

TEK	Description	TEK integration	Possible Implementation
6.1.A	decompose real-world problems into structured parts by using visual representation	- SS: 6.14.A - ELA:6.11.A - Math:6.1.B - Science: 6.2.D	- Use visual representations such as flowcharts or concept maps to decompose how different cultures have adapted to their environments. - Break down research projects into structured parts using graphic organizers like mind maps or outlines to visualize the research process. - Decompose algebraic problems into visual parts using diagrams or flowcharts to illustrate the steps in solving equation - Use visual representations such as graphs, charts, or diagrams to break down scientific data and illustrate the process of drawing conclusions from experiments.
6.1.B	analyze the patterns and sequences found in visual representations such as learning maps, concept maps, or other representations of data	- SS: 6.14.B - ELA:6.11.B - Math:6.6.A - Science: 6.2.E	- Use concept maps to visualize and analyze the patterns and sequences of environmental changes caused by human activities. - Analyze the patterns and sequences in learning maps or concept maps created from research projects to identify key themes and draw conclusions. - Use visual representations such as graphs, charts, and concept maps to analyze scientific data and identify patterns and sequences.
6.1.C	define abstraction and distinguish between generalized information and specific information in the context of solving a problem or completing a task	- SS: 6.16.A - ELA:6.13.A - Math: - Science: 6.2.D	- Analyze a historical event by identifying generalized trends (e.g., causes of a revolution) and specific information (e.g., key figures, dates, and locations). - While writing a research paper, students identify the generalized thesis statement and support it with specific information from their sources. - Discuss generalized scientific theories (e.g., laws of motion) and support them with specific experimental results or case studies.
6.1.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	- SS: - ELA: - Math: - Science:	Code.org: https://studio.code.org/courses/csd-2023?viewAs=Instructor

6.1.E	analyze different techniques used in debugging and apply them to an algorithm;	• SS: • ELA: • Math: • Science:	Code.org: https://studio.code.org/courses/csd-2023?viewAs=Instructor
6.1.F	analyze the benefits of using iteration (code and sequence repetition) in algorithms	• SS: • ELA: • Math: • Science:	Code.org: https://studio.code.org/courses/csd-2023?viewAs=Instructor
6.2.A	define and label variables that relate to their programming or algorithm	• SS: • ELA: • Math: • Science:	Code.org: https://studio.code.org/courses/csd-2023?viewAs=Instructor
6.2.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	• SS: • ELA: • Math: • Science:	Code.org: https://studio.code.org/courses/csd-2023?viewAs=Instructor
6.3.A	resolve challenges in design processes independently using goal setting and personal character traits such as demonstrating courage and confidence	• SS: 6.14.B • ELA:6.11.D • Math: • Science: 6.2.A	• Research a technological innovation, set research goals, and independently overcome challenges in finding reliable sources or interpreting data. • Set goals for a writing assignment, such as improving thesis clarity or reducing grammatical errors, and independently work through editing challenges. • Set goals for a science experiment, such as accurately measuring variables, and independently overcome challenges in the experimental process.
6.3.B	discuss and implement a design process using digital tools to compare, contrast, and evaluate student-generated outcomes	• SS: 6.15.A • ELA:6.11.A • Math:6.10.C • Science: 6.2.A	• Use digital tools to design projects that address social or historical issues, compare and contrast different solutions, and evaluate their effectiveness. • Write multiple drafts of an essay using a word processor. Use digital tools to track changes and compare different versions, evaluating which draft best conveys the intended message • Conduct a statistical analysis project where students collect data, create different graphical representations using spreadsheets, and compare the effectiveness of each representation in conveying the data. • Design and conduct an experiment on plant growth under different conditions using digital tools to record and analyze

			data. Compare the results from different conditions and evaluate the effectiveness of each approach
6.3.C	identify how the design process is used in various industries	- SS: 6.16.B - ELA:6.13.B - Math:6.1.A - Science: 6.4.A	- Study how industries have evolved with technological advancements and the role of the design process in these changes. - Study how the aerospace industry uses mathematical modeling and simulation in the design process to optimize aircraft performance. - Investigate how the design process is applied in scientific research and development in various industries.
6.4.A	discuss how changes in technology throughout history have impacted various areas of study	- SS: 6.13.A - ELA:6.11.B - Math: - Science: 6.2.E	- Explore how technological advancements have facilitated cultural diffusion and impacted societies globally. - Investigate how technological changes have influenced literature and communication - Examine how technological advancements have driven scientific discoveries and changed scientific methodologies.
6.4.B	discuss how global trends impact the development of technology	- SS: 6.18.B - ELA:6.11.A - Math: - Science: 6.2.C	- Analyze how global trends such as globalization, economic shifts, and geopolitical events influence technological development. - Write essays or reports on the impact of global trends on technological development, focusing on specific trends such as environmental concerns or demographic changes.
6.4.C	transfer current knowledge to the learning of newly encountered technologies.	- SS: 6.18.A - ELA:6.11.A - Math: - Science: 6.4.B	- Apply current knowledge of historical research methods to using digital archives and databases for learning about contributions from diverse groups. - Transfer skills from traditional writing and editing to using collaborative writing tools like Google Docs for drafting and peer-reviewing essays. - Apply understanding of algebraic operations to learning how to use graphing calculator functions or mathematical software for solving equations and visualizing data. - Transfer knowledge of traditional scientific models to new simulation software and digital modeling tools.
6.5.A	demonstrate how data can be represented in Boolean expression	- SS: 6.22.B - ELA:6.11.D - Math:6.8.A - Science: 6.2.D	- Use Boolean expressions to represent and analyze historical data, such as election results, economic trends, or social changes. - Use Boolean expressions to refine searches for literary research, distinguishing between different types of literary

			analysis or themes. Solve problems that require the use of Boolean expressions to determine the truth values of mathematical statements (e.g., "If A AND B are true, then...").
6.5.B	discuss and use advanced search strategies, including keywords, Boolean operators, and limiters	- SS: 6.21.B - ELA:6.13.A - Math: - Science: 6.2.E	Advanced Search Strategies Workshop Explain the importance of advanced search strategies in conducting thorough and effective research. Teach students how to identify and use effective keywords related to their research topics. - Boolean Operators: Introduce Boolean operators (AND, OR, NOT) and demonstrate how they refine search results. - Limiters: Show how limiters (e.g., date ranges, publication types) can narrow search results to more relevant sources. Practice: Provide students with sample research questions and guide them through the process of using advanced search strategies to find relevant information. Research Project: Assign a research project where students must use advanced search strategies to gather information, document their search process, and evaluate the sources they find. Presentation: Have students present their research findings, explaining the search strategies they used and how these strategies helped them find relevant information.
6.6.A	use digital tools to transform data in order to identify and discuss trends and make inferences.	- SS: 6.21.B - ELA:6.13.B - Math:6.10.C - Science: 6.2.D	- Use digital tools to analyze historical data and identify trends in political, economic, and social changes. - Use digital tools to organize and analyze data from literary research to identify trends in themes, character development, or genre popularity. - Use spreadsheet software to analyze data from a survey, create various types of graphs, and discuss trends and patterns observed in the data. - Use digital tools to collect and analyze experimental data, identify trends, and make scientific inferences.
6.7.A	use digital tools to communicate and display data from a product or process to inform an intended audience	- SS: 6.21.B - ELA:6.13.A - Math:6.10.C - Science: 6.2.E	- Create an infographic using a digital tool to display data on the impact of a historical event on different social groups. - Use digital tools to compile research findings into a visually engaging presentation to inform an audience about a literary

			topic or author. Conduct a science experiment, record the data using digital tools, and create a digital report with charts and graphs to present the findings to the class.
6.8.A	identify the impact of a digital footprint	- SS: - ELA: - Math: - Science:	Common Sense: The Power of Digital Footprint
6.8.B	create formal and informal digital communications using appropriate digital etiquette	- SS: - ELA: - Math: - Science:	Watch Video on: Netiquette
6.8.C	collaborate on digital platforms such as recording a video conference presentation using appropriate formal and informal digital etiquette.	- SS: - ELA: - Math: - Science:	Create a Figjam to practice
6.9.A	adhere to local acceptable use policy (AUP) and practice safe, ethical, and positive online behaviors	- SS: - ELA: - Math: - Science:	AUP Pages 57-62
6.9.B	discuss and define intellectual property and associated terms, including copyright law, permission, fair use, creative commons, open source, and public domain	- SS: - ELA: - Math: - Science:	CommonSense: The Four Factors of Fair Use
6.9.C	create citations and cite sources for a variety of digital forms of intellectual property	- SS: - ELA: - Math: - Science:	Nearpod: Citing Sources
6.9.D	describe how information can be exaggerated or misrepresented online.	- SS: - ELA: - Math: - Science:	Nearpod: Fighting Cognitive Bias
6.10.A	identify real-world cybersecurity problems such as phishing, malware,	- SS: - ELA:	Commonsense: Don't Feed the Phish

	password attacks, identity theft, and hacking	• Math: • Science:	
6.10.B	identify various methods of cyberbullying such as harassment, impersonation, and cyberstalking.	• SS: • ELA: • Math: • Science:	• Video on Is it Cyberbullying? • Video on Cyberbullying vs cyberstalking • Video on Impersonation
6.11.A	create and design files in various formats such as text, graphics, video, and audio files	• SS: • ELA: • Math: • Science:	Need to embed
6.12.A	apply appropriate technology terminology such as cloud applications, input, output, and basic programming;	• SS: • ELA: • Math: • Science:	Need to embed
6.12.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	• SS: • ELA: • Math: • Science:	Need to embed
6.12.C	select and use the appropriate platform and tools to complete a specific task or project;	• SS: • ELA: • Math: • Science:	Need to embed
6.12.D	demonstrate improvement in speed and accuracy as measured by words per minute when applying correct keyboarding techniques	• SS: • ELA: • Math: • Science:	Need to embed
6.12.E	select and use appropriate shortcuts within applications	• SS: • ELA: • Math: • Science:	Need to embed
6.12.F	use help sources to research application features and solve	• SS: • ELA:	Need to embed

	software issues	• Math: • Science:	
6.12.G	identify types of local and remote data storage such as cloud architecture or local server	• SS: • ELA: • Math: • Science:	Need to embed
6.12.H	use productivity tools found in spreadsheet, word processing, and publication applications to create digital artifacts such as reports, graphs, and charts.	• SS: • ELA: • Math: • Science:	Need to embed

Key:

Computational Thinking

Creativity & Innovation

Data literacy, management, and representation

Digital citizenship

Practical technology concept