



Lift-Off with CodeX – TEKS Technology Applications Grade 6 Curriculum

Updated 06/02/2024 by Jill Jones

KNOWLEDGE & SKILLS	Technology Applications Grade 6 No prerequisite	Mission / Lesson
<p>(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.</p>	(A) decompose real-world problems into structured parts by using visual representation	Mission 6, Mission 7 Mission 8 Design Process <i>Extensions and cross-curricular for missions 6-8</i>
	(B) analyze the patterns and sequences found in visual representations such as learning maps, concept maps, or other representations of data	Mission 5, Mission 6 Mission 7, Mission 8 Mission 9, Mission 10 Design Process <i>Extensions and cross-curricular for missions 5-10</i>
	(C) define abstraction and distinguish between generalized information and specific information in the context of solving a problem or completing a task	Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project Design Process <i>Extensions and cross-curricular for missions 2-10</i>
	(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	Design Process <i>Extensions and cross-curricular for missions 2-10</i>
	(E) analyze different techniques used in debugging and apply them to an algorithm	Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project <i>Extensions and cross-curricular for missions 2-10</i>
	(F) analyze the benefits of using iteration (code and sequence repetition) in algorithms	Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project Design Process <i>Extensions and cross-curricular for missions 2-10</i>

<p>(2) Computational thinking - applications. The student applies the fundamentals of computer science.</p>	<p>(A) define and label variables that relate to their programming or algorithm</p>	<p>Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project <i>Extensions and cross-curricular for missions 2-10</i></p>
	<p>(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</p>	<p>Design Process <i>Extensions and cross-curricular for missions 2-10</i></p>
<p>(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.</p>	<p>(A) resolve challenges in design processes independently using goal setting and personal character traits such as demonstrating courage and confidence</p>	<p>Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project Design Process <i>Extensions and cross-curricular for missions 2-10</i></p>
	<p>(B) discuss and implement a design process using digital tools to compare, contrast, and evaluate student-generated outcomes</p>	<p>Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project Design Process <i>Extensions and cross-curricular for missions 2-10</i></p>
	<p>(C) identify how the design process is used in various industries</p>	<p>Technology & Trends Design Process</p>
<p>(4) Creativity and innovation - emerging technologies. The student demonstrates a thorough understanding of the role of technology throughout history and its impact on societies.</p>	<p>(A) discuss how changes in technology throughout history have impacted various areas of study</p>	<p>What is Computer Science? Technology & Trends <i>Extensions and cross-curricular for missions 2-10</i></p>
	<p>(B) discuss how global trends impact the development of technology</p>	<p>What is Computer Science? Technology & Trends <i>Extensions and cross-curricular for missions 1-10</i></p>
	<p>(C) transfer current knowledge to the learning of newly encountered technologies</p>	<p>Data & Trends, Cybersecurity <i>Extensions and cross-curricular for missions 2-10</i></p>
<p>(5) Data literacy, management, and representation - collect data. The student uses advanced digital strategies to collect and represent data.</p>	<p>(A) demonstrate how data can be represented in Boolean expression</p>	<p>Searches <i>Extensions and cross-curricular for mission 1</i></p>
	<p>(B) discuss and use advanced search strategies, including keywords, Boolean operators, and limiters</p>	<p>Searches</p>

<p>(6) Data literacy, management, and representation - organize, manage, and analyze data. The student uses digital tools to transform data, make inferences, and predictions.</p>	<p>(A) use digital tools to transform data in order to identify and discuss trends and make inferences</p>	<p>Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project Technology & Trends Data & Trends, Searches Digital Citizenship, Cybersecurity Intellectual Property <i>Extensions and cross-curricular for missions 2-10</i></p>
<p>(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.</p>	<p>(A) use digital tools to communicate and display data from a product or process to inform an intended audience</p>	<p>Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project Data & Trends, Searches <i>Extensions and cross-curricular for missions 5-10</i></p>
<p>(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.</p>	<p>(A) identify the impact of a digital footprint</p>	<p>Digital Citizenship</p>
	<p>(B) create formal and informal digital communications using appropriate digital etiquette</p>	<p>Digital Citizenship</p>
	<p>(C) collaborate on digital platforms such as recording a video conference presentation using appropriate formal and informal digital etiquette</p>	<p>Digital Citizenship</p>
<p>(9) Digital citizenship - ethics and laws. The student recognizes and practices responsible, legal, and ethical behavior while using digital tools and resources.</p>	<p>(A) adhere to local acceptable use policy (AUP) and practice safe, ethical, and positive online behaviors</p>	<p>Digital Citizenship Cybersecurity</p>
	<p>(B) discuss and define intellectual property and associated terms, including copyright law, permission, fair use, creative commons, open source, and public domain</p>	<p>Intellectual Property</p>
	<p>(C) create citations and cite sources for a variety of digital forms of intellectual property</p>	<p>Intellectual Property</p>
	<p>(D) describe how information can be exaggerated or misrepresented online</p>	<p>Intellectual Property</p>
<p>(10) Digital citizenship - privacy, safety, and security. The student practices safe, legal and ethical digital behaviors to become a socially responsible digital citizenship.</p>	<p>(A) identify real-world cybersecurity problems such as phishing, malware, password attacks, identity theft, and hacking</p>	<p>Cybersecurity</p>
	<p>(B) identify various methods of cyberbullying such as harassment, impersonation, and cyberstalking</p>	<p>Cybersecurity</p>
<p>(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.</p>	<p>(A) create and design files in various formats such as text, graphics, video, and audio files</p>	<p>Technology & Trends Data & Trends Files & File Management Digital Citizenship Cybersecurity Intellectual Property</p>

<p>(12) Practical technology concepts - skills and tools. The student leverages technology systems, concepts, and operations to produce digital artifacts.</p>	<p>(A) apply appropriate technology terminology such as cloud applications, input, output, and basic programming</p>	<p>Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project Technology & Trends Data & Trends Files & File Management Digital Citizenship Cybersecurity Intellectual Property <i>Extensions and cross-curricular for missions 2-10</i></p>
	<p>(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</p>	<p>Files & File Management</p>
	<p>(C) select and use the appropriate platform and tools to complete a specific task or project</p>	<p>Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project Technology & Trends Data & Trends Files & File Management Digital Citizenship Cybersecurity Intellectual Property <i>Extensions and cross-curricular for missions 2-10</i></p>
	<p>(D) demonstrate improvement in speed and accuracy as measured by words per minute when applying correct keyboarding techniques</p>	<p>Data & Trends</p>
	<p>(E) select and use appropriate shortcuts within applications</p>	<p>Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project <i>Extensions and cross-curricular for missions 2-10</i></p>
	<p>(F) use help sources to research application features and solve software issues</p>	<p>Mission 2, Mission 3 Mission 4, Mission 5 Mission 6, Mission 7 Mission 8, Mission 9 Mission 10, Final Project Technology & Trends Data & Trends <i>Extensions and cross-curricular for missions 1-10</i></p>

	(G) identify types of local and remote data storage such as cloud architecture or local server	Files & File Management
	(H) use productivity tools found in spreadsheet, word processing, and publication applications to create digital artifacts such as reports, graphs, and charts	Final Project Technology & Trends Data & Trends Digital Citizenship Cybersecurity Intellectual Property