

<b>Marking Period: 1</b>	<b>Unit Title: Overview of design process and need Finding</b>	<b>Recommended Instruction Days: 40 days</b>
<b>Standard-New Jersey Student Learning Standards: 8.1, 8.2</b>		
<p><b>Strand:</b></p> <p>8.1: Education Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.</p> <p>8.2: Technology Education, Engineering, and Design: All students will develop an understanding of the nature and impact of technology, engineering, technology design, and the designed world, as they relate to the individual, global, and the environment.</p> <p>9.1: 21<sup>st</sup> Century Life and Career Skills: All students will demonstrate the creativity, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.</p>		
<p>LGBT and Disabilities Law: <i>N.J.S.A. 18A:35-4.35</i></p> <p style="text-align: center;">Alan Turning:</p> <p style="text-align: center;">The mission is to ensure that every student is able to see themselves in our rich and diverse history.</p>		
<p><b>Social and Emotional Learning:</b> <i>Competencies</i></p>		<p><b>Social and Emotional Learning:</b> <i>Sub-Competencies</i></p>
<p style="text-align: center;">Self- awareness</p> <p style="text-align: center;">Social Awareness</p> <p style="text-align: center;">Self- Management</p>		<ul style="list-style-type: none"> <li>● Recognizing the importance of self-confidence in handling daily tasks and challenges.             <ul style="list-style-type: none"> <li>● Demonstrate an awareness of the expectations for social interactions in a variety of ways.</li> </ul> </li> <li>● Demonstrate an understanding of the need for mutual respect when viewpoints differ.</li> </ul>

<p>Relationship Skills</p> <p>Responsible Decision-Making</p>	<ul style="list-style-type: none"> <li>● Recognize the skills needed to establish achieve personal and educational goals.</li> <li>● Utilize positive communication and social skills to interact effectively with others.</li> <li>● Develop, implement, and model effective problem solving and critical thinking skills.</li> </ul>
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**Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit**

Essential Questions	Progress Indicators	Activity Description
<ul style="list-style-type: none"> <li>● What is design?</li> <li>● Pick an app that you're familiar with was it designed? Why do you say that? How do you think it was designed? Who do you think designed it?</li> <li>● What products/mobile applications a) work b) do not work and why?</li> <li>● Revisit what the students said about successful products in the first week. What were the main points that were brought up?</li> </ul>	<ul style="list-style-type: none"> <li>● Tests</li> <li>● Quizzes</li> <li>● Practice problems for homework</li> <li>● Workbook pages                             <ul style="list-style-type: none"> <li>● Worksheets</li> <li>● Focus Packet</li> </ul> </li> <li>● Leveled assessments</li> </ul>	<ul style="list-style-type: none"> <li>❖ Identify some of the types of apps available in the Android Marketplace &amp; what features these apps have</li> <li>❖ Label the major parts of an App Inventor program</li> <li>❖ Understand how the components and blocks work and interact</li> <li>❖ Understand the difference between download a source and package an apk and be able to do both</li> <li>❖ Give examples of events and a definition of event-based programming</li> <li>❖ Trace existing code to understand functionality</li> <li>❖ Utilize MIT App Inventor interface to modify existing code</li> <li>❖ Demonstrate ability to include conditionals, lists and iteration</li> </ul> <p><b>Spot Light On:</b> <i>Seek multiple perspectives and different answers to questions.</i></p> <p>Task 1 Have students brainstorm in group of 34, what “future classrooms” would look like. Give them 8 minutes. Ask them to present their favorite answer with the class. Tell students to brainstorm with the following guidelines: ● Aim for large number of ideas ● Ignore practically ● Set time limit ● Set aim ● Appoint facilitator ● One person at a time ● Individual brainstorm first</p>

<ul style="list-style-type: none"> <li>• How were they unique? What details mattered?</li> <li>• Why are there a million different types of cell phones? What are their different functions?</li> </ul>		<p>Task 2</p> <p>Assume that 4 bits are used to represent the intensities of red, green, and blue. How many total colors are possible in the scheme?</p> <p style="text-align: center;"><b><u>Interdisciplinary Connections:</u></b> <b><u>Technology: Educational Technology</u></b></p> <p><b><u>Unit Project:</u></b> Each student will choose a field related to computer science and do the following</p> <ol style="list-style-type: none"> <li>1. Create an 8 -10 slide PowerPoint Presentation describing the field, its benefits, salary, and necessary training</li> <li>2. Write a 2 -3 page essay describing their findings on the field they chose</li> <li>3. Make a 5- 7-minute presentation to the class on their findings.</li> </ol>
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**Mathematic Practice**

1. **Make sense of problems and persevere in solving them.**
2. **Reason abstractly and quantitatively.**
3. **Construct viable arguments and critique the reasoning of others.**
4. **Model with mathematics.**
5. **Use appropriate tools strategically.**
6. **Attend to precision.**
7. **Look for and make use of structure.**
8. **Look for and express regularity in repeated reasoning.**

<p style="text-align: center;"><b>Assessments (Formative)</b> <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>	<p style="text-align: center;"><b>Assessments (Summative)</b> <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>
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<p><b><u>Formative Assessment:</u></b></p> <ul style="list-style-type: none"> <li>● <u>Entry and Exit Slips</u></li> <li>● <u>Quizzes</u></li> <li>● <u>Self Assessments</u></li> <li>● <u>Focus Packets</u></li> </ul>		<p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>● Chapter Tests</li> <li>● Projects</li> </ul> <p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>● District assessments</li> <li>● Standardized test</li> </ul>	
<p><b>Differentiated Student Access to Content: Teaching and Learning <i>Resources/Materials</i></b></p>			
<p><b>Core Resources</b></p>	<p><b>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></b></p>	<p><b>ELL Core Resources</b></p>	<p><b>Gifted &amp; Talented Core Resources</b></p>
<p>Savass Envision achieve the core Khan Academy Desmos IXL Edulastic</p>	<p>Reteaching Worksheets Skill building workbook Math manipulatives</p>	<p>Dictionary for native language Video tutorial in native language</p>	<p>Enrichment worksheets Art of problem Leveled assessments</p>
<p><b>Supplemental Resources</b></p>			
<ul style="list-style-type: none"> <li>● Technology: Chromebooks, Graphing Calculators, smartboards,</li> <li>● Other: Zoom and google meets, schoology, google classroom</li> </ul>			

**Differentiated Student Access to Content:  
Recommended *Strategies & Techniques***

Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core Resources
<p>Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat</p>	<p>Utilize a multi-sensory (VAKT) approach during instruction, provide alternate presentations of skills by varying the method (repetition, simple explanations, additional examples, modeling, etc.), modify test content and/or format, allow students to retake test for additional credit, provide additional times and preferential seating as needed, review, restate and repeat directions, provide study guides, and/or break assignments into segments of shorter tasks.</p>	<p>Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of online bilingual dictionary, and modified assessment and/or rubric.</p>	<p>Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect student to related</p>

New Jersey Legislative Statutes and Administrative Code  
(place an "X" before each law/statute if/when present within the curriculum map)

Amistad Law: <i>N.J.S.A. 18A 52:16A-88</i>	Holocaust Law: <i>N.J.S.A. 18A:35-28</i>	<b>x</b>	LGBT and Disabilities Law: <i>N.J.S.A. 18A:35-4.35</i>	<b>x</b>	Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>	Standards in Action: <i>Climate Change</i>
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