

STRANDS AND STANDARDS

DIGITAL LITERACY



Course Description

This course is a foundation to the digital world that provides a broad understanding of key applications, computing fundamentals, and living online. Students will have opportunities to use technology and develop skills that promote creativity, critical thinking, productivity, and collaboration in the classroom and day-to-day life. This course is aligned with the International Society for Technology in Education (ISTE) for Students, the K-12 Computer Science Standards, and industry standards for Digital Literacy Certification. The alignment of these national and international benchmarks will ensure that students complete this course as a prerequisite to transition successfully to the 9-12th grade digital studies courses.

Pilot Year	2020-2021
Effective School Year	2021-2022
Intended Grade Level	7 or 8
Units of Credit	0.50
Core Code	32.02.00.00.170
Concurrent Enrollment Core Code	None
Prerequisite	None
Skill Certification Test Number	None
Test Weight	None
License Area of Concentration	CTE and/or Secondary Education 6-12
Required Endorsement(s)	
Endorsement 1	Business and Marketing (CTE/General)
Endorsement 2	Business and Marketing Basics
Endorsement 3	Business and Marketing Info Management L1
Endorsement 4	College and Career Awareness/Digital Literacy
Endorsement 5	Intro to Computer Science
Endorsement 6	Programming and Software Development

STRAND 1

(Keyboarding Efficiency) Students will enhance keyboarding skills. *This strand will be incorporated throughout the course.*

Standard 1

Students will enhance and demonstrate proper key by touch skills and keyboarding techniques.

- Sit up straight.
- Feet flat on the floor.
- Body centered with the “G” and “H” keys.
- Fingers curved on home row (A, S, D, F, J, K, L, ;).
- Wrists straight and elbows naturally at sides.
- Correct fingers used for keystrokes.
- **Key by touch** (eyes on copy or screen, not on keys).
- Key with smooth rhythm.

Strand 1 Performance Skill listed below

STRAND 2

(Information Processing Cycle) Students will identify a computer as a device that utilizes hardware and software to accept input, process data, store data, and produce output.

Standard 1

Identify computer hardware in the information processing cycle.

- Define **hardware** as the physical components that make up a computing system, computer, or computing device.
- Identify primary hardware components of a computer.
 - Monitor
 - Keyboard
 - System unit
 - Motherboard
 - Power supply
 - Hard Drive/Solid State Drive (SDD)
 - Central Processing Unit (CPU)
 - Mouse/Touchpad/Touchscreen
- Define **peripheral devices** as an internal or external device that connects directly to a computer but does not contribute to the primary function of a computer.
- Identify primary peripheral devices.
 - Printer
 - Camera
 - Projector
 - Speakers
 - Headphones

- Microphone
- Game controller
- Virtual Reality (VR) headsets

Standard 2

Explain the role of software for a computing system.

- Define **software** as a set of instruction that runs a computing system, computer, or other computing device.
- Define the two types of software for a computing system.
 - **Operating system** is software that controls the communication between the hardware and application software of a computer.
 - **Application software** is developed to help the user perform specific tasks.
- Identify the primary operating system of a computing device.
 - Windows
 - Mac OS
 - Android
 - iOS
 - Linux
- Identify the common application software for a computing device.
 - Business software (i.e. word processing, spreadsheets, databases, presentation, email, calendaring)
 - Communication software (i.e. social media, email, video conference, instant messaging)
 - Entertainment software (i.e. virtual reality, streaming, gaming)
 - Multimedia software (i.e. photo, image, video, audio, speech to text, artificial intelligence (AI) speech technology)
 - Education software (i.e. learning management system (LMS), gradebook, e-books)

Standard 3

Define input device and explain how input devices function in the information processing cycle.

- Define **input device** as hardware equipment used to transfer data to a computing system for processing.
- Explain the function of primary input devices.
 - Keyboard
 - Mouse/Touchpad
 - Touchscreen
 - Microphone
 - Camera
 - Game controller

Standard 4

Define processing and explain how processing functions in the information processing cycle.

- Define **processing** as interpreting input and producing output.
- Define and explain the main processing device in a computer system.
 - **Central Processing Unit (CPU)** is the master chip that controls all other aspects of the computer.
- Define the relationship of an algorithm, loop, and conditional in computer processing.
 - **Algorithm** is a set of instructions to complete a task.
 - The CPU uses the algorithm as an input to produce output.
 - **Loop** is a programming structure that repeats a set of instructions as long as a specific condition is true.
 - The CPU uses the loop as an input to repeat the task to output data until the specific condition is true.
 - **Conditional** is a feature of a programming language that performs different computations or actions depending on whether a programmer-specified Boolean condition evaluate to true or false.
 - The CPU uses the conditional as an input to continue to evaluate whether or not to send output data.
- Explain the role of the CPU, memory, and storage when purchasing a computing device based on the individual user's needs.

Standard 5

Explain how memory and storage devices function in the information processing cycle.

- Define **memory** as temporarily stored data for immediate use in a computer system.
- Define the two types of memory for a computer system.
 - **Random Access Memory (RAM)** is used by the operating system and application software while the computer is running.
 - **Read Only Memory (ROM)** is preloaded instructions for booting up the computer.
- Define **storage** as a place where data can be held and retrieved at a later time.
- Identify the benefits of using different types of primary storage.
 - Define **hard drive** as an internal storage device that stores data.
 - Define **external hard drive** as a portable storage device that stores data.
 - Define **flash drive** as a small, portable storage device that uses electrical rewritable storage (flash) to store or transfer data (i.e. USB, thumb drive, memory stick, jump drive).
 - Define **Solid-state drive (SSD)** as a storage device that uses an electrical rewritable storage (flash) and performs tasks faster than a hard drive.
 - Define **memory card** as a small, flat flash drive used in mobile devices and digital cameras (i.e. SD card, micro SD card).
 - Define **cloud storage** as storage where data is transmitted and stored on remote storage systems where it is maintained, managed, and backed up and

made available to users over a network (i.e. Google Drive, iCloud, Dropbox, OneDrive).

- Explain the role of memory and storage when purchasing a computing device based on the individual user's needs.

Standard 6

Explain how output devices function in the information processing cycle.

- Define **output** as information processed from a computing system and received by the user.
- Define **output device** as hardware equipment used to transfer data out from a computer system.
- Explain the function of primary output devices.
 - Monitor/Screen
 - Printer
 - Projector
 - Speakers
 - Headphones

STRAND 3

(Global Collaborator) Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively locally and globally (ISTE 1 and 7).

Standard 1

Define the components of the Internet.

- Define **network** as a group of two or more digital devices connected to share information.
- Define **Internet** as a global network.
- Define **bandwidth** as the amount of information that can travel on an Internet connection in a certain timeframe.
- Define **uniform resource locator (URL)** as an address for a worldwide webpage.
- Define **Internet protocol (IP) address** as a unique set of numbers separated by periods that identifies each digital device using the Internet to communicate.
- Define **Internet browser** as an application used to access and view websites.
- Define **search engine** as a program that searches for and identifies items in a database using keywords to find websites for information on the Internet.
- Define **server** as a computer or computer program which manages access to databases of information in a network.

Standard 2

Explain how to connect and navigate the Internet.

- Identify the different components required for an Internet connection.
 - Define **Internet service provider (ISP)** as a company that provides subscribers with access to the Internet.

- Define **modem** as a hardware component that converts packets into a usable signal to allow another device, such as a router, to connect to the Internet.
 - Define **packet** as small bits of data sent over a network.
- Define **router** as a device that transports the packets of information between the digital device and modem.
- Define **digital device** as a device that utilizes hardware and software during the information processing cycle.
- Identify types of Internet connections.
 - Cellular
 - Digital Subscriber Line (DSL)
 - Fiber optic
 - Satellite
 - Wireless (WiFi)
- Explain how Internet connection and bandwidth impact speed and accessibility.
- Define **uniform resource locator (URL)** as an address of a World Wide webpage on the Internet.
- Explain the component of a URL
 - Scheme (i.e. http://, https://)
 - Sub-domain (WWW)
 - Domain name (name of the website)
 - Top Level Domain (i.e. .org, .com, .net., .edu., .gov)
 - File path (description of the exact webpage location)
- Search Internet content efficiently and effectively.
 - Search engine (i.e. Google, Bing).
 - Don't use common words and punctuation.
 - Specific keywords.
 - Use quotation marks.
- Demonstrate the use of common website navigation components.
 - Menu
 - Chrome app launcher (waffle)
 - Three dots (kabob)
 - Three lines (hamburger)
 - Home page
 - Search bar
 - Graphics
 - Hyperlinks
- Identify components of credible online content.
 - Author
 - Date
 - Verified sources
 - Domain
 - Design

- Writing style

Standard 3

Identify a variety of online communication tools and the primary features of email.

- Identify different types of communication programs.
 - Define **email** as messages distributed by email application software from one digital device to another using a network (i.e. Gmail, Outlook, Yahoo).
 - Define **instant messaging** as online chat that offers real-time text communication over the Internet (i.e. Google Chat, Instagram DM (Direct Message), Facebook Messenger)
 - Define **video conference** as a conference where participants, in different locations, are able to communicate with each other in sound and vision (i.e. Skype, Google Meet, Microsoft Teams, FaceTime, Zoom)
 - Define **web authoring** as a category of software that allows the user to develop a website using visual tools based on code (i.e. Weebly, Google Sites, Wix, Adobe Spark, WordPress).
 - Define **social networking** as the use of internet based social media sites to stay connected with others.
- Identify the primary feature of an email.
 - Define **subject** as an informative, catchy, and brief line of text seen when the email reaches the recipient's inbox.
 - Define **CC** as a courtesy copy (previously known as carbon copy) including one or more recipients when a message is intended for one person but is relevant to other people as well.
 - Define **BCC** as a blind courtesy copy (previously known as blind carbon copy) to let others see an email without the main recipient knowing.
 - Explain a variety of scenarios where CC and BCC would be used in an email.
 - Define **attachment** as a file sent with an email message (i.e. image, video, text document). Often represented by a paperclip icon.
 - Define **inline image** as an image that is placed inside the body of the email. This allows the recipient to view the image without having to open the attachment.
 - Explain a variety of scenarios where attachment and inline image would be used in an email.
 - Define **signature block** as a personalized block of text automatically included at the bottom of an email. A signature can include name, address, phone number, website, and other business information.
 - Define **reply** as the response to an email that goes to a single person (the person who sent the original email or the person who sent the last message in the email thread).
 - Define **reply all** as the response to an email that goes to everyone who was included in the email, including CC.

- Explain a variety of scenarios where reply and reply all would be used in an email.
 - Define **forward** as the operation of re-sending an email message delivered to one email address to one or more different email addresses.
- Identify the primary email folders.
 - Inbox
 - Deleted/Trash
 - SPAM/Junk Mail

Strand 3 Performance Skill listed below

STRAND 4

(Digital Citizen) Students recognize the rights, responsibilities, and opportunities of living, learning, and working in an interconnected digital world, and they act in and model ways that are safe, legal, and ethical (ISTE 2).

Standard 1

Define digital citizenship and digital footprint.

- Define **digital citizenship** as continuously developing norms of appropriate, responsible, and empowered technology use.
- Define **digital footprint** as the information about a particular person that exists on the Internet as a result of their online activity.

Standard 2

Demonstrate knowledge of online safety, digital security, and online privacy.

- Define **online safety** as being aware of online risks and maximizing the user's personal safety.
- Identify guidelines to protect users from various types of online predators.
 - Avoid using suggestive screen names or photos.
 - Be aware of excessive attention.
 - Do not talk to anyone that wants to get too personal.
 - Keep in mind that people are not always who they say they are.
 - Never arrange to meet with someone you only know online in person.
 - Tell a trusted adult if you encounter a problem.
- Define **digital security** as tools used to secure identify and data online.
- Identify threats in the digital world.
 - Define **adware** as software that automatically displays unwanted advertising material when a user is online (i.e. pop-up advertisements)
 - Define **computer worm virus** as a malicious software that replicates itself to spread to other digital devices through a network.

- Define **denial of service attacks** as an attack to shut down a computer device or network by flooding it with traffic to make it inaccessible to the intended users.
- Define **hackers** as a person or program that uses computers to gain unauthorized access to data.
- Define **malware** as software that is specifically designed to disrupt, damage, or gain unauthorized access to a digital device.
- Define **ransomware** as a type of malicious software that is used to block access to a digital device until a sum of money is paid.
- Define **spyware** as software that enables a user to obtain private information about another's computer activity by transmitting data secretly from their hard drive.
- Define **Trojan Horse** as a malicious code that looks legitimate and takes control of your computer to damage, disrupt, and destroy your data.
- Explain the importance of using anti-virus protection software on your digital device.
 - Define **anti-virus protection software** as software designed to protect your computing device and destroy computer viruses.
- Define **online privacy** as the protection of private data and communication.
- Identify threats to online transactions.
 - Browser extensions
 - Credit card fraud
 - Data misuse
 - Hacking
 - Money theft
 - Unprotective services
- Identify threats to email and online communication.
 - Catfishing
 - Email scams
 - Hacking
 - Phishing attacks
 - Spoofing
- Explain the importance of different security measures on your digital devices.
 - Password/passphrase
 - Two-factor authentication
 - Firewalls
 - Secure website (HTTPS)
 - Updates

Standard 3

Define intellectual property and the legal and ethical responsibility in the digital world.

- Define **intellectual property** as a creative work or idea for which an individual has ownership rights.
- Identify common intellectual property protections.

- Define **copyrights** as the exclusive legal right given to the creator of works printed, posted, published, filmed, or recorded.
- Define **creative commons** as licenses that allow for the distribution of copyrighted works when the creator wants to give other people the right to share, use, or build upon what they have created.
- Define **patents** as the legal right granted to an inventor.
- Define **public domain** as intellectual property that is available for public use.
- Define **trade secrets** as formulas, patterns, or methods used to produce a creative work that is generally not known outside a company.
- Define **trademarks** as a distinctive protected mark or feature that identifies a person or thing.
- Identify intellectual property violations.
 - Define **plagiarism** as the practice of taking someone else’s intellectual property and using it as your own (i.e. copy/paste, images).
 - Define **copyright infringement (piracy)** as the unauthorized use of or reproduction of another’s work for financial gain (i.e. music, movies, images).
- Define **digital ethics** as how to manage oneself ethically and professionally when using digital device.
- Define **netiquette** as being courteous and respectful when communicating online.
- Explain the personal responsibilities of being ethical in a digital world.
 - Take care of technology equipment.
 - Explore appropriate and safe sites.
 - Follow copyright laws.
 - Help prevent cyberbullying.
 - Maintain a positive digital footprint.
 - Always use netiquette.

Standard 4

Identify measures to improve personal digital wellness.

- Define **digital wellness** as the preventative measures aimed at regulating and improving the healthy use of technology.
- Identify measures to achieve personal digital wellness.
 - Understand device use (i.e. get a detailed understanding of technology use)
 - Create boundaries (i.e. set limits for certain apps and sites, limit notifications)
 - Make adjustments to device screen (i.e. remove distracting apps on your screen, adjust light preferences)
 - Try single-tasking (i.e. to improve focus, try reducing the number of screens around you)
- Define **cyberbullying** as the use of electronic communication to bully a person, typically by sending messages of an intimidating, embarrassing, or threatening nature.
- Identify strategies to deal with cyberbullying.
 - Seek assistance from a trusted adult.
 - Be assertive (not aggressive, fighting, or teasing back).
 - Avoid unsafe websites.

- Use positive statements to maintain positive self-esteem.
- Avoid getting emotionally upset.
- Identify the steps to report cyberbullying.
 - Don't respond to and don't forward the cyberbullying messages.
 - Keep evidence of cyberbullying.
 - Record dates, times and descriptions of instance when cyberbullying occurred.
 - Save and print screenshots, emails, and text messages.
 - Block the person who is cyberbullying.
 - Tell a trusted adult.
- Identify consequences of cyberbullying for the perpetrator and victim.
 - Perpetrator
 - Criminal record
 - Internet or app restrictions
 - Negative digital footprint
 - School discipline
 - Victim
 - Anxious/Depression
 - Changes in appetite
 - Stress of being in a constant state of fear

STRAND 5

(Knowledge Constructor) Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others (ISTE 1 and 3).

Standard 1

Define common features and functions of software programs.

- Identify the primary structural elements of the user interface.
 - Define **icons** as an image that represents a capability of a computer and is usually selected.
 - Define **menus** as list of options or commands to help the user find information or complete a task.
 - Define **tabs** as part of a computer window that allows the user to go to different parts of the program or website.
 - Define **toolbar** as a set of icons used to perform certain functions.
 - Define **window** as a viewing area on a computer.
- Identify the primary interaction elements of the user interface.
 - Define **adjustment handle** as a small box that appears on the corners and edges of an element allowing the user to adjust size and shape.
 - Define **command button** as an element the user interacts with to tell the digital device to complete a task.

- Define **cursor** as a movable indicator on a computer screen, identifying the point that will be affected by input from the user.
- Define **insertion point** as the blinking vertical line in your document where you can enter text on your page.
- Identify primary keyboard shortcuts.
 - Cut
 - Copy
 - Paste
 - Undo
 - Redo
 - Save
 - Print
 - Find
- Identify the difference between Save and Save As.
 - Define **Save** as a command that creates an original file and location or updates changes made in a document while keeping the original file name and location.
 - Define **Save As** as a command that creates a copy of a current document and allows the user to rename and/or relocate the document.

Standard 2

Demonstrate knowledge of file management.

- Perform basic **file management system** tasks.
- Define **file management system** as software that manages the storage of data files.
 - Create and delete **files**.
 - Define **file** as storage of computer recorded data.
 - Create and delete **folders**.
 - Define **folders** as an icon on a computer used to access a directory of file storage.
 - Create **subfolders**.
 - Define **subfolders** as a folder contained within another folder.
 - Duplicate files.
- Identify where deleted content is contained (i.e. recycle bin, trash can, permanently deleted).
- Demonstrate the ability to sort and locate files based on search terms and file type.
- Rename files and save in a new location.

Standard 3

Demonstrate knowledge of word processing.

- Perform basic tasks by using word processing software.
 - Open a new document
 - Print a document
 - Save a document

- Perform primary page layout tasks.
 - Page orientation
 - Page margins
- Perform basic text formatting tasks.
 - Alignment (Left, Right, Center, Justify)
 - Bold
 - Font
 - Font color
 - Font highlight
 - Font size
 - Italics
 - Underline
- Insert and format a table.
 - Insert table
 - Add/delete columns and rows
 - Merge cells
 - Split cells
 - Border/Shading
- Insert and format an image.
 - Insert image
 - Wrap text
 - Adjust size
- Perform a spelling and grammar check on a document.

Standard 4

Demonstrate knowledge of spreadsheets.

- Identify the primary components of a spreadsheet.
 - Define **active cell** as the selected cell ready to input data.
 - Define **cell** as the intersection between a row and a column on a spreadsheet.
 - Define **row** as the horizontal cells identified by numbers.
 - Define **column** as the vertical cells identified by letters.
 - Define **fill handle** as a command that fills data in spreadsheet cells based on an existing pattern.
- Create basic mathematical formulas and functions in a spreadsheet.
 - Define **cell range** as a group of cells within a row and/or column.
 - Define **formula** as any calculation in a spreadsheet.
 - Define **function** as a predefined calculation in a spreadsheet.
- Perform the following formulas in a spreadsheet.
 - Addition
 - Subtraction
 - Division
 - Multiplication

- Perform the following functions in a spreadsheet.
 - SUM
 - MIN
 - MAX
 - COUNT
 - AVERAGE
- Insert a column and pie chart using data from a cell range.
 - Include a title.
 - Include a legend.
 - Define **legend** as the box that contains small samples of each color on the chart as well as a short description of what each color means.

Standard 5

Demonstrate knowledge of presentation programs.

- Apply different layouts to a slide.
 - Title Slide
 - Title and Content
 - Two Content
- Perform basic functions in a presentation.
 - Define **animation** as movement of an object or image within a slide.
 - Define **transitions** as the motion effect of a slide entering a presentation.
- Add images and/or media content to a presentation.

Standard 6

Define primary database terms and identify real-world applications.

- Define **field** as a single piece of data.
- Define **record** as a group of fields and contains all the data about one person, company or item.
- Define **query** as a request for information from a database table.
- Define **table** as a database composed of records and fields that hold data.
- Identify different real-world uses for databases.

Standard 7

Demonstrate knowledge of calendaring

- Create events and/or appointments with the following features:
 - Individual
 - Recurring
 - Location
 - Time Zone
 - Notes
 - Invitations

Strand 5 Performance Skill listed below

STRAND 6

(Creative Communicator) Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats, and digital media appropriate to their goals (ISTE 1 and 6).

Standard 1

Understand platform compatibility and define streaming and downloading of digital media.

- Understand platform compatibility.
- Define **streaming** as use of real-time audio and video over the Internet.
- Define **downloading** as saving a file from the Internet or other digital device to be used offline.

Standard 2

Identify primary functions and features of digital media.

- Audio
 - Record
 - Trim
 - Volume level
- Image
 - Crop
 - Brightness/Contrast
 - Export as a variety of file types (i.e. .jpeg, .png, .pdf, .gif)
- Video
 - Record
 - Trim
 - Volume level
 - Add audio track
- Voice
 - Record
 - Trim
 - Volume level

Strand 6 Performance Skill listed below

Performance Skills

Strand 1

- Student will demonstrate individual advancement in key-by-touch proficiency and technique.

Strand 3

- Student will demonstrate the use of one of the defined communication tools to explain the features, benefits, and dangers in online communities.
- Student will demonstrate how to send emails for a variety of purposes and audiences.

Strand 5

- (Innovative Design) Student will demonstrate and use a variety of any productivity programs to develop awareness and solve a problem by creating new, useful, or imaginative solutions (ISTE 1, 2, 3, 4, & 5)

Strand 6

- Student will use digital media to create a project to demonstrate the importance of becoming digitally literate in a digital world.

DRAFT

Digital Literacy Vocabulary List

active cell	flash drive	processing
adjustment handle	folder	public domain
adware	formula	query
algorithm	forward	Random Access Memory (RAM)
animation	function	ransomware
anti-virus protection software	hackers	Read Only Memory (ROM)
application software	hard drive	record
attachment	hardware	reply
bandwidth	icons	reply all
BCC	information processing cycle	router
CC	inline image	row
cell	input	save
cell range	input device	save as
central processing unit (CPU)	insertion point	search engine
cloud storage	instant messaging	server
column	intellectual property	signature block
command buttons	Internet	social networking
computer worm virus	Internet browser	software
conditional	Internet Protocol (IP) address	solid-state drive (SSD)
copyright infringement (privacy)	Internet service provider (ISP)	spyware
copyrights	key by touch	storage
creative commons	legend	streaming
cursor	loop	subfolder
cyberbullying	malware	subject
denial of service attacks	memory	table
digital citizenship	memory card	tabs
digital device	menus	toolbar
digital ethics	modem	trade secrets
digital footprint	netiquette	trademarks
digital security	network	transition
digital wellness	online privacy	Trojan Horse
downloading	online safety	Uniform Resource Locator (URL)
email	operating system	uniform resource locator (URL)
external hard drive	output	video conferencing
field	output device	web authoring
file	packet	window
file management system	patents	
fill handle	peripheral devices	
	plagiarism	