

TEK	Description	TEK integration	Possible Implementation
4.1.A	decompose story problems into smaller, manageable subproblems and discuss and document various solutions to the problems	<ul style="list-style-type: none"> <li>SS: 4.17.B</li> <li>ELA:4.11.B</li> <li>Math:4.5.A</li> <li>Science:</li> </ul>	<ul style="list-style-type: none"> <li>Decompose a historical event or social issue into smaller problems, discuss possible solutions, and document the decision-making process.</li> <li>Break down the writing process into smaller steps, discussing different ways to structure and solve plot problems in stories, and documenting revisions and solutions.</li> <li>Break down multi-step math problems into smaller subproblems, discuss and document different methods for solving each part, and then combine the solutions.</li> </ul>
4.1.B	identify patterns in story problems and make predictions based on the pattern	<ul style="list-style-type: none"> <li>SS: 4.17.B</li> <li>ELA:4.11.B</li> <li>Math:4.5.A</li> <li>Science:</li> </ul>	<ul style="list-style-type: none"> <li>Identify patterns in historical events or social issues and make predictions about future events or outcomes based on these patterns.</li> <li>Identify patterns in narrative structure or character behavior in stories and predict possible outcomes or plot developments</li> <li>Identify numerical patterns in multi-step math problems and predict the next steps or outcomes based on these patterns.</li> </ul>
4.1.C	communicate design plans and solutions using a variety of options	<ul style="list-style-type: none"> <li>SS: 4.17.B</li> <li>ELA:4.11.A,4.14.A</li> <li>Math:4.1.C</li> <li>Science:</li> </ul>	<ul style="list-style-type: none"> <li>Communicate design plans and solutions for a community issue using various methods such as written reports, oral presentations, and digital presentations.</li> <li>Use different forms of writing (narrative, expository, persuasive) to communicate design plans and solutions for classroom projects.</li> <li>Use mathematical models, diagrams, and digital tools to communicate solutions to complex math problems or real-world scenarios.</li> </ul>
4.1.D	debug algorithms (set of procedures) by identifying and removing errors.	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	<a href="#">Code.Org Computer Science Fundamentals</a> <ul style="list-style-type: none"> <li><a href="#">Course E (Grade 4)</a></li> </ul>
4.2.A	use variables within a program to modify data	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	<a href="#">Code.Org Computer Science Fundamentals</a> <ul style="list-style-type: none"> <li><a href="#">Course E (Grade 4)</a></li> </ul>
4.2.B	use a design process to create programs that include sequences, loops, and conditionals to express ideas or address a problem.	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	<a href="#">Code.Org Computer Science Fundamentals</a> <ul style="list-style-type: none"> <li><a href="#">Course E (Grade 4)</a></li> </ul>
4.3.A	explain the importance of and demonstrate personal skills and	<ul style="list-style-type: none"> <li>SS: 4.17.A</li> <li>ELA:4.11.A, 4.14.A</li> </ul>	<ul style="list-style-type: none"> <li>Highlight the role of questioning, effective communication, and metacognition in planning and drafting written work.</li> </ul>

	behaviors, including problem-solving and questioning, effective communication, following directions, mental agility, and metacognition, that are needed to implement a design process successfully	<ul style="list-style-type: none"> <li>Math:4.1.C</li> <li>Science: 4.2.C</li> </ul>	<ul style="list-style-type: none"> <li>Highlight the role of questioning, effective communication, and metacognition in planning and drafting written work.</li> <li>Demonstrate problem-solving, questioning, and metacognition in conducting experiments and analyzing data.</li> </ul>
4.3.B	apply an appropriate design process that includes components to improve processes and refine original products for authentic problems	<ul style="list-style-type: none"> <li>SS: 4.17.B</li> <li>ELA:4.11.B, 4.14.B</li> <li>Math:</li> <li>Science: 4.2.D</li> </ul>	<ul style="list-style-type: none"> <li>Develop a project to address a community issue, applying a design process to refine and improve the proposed solution.</li> <li>Apply a design process to create and refine presentations or reports, incorporating feedback to improve the final product.</li> <li>Use a design process to plan, conduct, and refine scientific experiments, focusing on improving the accuracy and reliability of the results.</li> </ul>
4.4.A	identify examples of emerging technologies.	<ul style="list-style-type: none"> <li>SS: 4.17.A</li> <li>ELA:4.13.A</li> <li>Math:</li> <li>Science: 4.3.A</li> </ul>	<p>Future Technology Fair:</p> <ul style="list-style-type: none"> <li>students research and present on different emerging technologies.</li> <li>Assign each student or group a specific technology to research, covering areas such as renewable energy, AI, robotics, biotechnology, and more.</li> <li>Have students create displays, models, and presentations showcasing their technology, its current applications, and potential future impact.</li> <li>Invite other classes, teachers, and parents to the fair, allowing students to share their knowledge and discuss the importance of emerging technologies.</li> <li>Encourage students to reflect on how these technologies might change various fields and aspects of daily life.</li> </ul>
4.5.A	classify numerical and non-numerical data	<ul style="list-style-type: none"> <li>SS: 4.21.B</li> <li>ELA:4.13.A, 4.14.A</li> <li>Math: 4.9.A</li> <li>Science: 4.2.D</li> </ul>	<ul style="list-style-type: none"> <li>Gather data from primary and secondary sources and classify the information into numerical (e.g., population statistics, dates) and non-numerical (e.g., narratives, descriptions) categories.</li> <li>Use numerical data (e.g., charts, graphs) and non-numerical data (e.g., text, images) to enhance presentations or reports on various topics</li> <li>Collect data from class activities or surveys and classify it into numerical (e.g., counts, measurements) and non-numerical (e.g., categories, labels) before creating graphical representations.</li> <li>Collect and classify scientific data into numerical (e.g., measurements, quantities) and non-numerical (e.g., observations, descriptions) categories to analyze and draw conclusions from experiments.</li> </ul>
4.5.B	identify and collect data by using various search strategies, including two or more keywords within specific parameters	<ul style="list-style-type: none"> <li>SS: 4.21.B</li> <li>ELA:4.13.A, 4.14.A</li> <li>Math:</li> <li>Science: 4.2.D</li> </ul>	<ul style="list-style-type: none"> <li>Teach students to use specific search strategies with keywords to find reliable sources about Texas history or geography.</li> <li>Guide students to formulate research questions and use multiple keywords to search for information from a variety of sources</li> </ul>

			<ul style="list-style-type: none"> <li>Help students collect data using advanced search techniques and keywords to create informative presentations or reports.</li> </ul>
4.6.A	use digital tools to transform and make inferences about data to answer a question	<ul style="list-style-type: none"> <li>SS: 4.21.B</li> <li>ELA:4.13.A</li> <li>Math:4.9.A</li> <li>Science: 4.2.D</li> </ul>	<ul style="list-style-type: none"> <li>Use digital tools to collect and analyze data from primary and secondary sources, making inferences about historical or social questions related to Texas.</li> <li>Use digital tools to collect and analyze data from various sources to answer research questions, making inferences based on the data collected.</li> <li>Use digital tools to create graphs and charts from data sets, making inferences about trends and patterns to answer mathematical questions.</li> <li>Use digital tools to analyze scientific data, transform it into visual formats, and make inferences to answer scientific questions.</li> </ul>
4.7.A	use digital tools to communicate results of an inquiry to inform an intended audience.	<ul style="list-style-type: none"> <li>SS: 4.17.A</li> <li>ELA:4.14.A, 4.13.B</li> <li>Math:4.1.C</li> <li>Science: 4.2.D</li> </ul>	<ul style="list-style-type: none"> <li>Conduct an inquiry on a historical or current event and use digital tools to create a presentation or report to inform classmates or the community.</li> <li>Analyze data from mathematical inquiries and use digital tools to create visual representations (charts, graphs) to communicate the results.</li> </ul>
4.8.A	describe how information retained online creates a permanent digital footprint	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	<p>Common Sense Education:</p> <ul style="list-style-type: none"> <li><a href="#">Nearpod: Our Online Tacks</a> or <a href="#">Google slides</a></li> </ul> <p>Be Internet Awesome:</p> <ul style="list-style-type: none"> <li>Have students play their way their <a href="#">Interland</a> to get their certificates</li> <li>You can also go through the <a href="#">Be Internet Awesome</a> Curriculum or peardeck for additional lessons</li> </ul>
4.8.B	describe appropriate digital etiquette for various forms of digital communication such as text, email, and online chat	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	<p>Brainpop:</p> <p><a href="#">Watch Digital Etiquette Video</a></p>
4.8.C	demonstrate appropriate digital etiquette for various forms of digital collaboration such as shared documents, video conferencing, and other platforms	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	<p>Brainpop:</p> <p><a href="#">Watch Digital Etiquette Video</a></p>
4.9.A	demonstrate adherence to local acceptable use policy (AUP) and explain the importance of responsible and ethical technology use;	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	<p>Nearpod:</p> <ul style="list-style-type: none"> <li><a href="#">AUP Time to Climb</a></li> </ul>
4.9.B	describe the rights and responsibilities of a creator, define copyright law, and	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> </ul>	<p>Common Sense Education:</p> <ul style="list-style-type: none"> <li><a href="#">Nearpod: A Creator's rights and Responsibilities</a> or <a href="#">google slides</a></li> </ul>

	explain how copyright law applies to creative work	<ul style="list-style-type: none"> <li>Math:</li> <li>Science:</li> </ul>	
4.9.C	create citations for digital forms of media with assistance.	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	Nearpod: <ul style="list-style-type: none"> <li><a href="#">Watch Interactive Video</a></li> <li><a href="#">Play Drag and Drop</a></li> </ul>
4.10.A	demonstrate account safety, including creating a strong password and logging off devices, and explain the importance of these practices;	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	Common Sense Education: <ul style="list-style-type: none"> <li><a href="#">Nearpod: Password Power-Up</a> or <a href="#">google slides</a></li> </ul> Be Internet Awesome: <ul style="list-style-type: none"> <li><a href="#">Secure Your Secrets. How to Build A Great Password</a></li> </ul>
4.10.B	identify and discuss types of data collection tools such as cookies, pop-ups, smart devices, and unsecured networks and explain why it is important to maintain digital privacy;	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	Google Slide: <ul style="list-style-type: none"> <li><a href="#">Understanding data Collection Tools &amp; Digital Privacy</a></li> </ul>
4.10.C	discuss and explain how to respond to cyberbullying, including advocating for self and others.	<ul style="list-style-type: none"> <li>SS:</li> <li>ELA:</li> <li>Math:</li> <li>Science:</li> </ul>	Common Sense Education: <ul style="list-style-type: none"> <li><a href="#">Be a super Digital Citizen</a></li> </ul>
4.11.A	evaluate and choose applications for relevance to an assigned task	<ul style="list-style-type: none"> <li>SS: 4.17.A</li> <li>ELA:4.14.A</li> <li>Math:</li> <li>Science:</li> </ul>	<ul style="list-style-type: none"> <li>Assess various applications (e.g., word processors, presentation software, graphic organizers) to decide which tools best suit the needs for creating and delivering a report or presentation.               <ul style="list-style-type: none"> <li>Assign a writing project, such as a narrative or research report.</li> <li>Provide students with different writing and editing tools (e.g., Google Docs, Grammarly, Microsoft Word).</li> <li>Have students evaluate each tool based on their features, ease of use, and how well they help improve their writing.</li> <li>Choose the most effective tool for drafting and editing their work.</li> <li>Use the chosen tool to complete the writing project, and present the final product to the class.</li> </ul> </li> </ul>
4.11.B	perform software application functions such as outline options, bulleting, and numbering lists, and perform editing functions such as finding and replacing	<ul style="list-style-type: none"> <li>SS: 4.17.A</li> <li>ELA:4.14.A</li> <li>Math:</li> <li>Science: 4.2.C</li> </ul>	<b>School Newsletter</b> <ul style="list-style-type: none"> <li>Assign students to create a monthly school newsletter covering various topics (e.g., school events, student achievements, educational articles).</li> <li>Use a word processor to outline the sections of the newsletter.</li> <li>Utilize bullet points and numbered lists to organize content within</li> </ul>

			<p>each section.</p> <ul style="list-style-type: none"> <li>• Use find and replace to update recurring terms, dates, and information consistently throughout the newsletter.</li> <li>• Edit and refine the newsletter for publication.</li> <li>• Present the final newsletter to the school community, highlighting the organizational and editing tools used in its creation.</li> </ul>
4.12.A	communicate an understanding of terminology related to virtual systems such as video conferencing, augmented reality, and virtual reality environments	<ul style="list-style-type: none"> <li>• SS:</li> <li>• ELA:</li> <li>• Math:</li> <li>• Science:</li> </ul>	<p>Nearpod: <a href="#">Interactive Video on VR/AR</a></p> <p>Nearpod: <a href="#">Annexation of Texas Virtual Field trip</a></p> <p>Nearpod: <a href="#">Add Virtual Reality Field Trip to a Nearpod Lesson</a> (For Teachers)</p>
4.12.B	evaluate where and how to save, including the use of appropriate naming conventions and effective file management strategies and folder structures	<ul style="list-style-type: none"> <li>• SS:</li> <li>• ELA:</li> <li>• Math:</li> <li>• Science:</li> </ul>	<p>Nearpod: <a href="#">Organizing Files</a></p>
4.12.C	demonstrate proper touch keyboarding techniques with speed and accuracy and ergonomic strategies such as correct hand and body positions	<ul style="list-style-type: none"> <li>• SS:</li> <li>• ELA:</li> <li>• Math:</li> <li>• Science:</li> </ul>	<p>Have students practice on: <a href="https://www.typingclub.com/">https://www.typingclub.com/</a></p>
4.12.D	Identify and practice using cross-curricular symbols or other input device shortcuts on a keyboard	<ul style="list-style-type: none"> <li>• SS:</li> <li>• ELA:</li> <li>• Math:</li> <li>• Science:</li> </ul>	<p>Nearpod: <a href="#">Keyboarding Shortcut Commands</a></p> <p>Nearpod: <a href="#">Keyboarding Shortcut Scenarios</a></p>
4.12.E	use troubleshooting strategies to solve minor technical problems with hardware and software such as restarting software or rebooting hardware	<ul style="list-style-type: none"> <li>• SS:</li> <li>• ELA:</li> <li>• Math:</li> <li>• Science:</li> </ul>	<p>Nearpod: <a href="#">Getting Help</a></p>

**Key:**

Computational Thinking

Creativity & Innovation

Data literacy, management, and representation

Digital citizenship

Practical technology concept

