Technology: SCOPE AND SEQUENCE

	Toddler	Early Learner	Preschool	Prekindergarten	Kindergarten	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth
Technology Operations and Concepts													
Equipment, File, Drive and Network Awareness	Treat technology equipment with respect. Engage with, imitate and repeat information from technology activities.	Treat technology equipment with respect. Engage with, imitate and repeat information from technology activities.	Use simple, basic terminology to describe work with technology. Recognize that information is accessible through technology. Actively make choices to use technology.	Use simple, basic terminology to describe work with technology. Recognize that information is accessible through technology. Actively make choices to use technology. Identify icons.	Identify the dos and don'ts of using a computer. Identify icons for files, programs, and disks. Log on and off a network. Open, edit and save files to a network drive.	Log on and off a network. Open, edit and save files to a network drive. Identify various external parts of the computer. Log on and off a network. Open, edit and save files to a network drive.	Distinguish between output and input devices. Open a shared network file and save as a personal file. Access a shared network drive.	Open a shared network file and save as a personal file. Distinguish between "save" and "save as" commands. Distinguish between "save" and "save as" commands.	Identify various internal parts of the computer. Choose a different network printer.	Install a network printer. Use external memory storage appropriately. Move and resize windows.	Create a folder and organize files. Copy files to another location. Rename and delete files.	Manage all aspects of file management both onsite and off-site. Troubleshoot basic file and network access problems.	Transfer current knowledge to unknown applications. Troubleshoot advanced technology problems across applications.
								Open a shared network file and save as a personal file. Access a shared network drive.	Define various internal parts of the computer. Print to a network printer.				
Touchscreen, Touchpad and Keyboarding	Operate a touchscreen with assistance. Use an app with assistance as needed.	Operate a touchscreen with assistance. Use an app with assistance as needed.	Operate a touchscreen. Turn iPad on/off with assistance. Recognize what an app is with assistance. Use an app with assistance as needed.	Operate a touchscreen. Turn iPad on/off. Launch and close apps independently. Navigate a wide variety of apps.	Point, click, drag and double click using a touchpad. Identify and use the letter and number keys. Use the spacebar, enter and delete/backspace.	Point, click, drag and double click using a touchpad. Identify and use punctuation and symbol keys. Use informal keyboarding skills to type words.	Use beginning touch typing skills to type words. Use shift, caps lock, tab and arrow keys. Knows how to place fingers on home row keys.	Use formal touch typing skills to learn the keyboard. Type 10-15 words per minute with 85% accuracy.	Use formal touch typing skills to learn the keyboard. Type 20-25 words per minute with 90% accuracy.	Use formal touch typing skills to learn the keyboard. Type 30-35 words per minute with 90% accuracy.	Use formal touch typing skills in all curricular areas.	Use formal touch typing skills in all curricular areas.	Use formal touch typing skills in all curricular areas.
			Follow direction to launch an app. Use apps independently based on teacher direction.										
Digital Citizenship													
Online Safety					Understand that computers can be used to visit far-away places and learn new things.	Understand that staying safe online is similar to staying safe in the real world. Describe how to travel safely on the internet.	Understand that being safe online is similar to staying safe in real life. Recognize if they should ask an adult they trust before they visit a particular site.	Recognize if they should ask an adult they trust before they visit a particular site. Recognize sites that are age-appropriate to visit.	Compare and contrast online friends and real, face-to-face friends. Understand what private information should not be shared online.	Understand what private information should not be shared online. Learn how to respond if an online friend asks personal questions.	Describe positive aspects of online communication. Understand rules for safe online communication.	Identify situations in which online flirting and inappropriate talk is risky. Understand how online predators gain kids' trust.	Identify situations in which online flirting and inappropriate talk is risky. Understand how online predators gain kids' trust.
Security					Recognize that passwords are kept private.	Recognize that passwords are kept private.	Recognize the kind of information that is private. Understand that they should never give out private information online.	Recognize the kind of information that is private. Create effective usernames that protect their private information.	Identify which information they should avoid sharing online because it's private. Understand what sites have privacy policies and why.	Identify which information they should avoid sharing online because it's private. Identify strategies for creating and protecting secure	Identify strategies for creating and protecting secure passwords. Create their own secure password. Understand the safety and	Create their own secure password. Understand the safety and security risks of sharing information online. Understand what type of	Create their own secure password. Understand the safety and security risks of sharing information online. Understand what type of

Category												
									passwords. Create their own secure password.	security risks of sharing information online.	information can put them at risk for identity theft and scams.	information can put them at risk for identity theft and other scams.
Digital Life				Understand that the internet provides a means of communicating with real people. Describe how email messages are sent and received.	Understand that the internet provides a means of communicating with real people. Describe how email messages are sent and received.	Understand what it means to go online. Compare and contrast how they are connected to different people and places, both on- and off- line.	Compare and contrast how they are connected to different people and places, both on- and off- line. Understand how people can connect to the internet and show those connections on a map.	Understand their responsibilities to their offline communities. Compare and contrast their responsibilities to their offline and online communities.	Compare and contrast their responsibilities to their offline and online communities. Understand that good digital citizens are responsible and respectful of the digital world and beyond.	Compare and contrast their responsibilities to their offline and online communities. Understand that good digital citizens are responsible and respectful of the digital world and beyond. Explore and reflect on their digital lives.	Understand good digital citizens are responsible and respectful of the digital world and beyond. Determine different ways digital media impacts them, their friends and family, and society. Understand the importance of acting responsibly when carrying out relationships using digital media.	Understand good digital citizens are responsible and respectful of the digital world and beyond. Determine different ways digital media impacts them, their friends and family, and society. Understand the importance of acting responsibly when carrying out relationships using digital media.
Privacy, Digital Footprints and Self-Expression				Recognize that objects, including technology have owners. Identify the school as the owner of its technology.	Recognize that objects, including technology have owners. Identify the school as the owner of its technology.	Identify the work of others as "property." Describe the rules for respecting technology related property.	Explore what information is appropriate to put online. Explore the nature of different digital footprints.	Understand that the information they put online leaves a digital footprint or trail. Explore what information is appropriate to put online.	Understand they have a digital footprint of information that can be searched, copied, passed on, seen by a larger, invisible audience, and is persistent. Recognize that people's online information can be helpful or harmful to their reputation and image. Reflect on the risks of sharing inappropriate information (over-sharing) online.	Understand they have a digital footprint of information that can be searched, copied, passed on, seen by a larger, invisible audience, and is persistent. Think critically about what they choose to post online and share about themselves. Understand that the internet gives them the freedom to make choices about how they present themselves to others.	Understand that is the responsibility of digital media users to respect personal information and privacy of others. Understand how putting information about others online could compromise their own reputations or their relationships with others. Reflect on the benefits and risks of presenting their identities in different ways online.	Understand that is the responsibility of digital media users to respect personal information and privacy of others. Understand how putting information about other online could compromise their own reputations or their relationships with others. Reflect on the benefits and risks of presenting their identities in different ways online.
Creativity and Innovation												

Visual Media (graphics, pictures, video)	Use a variety of apps with audio, video and graphics to enhance learning experiences.	Ask for assistance to change volume based on needs.	Use apps to create and express own ideas.	Use apps to create and express own ideas.	Utilize various paint tools (ie. pencil, paint bucket, erase, text, paintbrush, spray can, auto shape, free hand, change color). Draw a picture to illustrate an idea and label it with text.	Utilize various paint tools (ie. pencil, paint bucket, erase, text, paintbrush, spray can, auto shape, free hand, change color). Draw a picture to illustrate an idea and label it with a complete sentence. Apply special effects such as rotate, stretch, and perspective.	Duplicate a graphic for use in another program. Demonstrate proper care and use of a digital camera. Utilize basic digital camera tools (power, zoom, flash). Move pictures from camera to computer. Take pictures of stationary and moving objects. Use photo altering software to add effects to pictures.	Demonstrate proper care and use of a digital camera. Utilize basic digital camera tools (power, zoom, flash). Move pictures from camera to computer. Take pictures of stationary and moving objects. Use photo altering software to add effects to pictures (including resize, filters, text, and drawing tools).	Demonstrate proper care and use of a digital camera. Utilize basic digital camera tools (power, zoom, flash). Move pictures from camera to computer. Take pictures of stationary and moving objects. Add pictures to form simple slideshows. Add text, transitions, and music to slideshows to tell a story.	Take pictures of stationary and moving objects. Add pictures to form simple slideshows. Add text, transitions, and music to slideshows to tell a story. Incorporate video into other software programs.	Add pictures to form simple slideshows. Add text, transitions, and music to slideshows to tell a story. Incorporate video into other software programs.	Incorporate video into other software programs. Understand and apply storyboard concepts to an original video. Utilize basic video camera tools (power, zoom, record, pause, delete). Utilize basic editing tools and special effects. Add graphics, text, music, narration, transitions, sound effects, and video footage.	Incorporate video into other software programs. Understand and apply storyboard concepts to an original video. Utilize basic video camera tools (power, zoom, record, pause, delete). Utilize basic editing tools and special effects. Add graphics, text, music, narration, transitions, sound effects, and video footage.
Audio Media	Ask for assistance to change volume based on needs.	Ask for assistance to change volume based on needs.	Change volume based on needs.	Change volume based on needs. Use volume tools on iPad as well as headphones.	Change volume based on needs. Utilize volume tools on computer as well as headphones.	Change volume based on needs. Utilize volume tools on computer as well as headphones.	Change volume based on needs. Utilize volume tools on computer as well as headphones.	Record their voice and save it. Use pre-recorded sounds in an audio project. Add special effects to sounds. Modify and edit sounds.	Record their voice and save it. Use pre-recorded sounds in an audio project. Add special effects to sounds. Modify and edit sounds. Add audio created in one program to another software application.	Record their voice and save it. Use pre-recorded sounds in an audio project. Add special effects to sounds. Modify and edit sounds. Add audio created in one program to another software application.	Record their voice and save it. Use pre-recorded sounds in an audio project. Add special effects to sounds. Modify and edit sounds. Add audio created in one program to another software application. Create music from a library of song pieces.	Record their voice and save it. Use pre-recorded sounds in an audio project. Add special effects to sounds. Modify and edit sounds. Add audio created in one program to another software application. Create music from a library of song pieces. Add audio on a sound track of a video Convert video to audio.	Record their voice and save it. Use pre-recorded sounds in an audio project. Add special effects to sounds. Modify and edit sounds. Add audio created in one program to another software application. Create music from a library of song pieces. Add audio on a sound track of a video Convert video to audio.
Communication and Collaboration													
Email and Internet					Define "communicate." Explain that cyberspace is a	Define "communicate." Recognize the computer can be	Consider what it means to "go on the internet." Generate	Consider what it means to "go on the internet." Generate	Visually represent how cyberspace works within the	Model a computer network and how computers	Define the internet as a worldwide network of	Learn about the various ways that students can be	Learn about the various ways that students can be

						means of communicating with real people. Compose, address, send, retrieve and read an email message with assistance. Open a web browser (Internet Explorer, Chrome, etc.)	used as a device to communicate. Explain that cyberspace is a means of communicating with real people. Compose, address, send, retrieve and read an email message with assistance. Open a web browser (Internet Explorer, Chrome, etc.)	multiple solutions for dealing with face to face and online bullying situations. Recognize the importance of tone in both face to face and online communication. Use the tool bar and links in a web browser. Use a variety of ways to get to a website.	multiple solutions for dealing with face to face and online bullying situations. Recognize the importance of tone in both face to face and online communication. Apply rules for writing clear and respectful emails. Enter a Uniform Resource Locator (URL, web address). Use a variety of ways to get to a website. Add images from the web to projects.	U.S. Generate ways to be upstanders when faced with cyberbullying. Communicate effectively by email, taking into account purpose and audience of their email and the message they want to convey. Use multiple web browser platforms to access the internet. Save websites for future use.	communicate. Explain that no one person or organization owns the internet. Generate ways to be upstanders when faced with cyberbullying. Communicate effectively by email, taking into account purpose and audience of their email and the message they want to convey. Use multiple web browser platforms to access the internet. Save websites for future use.	networks. Explain how packets and routers interact. Generate ways to be upstanders when faced with cyberbullying. Communicate effectively by email, taking into account purpose and audience of their email and the message they want to convey. Use multiple web browser platforms to access the internet. Save websites for future use. Complete required tasks for an online project.	cyberbullied, including flaming, deceiving, and harassing. Identify core principles of healthy online communities. Communicate effectively by email, taking into account purpose and audience of their email and the message they want to convey. Use multiple web browser platforms to access the internet. Save websites for future use. Develop a project using online resources.	cyberbullied, including flaming, deceiving, and harassing. Identify core principles of healthy online communities. Communicate effectively by email, taking into account purpose and audience of their email and the message they want to convey. Use multiple web browser platforms to access the internet. Save websites for future use. Identify core principles of healthy online communities. Implement a project using online resources.
Word Processing and Desktop Publishing						Access and open a word processing program and word processing file. Save and retrieve word processing files. Enter and delete text. Understand the concept of electronic presentations. Add text to a slide. Add graphics to a slide.	Access and open a word processing program and word processing file. Save and retrieve word processing files. Enter and delete text. Highlight text in order to format the size, font style, and color. Understand the concept of electronic presentations. Understand the concept of slides. Add text to a	Access, open, save and retrieve word processing files. Highlight text in order to format the size, font style, and color. Understand the concept of insertion point and the cursor. Cut, copy, and paste text. Use the spell checker. Add text and graphics to a slide. Create new slides. Combine slides into a	Highlight text in order to format the size, font style, and color. Use the spell checker. Move or copy text between two or more word processing files. Import, position and manipulate graphics within a word processing file. Add text and graphics to a slide. Create new slides. Effectively use transitions.	Use the spell checker. Move or copy text between two or more word processing files. Import, position and manipulate graphics within a word processing file. Add text and graphics to a slide. Effectively use transitions. Reorganize slides using the sorter view. Control the pace or timing of a presentation.	Use online presentation software (Prezi) Effectively implement a Tuesday Town Meeting. Use upper and lower case letters, graphics, headlines, and body text effectively. Use contrast, proportion, balance and white space effectively. Apply a unit of graphical elements effectively.	Use online presentation software (Prezi) Effectively implement a Tuesday Town Meeting. Use upper and lower case letters, graphics, headlines, and body text effectively. Use contrast, proportion, balance and white space effectively. Apply a unit of graphical elements effectively.	Use online presentation software (Prezi) Effectively implement a Tuesday Town Meeting. Use upper and lower case letters, graphics, headlines, and body text effectively. Use contrast, proportion, balance and white space effectively. Apply a unit of graphical elements effectively.	Use online presentation software (Prezi) Effectively implement a Tuesday Town Meeting. Use upper and lower case letters, graphics, headlines, and body text effectively. Use contrast, proportion, balance and white space effectively. Apply a unit of graphical elements effectively.

							slide. Add graphics to a slide.	presentation. Effectively use transitions.	Reorganize slides using the sorter view.						
Research and Information Fluency															
Searching Online							Identify ads as links to sites trying to sell something. Distinguish ads from content on children's sites. Learn how to search online by using the alphabet.	Identify ads as links to sites trying to sell something. Distinguish ads from content on children's sites. Learn how to search online by using the alphabet.	Locate subject categories that lead to a specified topic. Understand the function of keywords and keyword searches. Learn a step by step procedure for selecting keywords. Apply keywords to find information on the internet.	Locate subject categories that lead to a specified topic. Understand the function of keywords and keyword searches. Learn a step by step procedure for selecting keywords. Apply keywords to find information on the internet.	Understand how to choose a search site that is best matched for their purpose. Explain why it is best to utilize multiple searches when doing research.	Understand how to choose a search site that is best matched for their purpose. Explain why it is best to utilize multiple searches when doing research.	Understand the differences between search engines, directories and metasearch engines. Learn how to refine keyword searches with multiple words, synonyms, and alternate words and phrases.	Understand the differences between search engines, directories and metasearch engines. Learn how to refine keyword searches with multiple words, synonyms, and alternate words and phrases.	Understand the differences between search engines, directories and metasearch engines. Learn how to refine keyword searches with multiple words, synonyms, and alternate words and phrases.
Respecting Creative Work										Identify that pictures and files found on the internet belong to the creator. Copy and paste URLs to cite images in projects.	Define plagiarism and describe its consequences. Learn when it is acceptable to use people's work.	Define plagiarism and describe its consequences. Learn when it is acceptable to use people's work. Learn how to write a citation.	Understand the copyright is a legal system that protect their rights to creative work. Understand that piracy and plagiarism are irresponsible and disrespectful behaviors that have ethical and legal implications. Identify the key points required for a creative	Understand the copyright is a legal system that protect their rights to creative work. Understand that piracy and plagiarism are irresponsible and disrespectful behaviors that have ethical and legal implications. Identify the key points required for a creative	Understand the copyright is a legal system that protect their rights to creative work. Understand that piracy and plagiarism are irresponsible and disrespectful behaviors that have ethical and legal implications. Identify the key points required for a creative

											work to fall under fair use. Create bibliography citations for online newspaper and magazine articles, professional sites, and reference sites.	work to fall under fair use. Create bibliography citations for online newspaper and magazine articles, professional sites, and reference sites. Understand the value of fair use by reworking and remixing copyrighted material.	work to fall under fair use. Create bibliography citations for online newspaper and magazine articles, professional sites, and reference sites. Understand the value of fair use by reworking and remixing copyrighted material.
Spreadsheets						Move to a specific cell on a spreadsheet. Enter text or numbers in a spreadsheet. Select a cell or block of cells.	Recognize the parts of a spreadsheet. Open a spreadsheet program and file. Save and retrieve spreadsheet files	Understand the purpose of a spreadsheet. Recognize new menus within the spreadsheet environment. Insert or delete cells. Format cells.	Change column widths. Build a formula in a cell. Use the data within a spreadsheet to create charts and graphs.	Utilize spreadsheets in various content areas (Math, Science, etc.)	Utilize spreadsheets in various content areas (Math, Science, etc.)	Utilize spreadsheets in various content areas (Math, Science, etc.)	Utilize spreadsheets in various content areas (Math, Science, etc.)
Critical Thinking, Problem Solving, and Decision Making													
Website Evaluation					Identify and explore different features of an informational website. Evaluate whether they like or dislike features of a site.	Identify and explore different features of an informational website. Evaluate whether they like or dislike features of a site.	Use a set of criteria to evaluate and compare informational websites.	Use a set of criteria to evaluate and compare informational websites.	Evaluate the quality of informational websites. Rate informational websites by applying criteria. Understand that they need to consider both quality and appeal of a site when choosing which informational websites are right for them.	Evaluate the quality of informational websites. Rate informational websites by applying criteria. Understand that they need to consider both quality and appeal of a site when choosing which informational websites are right for them.	Understand how the ease of publishing on the internet might affect how much they can trust the content of some sites. Learn criteria that will help them evaluate websites.	Understand how the ease of publishing on the internet might affect how much they can trust the content of some sites. Learn criteria that will help them evaluate websites.	Understand how the ease of publishing on the internet might affect how much they can trust the content of some sites. Learn criteria that will help them evaluate websites.

						Computer Programming / Video Game Design				
Computer Programming					Define the word "algorithm" Arrange steps to meet a predetermined goal Define the word "program"	Define the word "algorithm" Arrange steps to meet a predetermined goal Define the word "program" Define the word "debugging" Modify an existing program to solve errors Order steps of a program in sequence	Order steps of a program in sequence Define the word "debugging" Modify an existing program to solve errors Represent an algorithm as a computer program Define the word "loop" Write a program for a given task that loops a single command	Represent an algorithm as a computer program Modify a program to solve errors Write a program for a given task with loops Define the word "conditional" Translate spoken language conditional statements into a program Define the word "binary" Define the word "event" Create a simple game using event handlers	Apply computer programming knowledge to video game design	Apply the steps of computational thinking (decompose, pattern matching, abstract, algorithm) Define the word "function" Define the word "variable" Apply conditionals to make logic-based choices and analyze multiple value conditions Write nested loops Apply debugging skills

	Express a complex activity using a sequence of simple instructions Develop a list of strategies for debugging Develop greater fluency with sequence, loops, events and parallelism Apply the computational practice of reusing and remixing	Identify common elements in a majority of apps Label the major parts of the App Inventor program Trace existing code to understand functionality Understand that an app's behavior consists of event handlers Demonstrate ability to include conditionals, lists and iteration Test, debug and publish apps	Learn the basics of Alice software Create a short animated story Apply functions and conditionals Write methods and apply them based on parameters Use lists to create unison motion Integrate another subject area with final programming project

Video Game Design	Alter video game landscape with software tools Add and format objects Program objects to move based on various conditionals Program variables such as time, score Apply the concept of "balance" to video game design Understand that all games are composed of space, mechanics, components, rules, and goals Learn the process of video game design, from idea, design, creation, playtesting,	Acquire and apply concepts about the elements of video games (space, components, mechanics, rules, goals) Design a balanced video game Playtest video games and give constructive feedback Debug and revise video games Understand how the element of rules affects the video game player experience	Review elements of video game design Review process of video game design Develop greater fluency with conditionals, operators, and data Describe what a variable is and why variables are useful Explore various hardware extensions that connect the digital world with the physical world	Apply concepts of video game design to mobile app creation	Define commons game design vocabulary Identify commands, buttons, and interface elements for Game Maker software Program objects to react to game rules Create animated sprites and moving targets Modify the user interface for a game Debug and fix game errors based on testing and customer feedback

								feedback, and publication.			
Computer Aided Design		Understand and correctly use navigation, drawing, formatting and measurement tools. Create original designs using various tools and techniques									Understand and correctly use navigation, drawing, formatting and measurement tools. Create original designs using various tools and techniques