

Second Grade Technology: Computer Science and Design Thinking Curriculum Map 2022

<b>Pacing Guide</b>	<b>Standard Code &amp; Indicator</b>	<b>Sample Learning Activities</b>	<b>Assessment</b>	<b>Additional Standards</b>
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<p><b>August-October</b></p> <p>Orientation/ Review of basics/ Google Training</p>	<p>8.1.2.CS.2: Explain the functions of common software and hardware components of computing systems.</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>	<ul style="list-style-type: none"> <li>-Log in to Google accounts and other school apps</li> <li>-Technology Word Wall</li> <li>-Demonstrate ability to access of Google classroom</li> <li>-Execute word processing activities successfully</li> <li>-Create a Google Doc in response to different prompts</li> <li>-Complete a Google Form and reflect on its results</li> <li>-Collaborate with students from another second grade class via Google</li> <li>-Typing Technique: home row hand placement, correct posture</li> <li>-Use ABCya to master key location and practice speed</li> <li>-Keys of the keyboard and what significant keys do.</li> </ul> <p><b>Instructional Resources:</b> Google Suite <a href="#">brainpop jr.</a> <a href="#">Grow with Google</a> <a href="#">ABCya</a></p>	<p><b>Formative Assessments:</b> Classwork Student Participation Teacher Observation</p> <p><b>Summative Assessments:</b> Logistical control over computer system Creating a doc/word document</p> <p><b>Benchmark Assessment:</b> BOY Benchmark</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard Writing</b> <a href="#">W 2.2</a> Students will demonstrate their ability to type a short writing piece on a google doc.</p> <p>9.4.2.DC.1: Explain differences between ownership and sharing of information.</p> <p>9.4.2.DC.2: Explain the importance of respecting digital content of others.</p>
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<p><b>November/ January</b></p> <p>Nature of Technology</p>	<p>8.2.2.NT.1: Model and explain how a product works after taking it apart, identifying the relationship of each part, and putting it back together.</p> <p>8.2.2.NT.2: Brainstorm how to build a product, improve a designed product, fix a product that has stopped working, or solve a simple problem.</p>	<ul style="list-style-type: none"> <li>-Take apart a toy or product identifying how all parts make the toy/product work</li> <li>-Brainstorm and gather information on how to build a product or toy.</li> <li>-Fix a broken toy/product and explain</li> <li>-Determine safe and unsafe internet choices</li> <li>-Discuss internet safety</li> </ul> <p><b>Instructional Resources:</b> GSuite <a href="#">brainpop jr.</a> Microsoft Word <a href="#">Grow with Google</a> <a href="#">Netsmartzkids</a> <a href="#">safeside schools- video, website,</a></p> <p><b>Teacher Technology:</b> Computer Activ Panel Acitiv View YouTube Videos BrainPop Jr.</p> <p><b>Student Technology:</b> Computer; iPads</p>	<p><b>Formative Assessments:</b> Classwork Student Participation Teacher Observation</p> <p><b>Summative Assessments:</b> Internet Safety Quiz</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard:</b> <b>K-2-ETS1-1</b> 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.RM.1: Describe how valuable items might be damaged or lost and ways to protect them.</p> <p>9.4.2.TL.7: Describe the benefits of collaborating with others to complete digital tasks or develop digital artifacts.</p>
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<p>February - March</p> <p>Algorithms and Programming</p>	<p>8.1.2.AP.1: Model daily processes by creating and following algorithms to complete tasks.</p> <p>8.1.2.AP.2: Model the way programs store and manipulate data by using numbers or other symbols to represent information.</p> <p>8.1.2.AP.5: Describe a program's sequence of events, goals, and expected outcomes.</p> <p>8.1.2.AP.6: Debug errors in an algorithm or program that includes sequences and simple loops.</p>	<p>-Students will use code.org unit b to learn application and development of coding</p> <p>-Develop understanding of how computers work through code</p> <p>-Identify what code means</p> <p>-Create a loop, sequence, algorithm and event</p> <p>-Edit a loop or sequence to fix errors.</p> <p><b>Instructional Resources:</b>  <a href="#">Code.org</a>  <a href="#">Tynker</a>  <a href="#">familycodenight.org</a>  <a href="#">Disney</a></p> <p><b>Teacher Technology:</b>  Computer  Activ Panel  Acitiv View  YouTube Videos  BrainPop Jr.</p> <p><b>Student Technology:</b>  Computer; iPads</p>	<p><b>Formative Assessments:</b>  Classwork  Student Participation  Teacher Observation</p> <p><b>Summative Assessments:</b>  Coding Challenge</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard:</b>  <b>6.1.4.C.16</b> Coding is a universal place for worldwide creativity and innovation. This is covered by the lessons and approach of the coding unit.</p> <p>9.4.2.TL.4: Navigate a virtual space to build context and describe the visual content.</p> <p>9.4.2.TL.5: Describe the difference between real and virtual experiences.</p> <p>9.4.2.TL.6: Illustrate and communicate ideas and stories using multiple digital tools.</p>
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<p><b>April-June</b></p> <p>Databases &amp; Spreadsheets</p>	<p>8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats.</p> <p>8.1.2.DA.3: Identify and describe patterns in data visualizations.</p> <p>8.1.2.DA.4: Make predictions based on data using charts or graphs.</p>	<p>-Identify basic vocabulary: spreadsheet, data, database, sort</p> <p>-Create a database or spreadsheet</p> <p>-Have students organize themselves with different categories</p> <p>-Filter and organize information in a spreadsheet or database</p> <p>-Make predictions based on data collected</p> <p><b>Instructional Resources:</b>  <a href="#">Gsuite training</a>  <a href="#">Microsoft Excel</a></p> <p><b>Teacher Technology:</b>  Computer  Activ Panel  Acitiv View  YouTube Videos  BrainPop Jr.</p> <p><b>Student Technology:</b>  Computer; iPads  Sheet  Google</p>	<p><b>Formative Assessments:</b>  Classwork  Student Participation  Teacher Observation</p> <p><b>Summative Assessments:</b>  Making a database  Manipulation of the data in a spreadsheet</p> <p><b>Benchmark Assessment:</b>  EOY Benchmark</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard: Math MD.D.10</b> After inputting data into a spreadsheet, students will create and analyze a graph.</p> <p>9.4.2.IML.2: Represent data in a visual format to tell a story about the data.</p> <p>9.4.2.TL.3: Enter information into a spreadsheet and sort the information.</p> <p>9.4.2.IML.3: Use a variety of sources including multimedia sources to find information about topics such as climate change.</p> <p>9.4.2.IML.4: Compare and contrast the way information is shared in a variety of contexts.</p> <p>9.4.2.DC.7: Describe actions peers can take to positively impact climate change.</p>
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**Alternate Assessments:** Making an algorithm that works; Looping and debugging an algorithm

**21st Century Standards:** 9.2.4.A.3 and 9.2.4.A.4

**21st Century Skills:** Initiative, Productivity and Technology literacy

**Career Ready Practice** CRP2, CRP8, CRP11