Tech Apps	Grade 6	Mission 1	Mission 2	Mission 3	Mission 4	Design Process	Remix 1	Mission 5	Mission 6	Remix 2	Mission 7	Mission 8	Remix 3	Tech & Trends	Data & Trends	Files / Manage	Searches	Dig. Citizenshp	Cybersecurity	Intell. Property	OPTIONAL	Mission 9	Remix 4	Mission 10	Mission 11	Mission 12	Remix 5	What is CS?	Pixel images	CodeX & images	CodeX & audio	CodeX & line art	Digital Info
(1) Computational thinking - foundations. The student explores the core concepts of computational thinking, a set of problem-solving processes that involve decomposition, pattern recognition, abstraction, and algorithms.	(A) decompose real-world problems into structured parts by using visual representation					X			X	X	X	X	X									X	X			X	X			X	X	X		
	(B) analyze the patterns and sequences found in visual representations such as learning maps, concept maps, or other representations of data					X							X																					
	(C) define abstraction and distinguish between generalized information and specific information in the context of solving a problem or completing a task			X			X					X	X									X	X	X	X	X	X							
	(D) design a plan collaboratively using visual representation to document a problem, possible solutions, and an expected timeline for the development of a coded solution					X	X			X	X	X	X														X			X	X	X		
	(E) analyze different techniques used in debugging and apply them to an algorithm			X	X		X	X	X	X	X	X	X									X	X	X	X	X	X			X	X	X		
	(F) analyze the benefits of using iteration (code and sequence repetition) in algorithms					X			X	X	X	X	X									X	X	X	X	X	X							
(2) Computational thinking - applications. The student applies the fundamentals of computer science.	(A) define and label variables that relate to their programming or algorithm			X	X		X		X	X	X	X	X									X	X	X	X	X	X			X	X	X	X	
	(B) use a design process to create block-based and text-based programs that include sequences, loops, conditionals, and events to solve an everyday problem				X	X	X		X	X	X	X	X									X	X	X	X	X	X			X	X	X	X	
(3) Creativity and innovation - innovative design process. The student takes an active role in learning by using a design process and creative thinking to develop and evaluate solutions, considering a variety of local and global perspectives.	(A) resolve challenges in design processes independently using goal setting and personal character traits such as demonstrating courage and confidence					X	X		X	X	X	X	X									X	X	X	X	X	X			X	X	X	X	
	(B) discuss and implement a design process using digital tools to compare, contrast, and evaluate student-generated outcomes					X	X			X			X										X				X							
	(C) identify how the design process is used in various industries					X																												
(4) Creativity and innovation - emerging technologies. The student demonstrates a thorough understanding of the role of technology throughout history and its impact on societies.	(A) discuss how changes in technology throughout history have impacted various areas of study													X														X						
	(B) discuss how global trends impact the development of technology													X														X						
	(C) transfer current knowledge to the learning of newly encountered technologies		X	X			X	X		X	X		X		X				X			X	X				X							
(5) Data literacy, management, and representation - collect data. The student uses advanced digital strategies to collect and represent data.	(A) demonstrate how data can be represented in Boolean expression								X	X	X	X	X				X					X	X											
	(B) discuss and use advanced search strategies, including keywords, Boolean operators, and limiters																X																	
(6) Data literacy, management, and representation - organize, manage, and analyze data. The student uses digital tools to transform data, make inferences, and predictions.	(A) use digital tools to transform data in order to identify and discuss trends and make inferences														X		X																	
(7) Data literacy, management, and representation - communicate and publish results. The student creates digital products to communicate data to an audience for an intended purpose.	(A) use digital tools to communicate and display data from a product or process to inform an intended audience													X	X		X	X	X	X				X	X	X		X						
(8) Digital citizenship - social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact.	(A) identify the impact of a digital footprint																	X																
	(B) create formal and informal digital communications using appropriate digital etiquette																	X																
	(C) collaborate on digital platforms such as recording a video conference presentation using appropriate formal and informal digital etiquette																	X																
(9) Digital citizenship - ethics and laws. The student recognizes and practices responsible, legal, and ethical behavior while using digital tools and resources.	(A) adhere to local acceptable use policy (AUP) and practice safe, ethical, and positive online behaviors																	X	X															
	(B) discuss and define intellectual property and associated terms, including copyright law, permission, fair use, creative commons, open source, and public domain																			X														
	(C) create citations and cite sources for a variety of digital forms of intellectual property																			X														
	(D) describe how information can be exaggerated or misrepresented online																			X														

Tech Apps	Grade 6	Mission 1	Mission 2	Mission 3	Mission 4	Design Process	Remix 1	Mission 5	Mission 6	Remix 2	Mission 7	Mission 8	Remix 3	Tech & Trends	Data & Trends	Files / Manage	Searches	Dig. Citizenshp	Cybersecurity	Intell. Property	OPTIONAL	Mission 9	Remix 4	Mission 10	Mission 11	Mission 12	Remix 5	What is CS?	Pixel images	CodeX & images	CodeX & audio	CodeX & line art	Digital Info
(10) Digital citizenship - privacy, safety, and security. The student practices safe, legal and ethical digital behaviors to become a socially responsible digital citizenship.	(A) identify real-world cybersecurity problems such as phishing, malware, password attacks, identity theft, and hacking																		X														
	(B) identify various methods of cyberbullying such as harassment, impersonation, and cyberstalking																		X														
(11) Practical technology concepts - processes. The student evaluates and selects appropriate methods or techniques for an independent project and identifies and solves common hardware and software problems using troubleshooting strategies.	(A) create and design files in various formats such as text, graphics, video, and audio files													X	X			X	X	X									X	X	X	X	
(12) Practical technology concepts - skills and tools. The student leverages technology systems, concepts, and operations to produce digital artifacts.	(A) apply appropriate technology terminology such as cloud applications, input, output, and basic programming		X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X						
	(B) identify effective file management strategies such as file naming conventions, local and remote locations, backup, hierarchy, folder structure, file conversion, tags, and emerging digital organizational strategies		X													X													X	X	X	X	
	(C) select and use the appropriate platform and tools to complete a specific task or project	X												X	X			X	X	X							X		X	X	X	X	
	(D) demonstrate improvement in speed and accuracy as measured by words per minute when applying correct keyboarding techniques														X																		
	(E) select and use appropriate shortcuts within applications								X	X	X	X	X									X	X	X	X	X	X		X	X	X	X	
	(F) use help sources to research application features and solve software issues	X	X		X		X	X	X	X	X	X	X	X	X							X	X	X	X	X	X		X	X	X	X	
	(G) identify types of local and remote data storage such as cloud architecture or local server															X																	
	(H) use productivity tools found in spreadsheet, word processing, and publication applications to create digital artifacts such as reports, graphs, and charts	X												X	X			X	X	X								X					

Tech Apps	Grade 7	Mission 1	Mission 2	Mission 3	Mission 4	Design Process	Remix 1	Mission 5	Mission 6	Remix 2	Mission 7	Mission 8	Remix 3	Tech & Trends	Data & Trends	Files / Manage	Searches	Digital Info	Dig. Citizenshp	Cybersecurity	Intell. Property	OPTIONAL	Mission 9	Remix 4	Mission 10	Mission 11	Mission 12	Remix 5	What is CS?	Pixel images	CodeX & images	CodeX & audio	CodeX & line art
(1) Computational thinking - foundations. The student explores the core concepts of computational thinking, a set of problem-solving processes that involve decomposition, pattern recognition, abstraction, and algorithms.	(A) decompose real-world problems into structured parts by using flowcharts					X	X		X	X	X	X	X										X	X			X	X		X	X	X	X
	(B) analyze the patterns and sequences found in flowcharts					X							X																					
	(C) identify abstraction and analyze how an algorithm the student created can be generalized to solve additional problems			X			X					X	X										X	X	X	X	X	X					
	(D) design a plan collaboratively using flowcharts to document a problem, possible solutions, and an expected timeline for the development of a coded solution					X	X			X	X	X	X															X		X	X	X	X
	(E) analyze different techniques used in debugging and apply them to an algorithm			X	X		X	X	X	X	X	X	X										X	X	X	X	X	X		X	X	X	X
	(F) analyze the benefits of using iteration (code and sequence repetition) in algorithms					X			X	X	X	X	X										X	X	X	X	X	X					
(2) Computational thinking - applications. The student applies the fundamentals of computer science.	(A) manipulate and rename variables and describe different data types			X	X		X		X	X	X	X	X					X					X	X	X	X	X	X		X	X	X	X
	(B) use a software design process to create text-based programs with nested loops that address different subproblems within a real-world context				X	X			X	X	X	X	X										X	X	X	X	X	X		X	X	X	X
(3) Creativity and innovation - innovative design process. The student takes an active role in learning by using a design process and creative thinking to develop and evaluate solutions, considering a variety of local and global perspectives.	(A) resolve challenges in design processes independently using goal setting and personal character traits such as demonstrating responsibility and advocating for self appropriately					X	X		X	X	X	X	X										X	X	X	X	X	X		X	X	X	X
	(B) discuss and implement a design process that includes planning and selecting digital tools to develop and refine a prototype or model through trial and error					X	X			X			X											X				X					
	(C) identify how the design process is used in various industries					X																												
(4) Creativity and innovation - emerging technologies. The student demonstrates a thorough understanding of the role of technology throughout history and its impact on societies.	(A) discuss how changes in technology throughout history have impacted various areas of study													X															X				
	(B) discuss how global trends impact the development of technology													X															X				
	(C) transfer current knowledge to the learning of newly encountered technologies		X	X			X	X		X	X		X		X					X			X	X				X					
(5) Data literacy, management, and representation - collect data. The student uses advanced digital strategies to collect and represent data.	(A) demonstrate how data can be represented in a binary number system																	X					X	X									
	(B) evaluate advanced search strategies, including keywords, Boolean operators, and limiters																X																	
(6) Data literacy, management, and representation - organize, manage, and analyze data. The student uses digital tools to transform data, make inferences, and predictions.	(A) use digital tools in order to transform data to analyze trends and make inferences and predictions														X		X																	
(7) Data literacy, management, and representation - communicate and publish results. The student creates digital products to communicate data to an audience for an intended purpose.	(A) use digital tools to communicate and display data from a product or process to inform or persuade an intended audience													X	X		X		X	X	X				X	X	X		X				
(8) Digital citizenship - social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact.	(A) classify actions as having a positive or negative effect on a digital footprint																		X														
	(B) create and revise formal and informal communications using a feedback process and appropriate digital etiquette																		X														
	(C) collaborate on digital platforms such as recording a video conference presentation using appropriate formal and informal digital etiquette																		X														
(9) Digital citizenship - ethics and laws. The student recognizes and practices responsible, legal, and ethical behavior while using digital tools and resources.	(A) adhere to local acceptable use policy (AUP) and practice and model safe, ethical, and positive online behaviors																		X	X													
	(B) explain the importance of intellectual property laws, including the benefits of protection for content owners, and the consequences of violating these laws																				X												
	(C) create citations and cite sources for a variety of digital forms of intellectual property																				X												
	(D) evaluate how various types of media, including social media, and technology can be used to exaggerate and misrepresent information																				X												
(10) Digital citizenship - privacy, safety, and security. The student practices safe,	(A) describe and model ways to protect oneself from real-world cybersecurity attacks																			X													

Tech Apps	Grade 7	Mission 1	Mission 2	Mission 3	Mission 4	Design Process	Remix 1	Mission 5	Mission 6	Remix 2	Mission 7	Mission 8	Remix 3	Tech & Trends	Data & Trends	Files / Manage	Searches	Digital Info	Dig. Citizenshp	Cybersecurity	Intell. Property	OPTIONAL	Mission 9	Remix 4	Mission 10	Mission 11	Mission 12	Remix 5	What is CS?	Pixel images	CodeX & images	CodeX & audio	CodeX & line art
legal and ethical digital behaviors to become a socially responsible digital citizenship	(B) analyze the negative impacts of cyberbullying on the victim and the bully																			X													
(11) Practical technology concepts – processes. The student evaluates and selects appropriate methods or techniques for an independent project and identifies and solves common hardware and software problems using troubleshooting strategies.	(A) choose a variety of digital tools to create, share and communicate digital artifacts													X	X				X	X	X									X	X	X	X
(12) Practical technology concepts – skills and tools. The student leverages technology systems, concepts, and operations to produce digital artifacts.	(A) demonstrate proficiency in the appropriate use of technology terminology in projects through team collaboration and communication		X	X	X		X	X	X	X	X	X	X	X	X	X			X	X	X		X	X	X	X	X	X					
	(B) demonstrate effective file management strategies such as file naming conventions, local and remote locations, backup, hierarchy, folder structure, file conversion, tags, and emerging digital organizational strategies with assistance		X													X														X	X	X	X
	(C) select and use the appropriate platform and tools, including selecting and using software or hardware for a defined task	X												X	X				X	X	X							X		X	X	X	X
	(D) demonstrate improvement in speed and accuracy as measured by words per minute when applying correct keyboarding techniques														X																		
	(E) select and use appropriate shortcuts within applications								X	X	X	X	X										X	X	X	X	X	X		X	X	X	X
	(F) research and test potential solutions to solve hardware and software problems	X	X		X		X	X	X	X	X	X	X	X	X								X	X	X	X	X	X		X	X	X	X
	(G) use a variety of types of local and remote data storage to store or share data such as cloud architecture or local server															X																	
	(H) select and use productivity tools found in spreadsheet, word processing, and publication applications to create digital artifacts such as reports, graphs, and charts with increasing complexity	X												X	X				X	X	X								X				

Tech Apps	Grade 8	Mission 1	Mission 2	Mission 3	Mission 4	Design Process	Remix 1	Mission 5	Mission 6	Remix 2	Mission 7	Mission 8	Remix 3	Mission 9	Remix 4	Tech & Trends	Data & Trends	Files / Manage	Searches	Digital Info	Dig. Citizenshp	Cybersecurity	Intell. Property	OPTIONAL	Mission 10	Mission 11	Mission 12	Remix 5	What is CS?	Pixel images	CodeX & images	CodeX & audio	CodeX & line art
(1) Computational thinking - foundations. The student explores the core concepts of computational thinking, a set of problem-solving processes that involve decomposition, pattern recognition, abstraction, and algorithms.	(A) decompose real-world problems into structured parts by using pseudocode					X	X		X	X	X	X	X	X	X												X	X		X	X	X	X
	(B) analyze the patterns and sequences found in pseudocode and identify its variables					X							X																				
	(C) practice abstraction by developing a generalized algorithm that can solve different types of problems			X								X	X	X	X										X	X	X	X					
	(D) design a plan collaboratively using pseudocode to document a problem, possible solutions, and an expected timeline for the development of a coded solution					X	X			X	X	X	X															X		X	X	X	X
	(E) develop, compare, and improve algorithms for a specific task to solve a problem								X	X	X	X	X	X	X										X	X	X	X		X	X	X	X
	(F) analyze the benefits of using iteration (code and sequence repetition) in algorithms					X			X	X	X	X	X	X	X										X	X	X	X					
(2) Computational thinking - applications. The student applies the fundamentals of computer science.	(A) construct named variables with multiple data types and perform operations on their values			X	X		X		X	X	X	X	X	X	X					X					X	X	X	X		X	X	X	X
	(B) use a software design process to create text-based programs with nested loops that address different subproblems within a real-world context				X	X			X	X	X	X	X	X	X										X	X	X	X		X	X	X	X
	(C) modify and implement previously written code to develop improved programs						X			X			X		X							X											
(3) Creativity and innovation - innovative design process. The student takes an active role in learning by using a design process and creative thinking to develop and evaluate solutions, considering a variety of local and global perspectives.	(A) demonstrate innovation in a design process using goal setting and personal character traits, including demonstrating calculated risk-taking and tolerance					X	X		X	X	X	X	X	X	X										X	X	X	X		X	X	X	X
	(B) discuss and implement a design process that includes planning, selecting digital tools to develop, test and evaluate design limitations, and refining a prototype or model					X	X			X			X		X													X					
	(C) identify how the design process is used in various industries					X																												
(4) Creativity and innovation - emerging technologies. The student demonstrates a thorough understanding of the role of technology throughout history and its impact on societies.	(A) evaluate how changes in technology throughout history have impacted various areas of study															X													X				
	(B) evaluate and predict how global trends impact the development of technology															X													X				
	(C) transfer current knowledge to the learning of newly encountered technologies		X	X			X	X		X	X		X	X	X		X					X						X					
(5) Data literacy, management, and representation - collect data. The student uses advanced digital strategies to collect and represent data.	(A) compare and contrast data types, including binary, integers, real numbers, Boolean data, and text-based representations													X	X					X													
	(B) apply appropriate search strategies, including keywords, Boolean operators, and limiters, to achieve a specified outcome that includes a variety of file formats																		X														
(6) Data literacy, management, and representation - organize, manage, and analyze data. The student uses digital tools to transform data, make inferences, and predictions.	(A) use digital tools in order to transform data, analyze trends, and predict possibilities and develop steps for the creation of an innovative process or product																X		X														
(7) Data literacy, management, and representation - communicate and publish results. The student creates digital products to communicate data to an audience for an intended purpose.	(A) use digital tools to communicate and publish data from a product or process to persuade an intended audience															X	X		X		X	X	X		X	X	X		X				
(8) Digital citizenship - social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact.	(A) analyze the importance of managing a digital footprint and how a digital footprint can affect the future																				X												
	(B) create and revise formal and informal communications using a feedback process and appropriate digital etiquette																				X												
	(C) collaborate and publish for a global audience on digital platforms such as recording and editing videos using appropriate formal and informal digital etiquette																				X												
(9) Digital citizenship - ethics and laws. The student recognizes and practices responsible, legal, and ethical behavior while using digital tools and resources.	(A) adhere to local acceptable use policy (AUP) and practice and advocate for safe, ethical, and positive online behaviors																				X	X											
	(B) adhere to appropriate intellectual property law when creating digital products																						X										
	(C) create citations and cite sources for a variety of digital forms of intellectual property																						X										
	(D) evaluate the bias of digital information sources, including websites																						X										

Tech Apps	Grade 8	Mission 1	Mission 2	Mission 3	Mission 4	Design Process	Remix 1	Mission 5	Mission 6	Remix 2	Mission 7	Mission 8	Remix 3	Mission 9	Remix 4		Tech & Trends	Data & Trends	Files / Manage	Searches	Digital Info	Dig. Citizenshp	Cybersecurity	Intell. Property	OPTIONAL	Mission 10	Mission 11	Mission 12	Remix 5		What is CS?	Pixel images	CodeX & images	CodeX & audio	CodeX & line art
(10) Digital citizenship - privacy, safety, and security. The student practices safe, legal and ethical digital behaviors to become a socially responsible digital citizenship.	(A) analyze real-world scenarios to identify cybersecurity threats and propose ways to prevent harm																						X											
	(B) evaluate scenarios or case studies to identify warning signs of a cyberbullying victim such as withdrawal or lack of sleep and predict the outcomes for both the victim and the bully																						X											
(11) Practical technology concepts - processes. The student evaluates and selects appropriate methods or techniques for an independent project and identifies and solves common hardware and software problems using troubleshooting strategies.	(A) combine various file formats for a specific project or audience																X	X				X	X	X							X	X	X	X
	(B) share and seek feedback on files in various formats, including text, raster and vector graphics, video and audio files						X			X			X		X						X	X												
(12) Practical technology concepts - skills and tools. The student leverages technology systems, concepts, and operations to produce digital artifacts.	(A) integrate use of appropriate technology terminology in scholarly inquiry and dialogue such as classroom discussion and written samples		X	X	X		X	X	X	X	X	X	X	X	X		X	X	X			X	X	X		X	X	X	X				
	(B) implement effective file management strategies independently, including file naming conventions, local and remote locations, backup, hierarchy, folder structure, file conversion, tags, and emerging digital organizational strategies		X																X												X	X	X	X
	(C) select and use the appropriate platform and tools, including selecting and using software or hardware to transfer data	X															X	X				X	X	X					X		X	X	X	X
	(D) demonstrate improvement in speed and accuracy as measured by words per minute when applying correct keyboarding techniques																	X																
	(E) select and use appropriate shortcuts within applications								X	X	X	X	X	X	X											X	X	X	X			X	X	X	X
	(F) apply appropriate troubleshooting techniques and seek technical assistance as needed	X	X		X		X	X	X	X	X	X	X	X	X		X	X								X	X	X	X			X	X	X	X
	(G) compare types of local and remote data storage such as cloud architecture or local server and select the appropriate type of storage to store and share data																		X															
	(H) select and use productivity tools found in spreadsheet, word processing, and publication applications to create digital artifacts including reports, graphs, and charts with increasing complexity	X															X	X				X	X	X						X				X