

GVCS Curriculum Map 5/6 Computers

Grade & Timeframe	Computer Science & Digital Fluency Standards	Materials, Resources & Vocabulary	Rationale	Project & Assessment
5 th grade 1-2 weeks	4-6.NSD.1 Propose improvements to the design of a computing technology based on an analysis of user interactions with that technology.	Sway, iPad, display board, internet, images/graphics, assignment, grading rubric	A computing system is composed of hardware, software, and the individuals who use them.	Students will use Sway to create and present an All About Me project.
5 th grade 2-3 weeks	4-6.CT.2 Collect digital data related to a real-life question or need.	iPad, display board, internet, PowerPoint, grading rubric, assignment	Data analysis is the process of cleaning, transforming, organizing, clustering, and categorizing data to discover useful information, draw conclusions, and aid in making decisions. Data can be visualized in a variety of ways (including graphs and charts) to aid in and communicate the results of the analysis.	Students will research and present based on a common topic such as states, animals, foods, etc.
5 th grade 2-3 weeks	4-6.CT.2 Collect digital data related to a real-life question or need.	Canva, iPad, display board, large scale printer, PowerPoint, internet	Data analysis is the process of cleaning, transforming, organizing, clustering, and categorizing data to discover useful information, draw conclusions, and aid in making decisions. Data can be visualized in a variety of ways (including graphs and charts) to aid in and communicate the results of the analysis.	Students will use Canva based off of the PowerPoint Project to create a visual summary of their research and presentation. Students will use the large scale printer after creating visual poster. Students will choose a story, use PowerPoint to present the story to a younger grade.
5 th and 6 th 1 week	4-6.NSD.4 Model how data is structured to transmit through a network. 4-6.NSD.5 Describe that data can be stored locally or remotely in a network.	iPad, iCloud, display board	A computing system is composed of hardware, software, and the individuals who use them. Networks are formed by connecting individual devices in a variety of ways. Data is stored on one or more devices in a network and transferred between devices	Students will set up folders and name files appropriately.

GVCS Curriculum Map 5/6 Computers

	<p>4-6.IC.6 Identify and explain ways to improve the accessibility and usability of a computing device or software application for the diverse needs and wants of users.</p> <p>4-6.CY.1 Explain why different types of information might need to be protected.</p>		<p>using a set of protocols or rules. The internet is an example of a global network that transmits data between many devices around the world. The development and design of computing systems needs to take into account the needs and wants of diverse end users and purposefully consider potential perspectives of users with different backgrounds and ability levels. It is important to understand why data and resources need to be protected and how they might be compromised so the correct safeguards can be put into place.</p>	
<p><i>6th grade</i> <i>2-3 weeks</i></p>	<p>4-6.IC.3 Explain current events that involve computing technologies.</p>	<p>iPad, internet, printer, envelopes, assignment, Microsoft Word, pens, grading rubric</p>	<p>The question of ethics in computing is for both creators and users of technology. If computer scientists and end users do not take into account biases and ethics of what has been built, algorithms and programs may have unintended impacts on societies.</p>	<p>Students will write a business letter to a company based on a product or services. Students will learn how to properly address an envelope.</p> <p>Students will write themselves a letter to be opened their senior year of high school.</p>
<p><i>6th grade</i> <i>1-2 weeks</i></p>	<p>4-6.CY.1 Explain why different types of information might need to be protected.</p> <p>4-6.CY.2 Describe common safeguards for protecting personal information.</p>	<p>iPad, internet, website, assignment, grading rubric</p>	<p>It is important to understand why data and resources need to be protected and how they might be compromised so the correct safeguards can be put into place. When combined, various physical, digital, and behavioral precautions can create a level of digital security. When a security breach occurs, individuals must</p>	<p>Students will use Makebelievcomix.com to create a new and unique comic strip about digital citizenship and ethics.</p>

GVCS Curriculum Map 5/6 Computers

	<p>4-6.CY.5 Explain suspicious activity of applications and devices.</p> <p>4-6.IC.4 Explain who has access to data in different digital spaces.</p>		<p>decide what actions to take. This takes into account what type of breach occurred and how to improve security moving forward. When a security breach occurs, individuals must decide what actions to take. This takes into account what type of breach occurred and how to improve security moving forward.</p>	
<p><i>6th grade</i></p> <p><i>2-3 weeks</i></p>	<p>4-6.CT.3 Visualize a simple data set in order to highlight relationships and persuade an audience.</p> <p>4-6.CT.4 Decompose a problem into smaller named tasks, some of which can themselves be decomposed into smaller steps.</p> <p>4-6.CT.10 Describe the steps taken and choices made to design and develop a solution using an iterative design process.</p>	<p>iPads, assignment, survey, Microsoft Excel, display board, grading rubric, internet</p>	<p>Data analysis is the process of cleaning, transforming, organizing, clustering, and categorizing data to discover useful information, draw conclusions, and aid in making decisions. Data can be visualized in a variety of ways (including graphs and charts) to aid in and communicate the results of the analysis. The study of a complicated system often starts by simplifying it and addressing just the most important parts. An algorithm is a sequence of steps designed to accomplish a specific task. Algorithms can be translated into programs, or code, to provide instructions for computing devices.</p>	<p>Students will use Microsoft Excel to calculate and graph data based on an in school survey.</p>

- Typing practice at the beginning of class consists of product description activities, morning chips, round robin story writing, padlets and relay races.