

## **Moon Area School District Curriculum Map**

**Course:** Computer 4

**Grade Level:** 4th Grade

**Content Area:** Computer/Technology

**Frequency:** Full-Year Course, 1 day every 5 days

### **Big Ideas:**

1. Input and output devices are used to navigate, organize and troubleshoot technology.
2. Digital citizenship skills are essential for engaging in cyber communities and making informed, responsible choices online.
3. Keyboarding skills are essential as a primary tool for communication.
4. Coding develops skills in math, problem solving, communication and creativity.
5. Creating documents, presentations and spreadsheets is crucial for success in 21<sup>st</sup> century careers.
6. Artificial intelligence is a tool we can use with technology to help solve problems, make smart choices and learn new things.
7. iPad assessment tools can help improve student performance across multiple subject areas.
8. iPads are a tool used to learn, create and discover new things.

### **Essential Questions:**

9. How do input and output devices work together to make a computer system?
10. What strategies can you use to stay safe, be responsible, and be kind online?
11. Why should you learn how to use the keyboard quickly and efficiently?
12. How can you use coding to better understand technology?
13. How can documents, presentations and spreadsheets help you convey your thoughts and ideas effectively?
14. How can we use AI to create and explore new ideas with technology?
15. How can iPad assessment tools enhance fourth-grade student's understanding and engagement?
16. How can you use the iPad to help you learn, create, and discover new things?

### **Primary Resource(s) & Technology:**

Promethean Board, iPads, Clever, Common Sense Education, FBI Safe Online Surfing, Typing.com, Code.org, Scratch, Apple Suite, Office 365, iWork

### **Pennsylvania and/or focus standards referenced at:**

[www.pdesas.org](http://www.pdesas.org)  
[www.education.pa.gov](http://www.education.pa.gov)

<b>Big Ideas/EQs</b>	<b>Focus Standard(s)</b>	<b>Assessed Competencies (Key Content and Skills)</b>	<b>Timeline</b>
1, 9, 8, 16	15.4.5.C 1B.CS.01 1B.CS.02 1B.CS.03	<ul style="list-style-type: none"> <li>• Determine and explain which parts of the computer are input and output devices and why.</li> <li>• Describe how devices and components of a computer interact using correct terminology.</li> <li>• Model how computer hardware and software work together as a system to accomplish tasks, including input, output, processor, sensor, and storage.</li> </ul>	Ongoing
2, 10, 8, 16	15.4.5.B 15.4.5.L 1B.NI.05	<ul style="list-style-type: none"> <li>• Define the term "digital footprint" and identify the online activities that contribute to it.</li> <li>• Identify ways they are -- and are not -- in control of their digital footprint.</li> <li>• Understand what responsibilities they have for the digital footprints of themselves and others.</li> <li>• Reflect on the characteristics that make someone an upstanding digital citizen.</li> <li>• Recognize what cyberbullying is.</li> <li>• Identify the reasons why people share information about themselves online.</li> <li>• Explain the difference between private and personal information.</li> <li>• Explain why it is risky to share private information online.</li> </ul>	Ongoing
3, 11, 8, 16	15.4.5.D	<ul style="list-style-type: none"> <li>• Use the keyboard as an input device to communicate to the computer.</li> <li>• Utilize home row finger placement to type top row letters, bottom row letters, enter, shift, space bar and backspace.</li> <li>• Demonstrate correct typing posture, proper finger placement and reaches, and maintain focus on the screen while typing.</li> </ul>	Ongoing
4, 12, 8, 16	1B.AP.08 1B.AP.09 1B.AP.10 1B.AP.11	<ul style="list-style-type: none"> <li>• Compare and refine multiple algorithms for the same task and determine which is the most appropriate.</li> </ul>	Ongoing

	1B.AP.12 1B.AP.15	<ul style="list-style-type: none"> <li>• Properly write sequenced algorithms using arrows to represent directions.</li> <li>• Students develop a programming plan to be used to check if the program is correct.</li> <li>• Identify patterns in a sequence and use them to create coding loops.</li> <li>• Persevere through coding bugs by changing the sequence, following algorithm step-by-step, or trial and error to fix problems.</li> <li>• Identify actions that correlate to input events.</li> <li>• Use conditional if/then commands to simplify coding algorithms.</li> <li>• Define coding, sequencing, loops, bugs, events and conditions.</li> </ul>	
5, 13, 8, 16	15.4.5.G 15.4.5.K 15.4.5.L	<ul style="list-style-type: none"> <li>• Create a movie with video clips, photos and audio in iMovie.</li> <li>• Properly apply filters, editing features and voiceovers in iMovie.</li> <li>• Customize a storyboard by editing clips, titles, text and filters in iMovie.</li> <li>• Create and edit a Magic Movie in iMovie.</li> </ul>	Ongoing
5, 13, 8, 16	15.4.5.G 15.4.5.K 15.4.5.L	<ul style="list-style-type: none"> <li>• Create a spreadsheet in Excel that includes data, formulas, functions, and charts.</li> <li>• Format data correctly in Excel</li> <li>• Sort data efficiently in Excel.</li> </ul>	Ongoing
6, 14, 8, 16	15.4.5.A 15.4.5.B 15.4.5.L 15.4.5.M	<ul style="list-style-type: none"> <li>• Understand the concept of fairness, bias, and equity in AI systems.</li> <li>• Recognize blind spots in how AI is trained or applied.</li> <li>• Identify privacy concerns related to AI.</li> <li>• Explore how AI may influence opportunities and representation.</li> <li>• Understand the digital divide and how unequal access affects communities.</li> </ul>	Ongoing
7, 15, 8, 16	15.4.5.A 15.4.5.D	<ul style="list-style-type: none"> <li>• Properly use assessment tools to demonstrate learning.</li> </ul>	Ongoing