

First Grade Computer Science and Design Thinking Curriculum Map 2022

Pacing Guide	Standard Code and Indicator	Sample Learning Activities	Assessment	Additional Standards
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<p>August/ October</p> <p>Computing Systems, Networks and the Internet and Keyboarding</p>	<p>8.1.2.CS.2: Explain the functions of common software and hardware components of computing systems.</p> <p>8.1.2.CS.3: Describe basic hardware and software problems using accurate terminology.</p> <p>8.1.2.NI.3: Create a password that secures access to a device. Explain why it is important to create unique passwords that are not shared with others.</p> <p>8.1.2.NI.4: Explain why access to devices need to be secured.</p>	<p>- Vocabulary: desktop, CPU, server, network, Input, Output, Processor</p> <p>-Typing Technique: home row hand placement, correct posture</p> <p>-Practice Log in, Log out, shut down review</p> <p>-Explain how information flows from an input to a processor to an output.</p> <p>-Use ABCya to master key location and practice speed</p> <p>-Keys of the keyboard and what significant keys do.</p> <p>Instructional Resources: Abcya - typing and keys brainpop jr. Microsoft Word</p> <p>Teacher Technology: Computer Activ Panel Acitiv View YouTube Videos BrainPop Jr.</p>	<p>Formative Assessments: Classwork Student Participation Teacher Observation</p> <p>Summative Assessments: Using My Computer Performance Assessment</p> <p>Benchmark Assessment: BOY Benchmark</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard: SL.1.1.A During discussion, students will practice age appropriate behaviors to have a respectful discussion, listen to other/differing viewpoints and make decisions</p> <p>9.4.2.DC.3: Explain how to be safe online and follow safe practices when using the internet (e.g., 8.1.2.NI.3, 8.1.2.NI.4).</p> <p>9.4.2.DC.4: Compare information that should be kept private to information that might be made public.</p> <p>9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool.</p>
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<p>November - January</p> <p>Impacts of Computing/ Data and Analysis</p>	<p>8.1.2.IC.1: Compare how individuals live and work before and after the implementation of new computing technology.</p> <p>8.1.2.DA.2: Store, copy, search, retrieve, modify, and delete data using a computing device.</p>	<p>-Compare and contrast old and new technology</p> <p>-Type on Google Docs</p> <p>-Copy and Paste information and Identify when something is plagiarized</p> <p>-Use different search engines to copy, cut and paste information from the internet.</p> <p>Instructional Resources: Brainpop jr. Google Platform</p> <p>Teacher Technology: Computer Activ Panel Acitiv View YouTube Videos BrainPop Jr.</p> <p>Student Technology: Computer; iPads Kidpix ABCYA Google Platform</p>	<p>Formative Assessments: Classwork Student Participation Teacher Observation</p> <p>Summative Assessments: -Google Doc Creation</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard: W.1.2 Students will use a word processor program to write a story that informs and describes a season to use google search engine and get familiar with Google Docs.</p> <p>9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource.</p> <p>9.4.2.TL.2: Create a document using a word processing application.</p>
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<p>February - March</p> <p>Engineering Design</p>	<p>8.2.2.ED.1: Communicate the function of a product or device.</p> <p>8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.</p> <p>8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process.</p> <p>8.2.2.ED.4: Identify constraints and their role in the engineering design process.</p>	<p>-Discussion to how products and devices can work.</p> <p>-Develop a solution to fix a broken toy</p> <p>-Using a program such as Paint or KidPix students will draw a picture to represent the toy as part of a system</p> <p>-Show how parts of a toy work together</p> <p>-Make a list of materials to build/fix a working toy</p> <p>Instructional Resources: Brainpop jr. Google Platform</p> <p>Teacher Technology: Computer Activ Panel Acitiv View YouTube Videos BrainPop Jr.</p> <p>Student Technology: Computer; iPads Kidpix ABCYA</p>	<p>Formative Assessments: Classwork Student Participation Teacher Observation</p> <p>Summative Assessments: -Drawing of a system -Fixing a broken system</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard:</p> <p>K-2 ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>9.1.2.CAP.3: Define entrepreneurship and social entrepreneurship.</p> <p>9.1.2.CAP.4: List the potential rewards and risks to starting a business.</p>
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<p>April - June</p> <p>Effects of Technology on the Natural World</p>	<p>8.2.2.ETW.2: Identify the natural resources needed to create a product.</p> <p>8.2.2.ETW.3: Describe or model the system used for recycling technology.</p> <p>8.2.2.ETW.4: Explain how the disposal of or reusing a product affects the local and global environment.</p>	<p>-Create a list of natural resources used to create products on a Google Doc</p> <p>-Research and model the recycling process</p> <p>-Explain how to reuse products and its benefits on the environment</p> <p>-Create a reusable item with recycled materials</p> <p>Instructional Resources: Code.org Tynker familycodenight.org Disney</p> <p>Teacher Technology: Computer Activ Panel Acitiv View YouTube Videos BrainPop Jr.</p> <p>Student Technology: Computer; iPads Code.org</p>	<p>Formative Assessments: Classwork Student Participation Teacher Observation</p> <p>Summative Assessments: Project</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard: W.2.7 Participate in shared research and writing projects.</p> <p>9.4.2.CT.2: Identify possible approaches and resources to execute a plan.</p> <p>9.4.2.CT.3: Use a variety of types of thinking to solve problems.</p>
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Alternate Assessments: Making an algorithm that works for a robot; Debugging an algorithm

21st Century Standards: 9.2.4.A.4 and 9.1.4.A.2

21st Century Skills: Communication, Critical Thinking, Information literacy and Media literacy

Career Ready Practice: CRP4, CRP 6, CRP 11