - know how to use basic input/output devices and other peripherals (e.g., scanners, digital cameras, video projectors)
 - **CF.TEC.3-5.1.5** - know proper keyboarding positions and touch-typing techniques
 - **CF.TEC.3-5.1.6** - manage and maintain files on a hard drive or the network
 - **CF.TEC.3-5.1.7** - demonstrate proper care in the use of hardware, software, peripherals, and storage media
 - **CF.TEC.3-5.1.8** - know how to exchange files with other students using technology (e.g., e-mail attachments, network file sharing, diskettes, flash drives)
 - **CF.TEC.3-5.1.9** - identify which types of software can be used most effectively for different types of data, for different information needs, or for conveying results to different audiences
 - **CF.TEC.3-5.1.10** - identify search strategies for locating needed information on the internet
 - **CF.TEC.3-5.1.11** - proofread and edit writing using appropriate resources (e.g., dictionary, spell check, grammar check, grammar references, writing references) and grade level appropriate checklists both individually and in groups
- **CF.TEC.3-5.2 - Social, Ethical, and Human Issues**
 - **CF.TEC.3-5.2.1** - identify cultural and societal issues relating to technology
 - **CF.TEC.3-5.2.2** - discuss how information and communication technology supports collaboration, productivity, and lifelong learning
 - **CF.TEC.3-5.2.3** - discuss how various assistive technologies can benefit individuals with disabilities
 - **CF.TEC.3-5.2.4** - discuss the accuracy, relevance, appropriateness, and bias of electronic information sources
 - **CF.TEC.3-5.2.5** - discuss scenarios describing acceptable and unacceptable uses of technology (e.g., computers, digital cameras, cellphones, PDAs, wireless connectivity) and describe consequences of inappropriate use
 - **CF.TEC.3-5.2.6** - discuss basic issues regarding appropriate and inappropriate uses of technology (e.g., copyright, privacy, file sharing, spam, viruses, plagiarism) and related laws
 - **CF.TEC.3-5.2.7** - use age-appropriate citing of sources for electronic reports
 - **CF.TEC.3-5.2.8** - identify appropriate kinds of information that should be shared in public chat rooms
 - **CF.TEC.3-5.2.9** - identify safety precautions that should be taken while on-line
 - **CF.TEC.3-5.2.10** - explore various technology resources that could assist in pursuing personal goals
 - **CF.TEC.3-5.2.11** - identify technology resources and describe how those resources improve the ability to communicate, increase productivity, or help achieve personal goals
- **CF.TEC.3-5.3 - Technology Productivity Tools**
 - **CF.TEC.3-5.3.1** - know how to use menu options in applications to print, format, add multimedia features; open, save, manage files; and use various grammar tools (e.g., dictionary, thesaurus, spell-checker)
 - **CF.TEC.3-5.3.2** - know how to insert various objects (e.g., photos, graphics, sound, video) into word processing documents, presentations, or web documents
 - **CF.TEC.3-5.3.3** - use a variety of technology tools and applications to promote creativity
 - **CF.TEC.3-5.3.4** - understand that existing (and future) technologies are the result of human creativity
 - **CF.TEC.3-5.3.5** - collaborate with classmates using a variety of technology tools to plan, organize, and create a group project
- **CF.TEC.3-5.4 - Technology Communications Tools**
 - **CF.TEC.3-5.4.1** - use basic telecommunication tools (e.g., e-mail, WebQuests, IM, blogs, chat rooms, web conferencing) for collaborative projects with other students
 - **CF.TEC.3-5.4.2** - use a variety of media and formats to create and edit products (e.g., presentations, newsletters, brochures, web pages) to communicate information and ideas to various audiences
 - **CF.TEC.3-5.4.3** - identify how different forms of media and formats may be used to share similar information, depending on the intended audience (e.g., presentations for classmates, newsletters for parents)
- **CF.TEC.3-5.5 - Technology Research Tools**
 - **CF.TEC.3-5.5.1** - use Web search engines and built-in search functions of other various resources to locate information
 - **CF.TEC.3-5.5.2** - describe basic guidelines for determining the validity of information accessed from various sources (e.g., web site, dictionary, on-line newspaper, CD-ROM)

- **CF.TEC.3-5.5.3** - know how to independently use existing databases (e.g., library catalogs, electronic dictionaries, encyclopedias) to locate, sort, and interpret information on an assigned topic
- **CF.TEC.3-5.5.4** - perform simple queries on existing databases and report results on an assigned topic
- **CF.TEC.3-5.5.5** - identify appropriate technology tools and resources by evaluating the accuracy, appropriateness, and bias of the resource
- **CF.TEC.3-5.5.6** - compare and contrast the functions and capabilities of the word processor, database, and spreadsheet for gathering data, processing data, performing calculations, and reporting results
- **CF.TEC.3-5.6** - Technology Problem-Solving and Decision-Making Tools
- **CF.TEC.3-5.6.1** - use technology resources to access information that can assist in making informed decisions about everyday matters (e.g., which movie to see, which product to purchase)
- **CF.TEC.3-5.6.2** - use information and communication technology tools (e.g., calculators, probes, videos, DVDs, educational software) to collect, organize, and evaluate information to assist with solving real-life problems (personal or community)

Curriculum Framework

Educational Technology

Grades: 6-8

- **CF.TEC.6-8.1** - Basic Operations and Concepts
- **CF.TEC.6-8.1.1** - use proper keyboarding posture, finger positions, and touch-typing techniques to improve accuracy, speed, and general efficiency in operating a computer
- **CF.TEC.6-8.1.2** - use appropriate technology terminology
- **CF.TEC.6-8.1.3** - use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced products
- **CF.TEC.6-8.1.4** - understand that new technology tools can be developed to do what could not be done without the use of technology
- **CF.TEC.6-8.1.5** - describe strategies for identifying and preventing routine hardware and software problems that may occur during everyday technology use
- **CF.TEC.6-8.1.6** - identify changes in hardware and software systems over time and discuss how these changes affected various groups (e.g., individual users, education, government, and businesses)
- **CF.TEC.6-8.1.7** - discuss common hardware and software difficulties and identify strategies for trouble-shooting and problem solving
- **CF.TEC.6-8.1.8** - identify characteristics that suggest that the computer system hardware or software might need to be upgraded
- **CF.TEC.6-8.1.9** - identify a variety of information storage devices (e.g., floppies, CDs, DVDs, flash drives, tapes) and provide a rationale for using a certain device for a specific purpose
- **CF.TEC.6-8.1.10** - identify technology resources that assist with various consumer-related activities (e.g., budgets, purchases, banking transactions, product descriptions)
- **CF.TEC.6-8.1.11** - identify appropriate file formats for a variety of applications
- **CF.TEC.6-8.1.12** - use basic utility programs or built-in application functions to convert file formats
- **CF.TEC.6-8.1.13** - proofread and edit writing using appropriate resources (e.g., dictionary, spell check, grammar check, grammar references, writing references) and grade level appropriate checklists both individually and in groups
- **CF.TEC.6-8.2** - Social, Ethical, and Human Issues
- **CF.TEC.6-8.2.1** - understand the potential risks and dangers associated with on-line communications
- **CF.TEC.6-8.2.2** - identify security issues related to e-commerce
- **CF.TEC.6-8.2.3** - discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, spam, viruses, file-sharing)
- **CF.TEC.6-8.2.4** - describe possible consequences and costs related to unethical use of information and communication technologies
- **CF.TEC.6-8.2.5** - discuss the societal impact of technology in the future
- **CF.TEC.6-8.2.6** - provide accurate citations when referencing information from outside sources in electronic reports
- **CF.TEC.6-8.2.7** - use technology to identify and explore various occupations or careers
- **CF.TEC.6-8.2.8** - discuss possible uses of technology (present and future) to support personal pursuits and lifelong learning
- **CF.TEC.6-8.2.9** - identify uses of technology to support communication with peers, family, or school personnel
- **CF.TEC.6-8.3** - Technology Productivity Tools
- **CF.TEC.6-8.3.1** - apply common software features (e.g., thesaurus, formulas, charts, graphics, sounds) to enhance communication and to support creativity
- **CF.TEC.6-8.3.2** - use a variety of technology resources, including the internet, to increase learning and productivity
- **CF.TEC.6-8.3.3** - explore basic applications that promote creativity (e.g., graphics, presentation, photo-editing, programming, video-editing)

- **CF.TEC.6-8.3.4** - use available utilities for editing pictures, images, or charts
- **CF.TEC.6-8.3.5** - use collaborative tools to design, develop, and enhance materials, publications, or presentations
- **CF.TEC.6-8.4** - Technology Communications Tools
- **CF.TEC.6-8.4.1** - use a variety of telecommunication tools (e.g., e-mail, discussion groups, IM, chat rooms, blogs, video-conferences, web conferences) or other online resources to collaborate interactively with peers, experts, and other audiences
- **CF.TEC.6-8.4.2** - create a project (e.g., presentation, web page, newsletter, information brochure) using a variety of media and formats (e.g., graphs, charts, audio, graphics, video) to present content information to an audience
- **CF.TEC.6-8.5** - Technology Research Tools
- **CF.TEC.6-8.5.1** - use a variety of Web search engines to locate information
- **CF.TEC.6-8.5.2** - evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness
- **CF.TEC.6-8.5.3** - identify types of internet sites based on their domain names (e.g., edu, com, org, gov, au)
- **CF.TEC.6-8.5.4** - know how to create and populate a database
- **CF.TEC.6-8.5.5** - perform queries on existing databases
- **CF.TEC.6-8.5.6** - know how to create and modify a simple database report
- **CF.TEC.6-8.5.7** - evaluate new technology tools and resources and determine the most appropriate tool to use for accomplishing a specific task
- **CF.TEC.6-8.6** - Technology Problem-Solving and Decision-Making Tools
- **CF.TEC.6-8.6.1** - use database or spreadsheet information to make predictions, develop strategies, and evaluate decisions to assist with solving a basic problem
- **CF.TEC.6-8.6.2** - describe the information and communication technology tools to use for collecting information from different sources, analyze findings, and draw conclusions for addressing real-world problems

Curriculum Framework

Educational Technology

Grades: 9-12

- **CF.TEC.9-12.1** - Basic Operations and Concepts
- **CF.TEC.9-12.1.1** - discuss emerging technology resources (e.g., podcasting, webcasting, compressed video delivery, online file sharing, graphing calculators, global positioning software)
- **CF.TEC.9-12.1.2** - identify the capabilities and limitations of emerging communication resources
- **CF.TEC.9-12.1.3** - understand the importance of both the predictable and unpredictable impacts of technology
- **CF.TEC.9-12.1.4** - identify changes in hardware and software systems over time and discuss how these changes might affect the individual personally in his/her role as a lifelong learner
- **CF.TEC.9-12.1.5** - understand the purpose, scope, and use of assistive technology
- **CF.TEC.9-12.1.6** - understand that access to online learning increases educational and workplace opportunities
- **CF.TEC.9-12.1.7** - be provided with the opportunity to learn in a virtual environment as a strategy to build 21st century learning skills
- **CF.TEC.9-12.1.8** - understand the relationship between electronic resources, infrastructure, and connectivity
- **CF.TEC.9-12.1.9** - routinely apply touch-typing techniques with advanced accuracy, speed, and efficiency
- **CF.TEC.9-12.1.10** - assess and solve hardware and software problems by using online help or other user documentation and support
- **CF.TEC.9-12.1.11** - identify common graphic, audio, and video file formats (e.g., jpeg, gif, bmp, mpeg, wav)
- **CF.TEC.9-12.1.12** - demonstrate how to import/export text, graphics, or audio files
- **CF.TEC.9-12.1.13** - proofread and edit a document using an application's spelling and grammar checking functions
- **CF.TEC.9-12.2** - Social, Ethical, and Human Issues
- **CF.TEC.9-12.2.1** - identify legal and ethical issues related to use of information and communication technology
- **CF.TEC.9-12.2.2** - analyze current trends in information and communication technology and assess the potential of emerging technologies for ethical and unethical uses
- **CF.TEC.9-12.2.3** - discuss possible long-range effects of unethical uses of technology (e.g., virus spreading, file pirating, hacking) on cultures and society
- **CF.TEC.9-12.2.4** - discuss the possible consequences and costs of unethical uses of information and computer technology
- **CF.TEC.9-12.2.5** - identify ways that individuals can protect their technology systems from unethical or unscrupulous users
- **CF.TEC.9-12.2.6** - demonstrate the ethical use of technology as a digital citizen and lifelong learner
- **CF.TEC.9-12.2.7** - explain the differences between freeware, shareware, and commercial software
- **CF.TEC.9-12.2.8** - adhere to fair use and copyright guidelines
- **CF.TEC.9-12.2.9** - create appropriate citations for resources when presenting research findings

- **CF.TEC.9-12.2.10** - adhere to the district acceptable use policy as well as state and federal laws
- **CF.TEC.9-12.2.11** - explore career opportunities and identify their related technology skill requirements
- **CF.TEC.9-12.2.12** - design and implement a personal learning plan that includes technology to support his/her lifelong learning goals
- **CF.TEC.9-12.3** - Technology Productivity Tools
 - **CF.TEC.9-12.3.1** - complete at least one online credit, or non-credit, course or online learning experience
 - **CF.TEC.9-12.3.2** - use technology tools for managing and communicating personal information (e.g., finances, contact information, schedules, purchases, correspondence)
 - **CF.TEC.9-12.3.3** - have access to and utilize assistive technology tools
 - **CF.TEC.9-12.3.4** - apply advanced software features such as an application's built-in thesaurus, templates, and styles to improve the appearance of word processing documents, spreadsheets, and presentations
 - **CF.TEC.9-12.3.5** - identify technology tools (e.g., authoring tools or other hardware and software resources) that could be used to create a group project
 - **CF.TEC.9-12.3.6** - use an online tutorial and discuss the benefits and disadvantages of this method of learning
 - **CF.TEC.9-12.3.7** - develop a document or file for inclusion into a web site or web page
 - **CF.TEC.9-12.3.8** - use a variety of applications to plan, create, and edit a multimedia product (e.g., model, webcast, presentation, publication, or other creative work)
 - **CF.TEC.9-12.3.9** - have the opportunity to participate in real-life experiences associated with technology-related careers
- **CF.TEC.9-12.4** - Technology Communications Tools
 - **CF.TEC.9-12.4.1** - identify and describe various telecommunications or online technologies (e.g., desktop conferencing, listservs, blogs, virtual reality)
 - **CF.TEC.9-12.4.2** - use available technologies (e.g., desktop conferencing, e-mail, groupware, instant messaging) to communicate with others on a class assignment or project
 - **CF.TEC.9-12.4.3** - use a variety of media and formats to design, develop, publish, and present products (e.g., presentations, newsletters, web sites) to communicate original ideas to multiple audiences
 - **CF.TEC.9-12.4.4** - collaborate in content-related projects that integrate a variety of media (e.g., print, audio, video, graphic, simulations, and models) with presentation, word processing, publishing, database, graphics design, or spreadsheet applications
 - **CF.TEC.9-12.4.5** - plan and implement a collaborative project using telecommunications tools (e.g., groupware, interactive web sites, video conferencing)
- **CF.TEC.9-12.5** - Technology Research Tools
 - **CF.TEC.9-12.5.1** - compare, evaluate, and select appropriate internet search engines to locate information
 - **CF.TEC.9-12.5.2** - formulate and use evaluation criteria (authority, accuracy, relevancy, timeliness) for information located on the internet to present research findings
 - **CF.TEC.9-12.5.3** - determine if online sources are authoritative, valid, reliable, relevant, and comprehensive
 - **CF.TEC.9-12.5.4** - distinguish between fact, opinion, point of view, and inference
 - **CF.TEC.9-12.5.5** - evaluate resources for stereotyping, prejudice, and misrepresentation
 - **CF.TEC.9-12.5.6** - develop a plan to gather information using various research strategies (e.g., interviews, questionnaires, experiments, online surveys)
- **CF.TEC.9-12.6** - Technology Problem-Solving and Decision-Making Tools
 - **CF.TEC.9-12.6.1** - use a variety of technology resources (e.g., educational software, simulations, models) for problem solving and independent learning
 - **CF.TEC.9-12.6.2** - describe the possible integration of two or more information and communication technology tools or resources to collaborate with peers, community members, and field experts
 - **CF.TEC.9-12.6.3** - formulate a research question or hypothesis, then use appropriate information and communication technology resources to collect relevant information, analyze the findings, and report the results to multiple audiences