Python with CodeX	Tech Apps Grade 6	Mission 1: Intro to CodeSpace	Mission 2: Intro to CodeX	Mission 3: Light Show	Mission 4: Display Games	Design Process	Remix 1 (Missions 3-4)	Mission 5: Micro Musician	Mission 6: Heartbeat	Remix 2 (Missions 5-6)	Mission 7: Personal Billboard	Mission 8: Answer Bot	Remix 3 (Missions 7-8)	ADDITIONAL LESSONS What is Computer Science?	Technology & Trends	Data & Trends	Files & File Management	Searches	Digital Citizenshp	Cybersecurity	Intellectual Property	OPTIONAL LESSONS	Mission 9: Game Spinner	Remix 4 (Mission 9)	Mission 10: Reaction Tester	Mission 11: Spirit Level	Mission 12: Night Light	Remix 5 (Missions 10-12)	Pixel images	CodeX & images	CodeX & audio	CodeX & line art	Digital Info
(1) Computational thinking - foundations. The student	(A) decompose real-world problems into structured parts by using visual representation					х			Х	х	х	x	х										х	x			x	x	X	x	х		
explores the core concepts of computational thinking, a set of problem-solving processes that involve decomposition, pattern	(B) analyze the patterns and sequences found in visual representations such as learning maps, concept maps, or other representations of data					Х							Х																				
recognition, abstraction, and algorithms.	(C) define abstraction and distinguish between generalized information and specific information in the context of solving a problem or completing a task			х			Х					х	Х										х	x	х	x	х	х					
	(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					х	х			х	х	x	х															х	х	x	х		
	(E) analyze different techniques used in debugging and apply them to an algorithm			х	х		Х	x	х	х	х	х	х										Х	X	X	X	х	х	Х	х	х		
	(F) analyze the benefits of using iteration (code and sequence repetition) in algorithms					Х			Х	х	х	х	Х										Х	Х	х	Х	х	х					
(2) Computational thinking – applications. The student applies	(A) define and label variables that relate to their programming or algorithm			х	х		Х		Х	х	х	х	Х										Х	Х	Х	Х	х	х	Х	Х	х	Х	
the fundamentals of computer science.	(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				х	Х	Х		Х	Х	х	х	х			Ť						ı	х	x	х	x	х	х	х	х	х	х	
(3) Creativity and innovation - innovative design process. The student takes an active role in	(A) resolve challenges in design processes independently using goal setting and personal character traits such as demonstrating courage and confidence					Х	Х		х	х	х	х	Х										х	х	х	х	х	х	x	х	х	х	
learning by using a design process and creative thinking to develop and evaluate solutions, considering a variety of local and	(B) discuss and implement a design process using digital tools to compare, contrast, and evaluate student-generated outcomes					Х	Х			х			Х											х				х					
global perspectives.	(C) identify how the design process is used in various industries					Х									>																		
(4) Creativity and innovation - emerging technologies. The	(A) discuss how changes in technology throughout history have impacted various areas of study														x >																		
student demonstrates a thorough understanding of the role of technology throughout history	(B) discuss how global trends impact the development of technology														x >																		
and its impact on societies.	(C) transfer current knowledge to the learning of newly encountered technologies		x	х			Х	x		Х	Х		Х] ;	×			×			х	X				х					
(5) Data literacy, management, and representation - collect data.	(A) demonstrate how data can be represented in Boolean expression								Χ	х	х	х	Х					>	×				Х	Х									
The student uses advanced digital strategies to collect and	(B) discuss and use advanced search strategies, including keywords, Boolean operators, and limiters																	>	×														
(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	>	ĸ														
(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	х	х					
(8) Digital citizenship - social interactions. The student	(A) identify the impact of a digital footprint																		Х														
understands different styles of digital communication and that a	(B) create formal and informal digital communications using appropriate digital etiquette																		X														
student's actions online can have a long-term impact.	video conference presentation using appropriate formal and informal digital etiquette																		×														
(9) Digital citizenship - ethics and laws. The student recognizes and	(A) adhere to local acceptable use policy (AUP) and practice safe, ethical, and positive online behaviors																		×	×													

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practices responsible, legal, and ethical behavior while using digital tools and resources.	(B) discuss and define intellectual property and associated terms, including copyright law, permission, fair use, creative commons, open source, and public domain																					х												
	(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																					Х												
(10) Digital citizenship - privacy, safety, and security. The student practices safe, legal and ethical digital behaviors to become a socially responsible digital	(A) identify real-world cybersecurity problems such as phishing, malware, password attacks, identity theft, and hacking																				х													
	(B) identify various methods of cyberbullying such as harassment, impersonation, and cyberstalking																				х													
(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															Х	х			х	х	х								x	х	х	х	
(12) Practical technology concepts - skills and tools. The student leverages technology	(A) apply appropriate technology terminology such as cloud applications, input, output, and basic programming		х	х	х		х	х	х	х	х	х	х			Х	х	х		Х	х	Х		х	х	х	х	х	х					
systems, concepts, and operations to produce digital artifacts.	(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		х															х												x	x	х	x	
	(C) select and use the appropriate platform and tools to complete a specific task or project	х														х	х			х	x	x							Х	X	x	×	×	
	(D) demonstrate improvement in speed and accuracy as measured by words per minute when applying correct keyboarding techniques																х																	
	(E) select and use appropriate shortcuts within applications								x	x	X	x	х											Х	х	х	Х	х	х	x	х	Х	Х	
	(F) use help sources to research application features and solve software issues	Х	x		х		х	x	x	x	Х	x	х			Х	х							Х	х	х	Х	х	х	x	х	Х	Х	
	(C) identify types of local and remote data storage such as cloud architecture or local server																	х																
	(H) use productivity tools found in spreadsheet, word processing, and publication applications to create digital artifacts such as reports, graphs, and charts	Х													х	Х	х			х	х	Х												