



Stafford Township School District

Computer Science & Design Thinking Grade K-2

2020 New Jersey Student Learning Standards – Computer Science & Design Thinking

<https://www.nj.gov/education/standards/compsci/Docs/2020%20NJSLS-CSDT.pdf>

Original Adoption: September 12, 2022

Philosophy

The goal of Stafford Township School District's Technology curriculum is technological literacy for all students. The curriculum is designed to help students develop solutions to real-world problems and design and build products that address human needs and desires. Our technology program facilitates a vital link to the math/science/technology triangle and assists with understanding living and working in our advanced technology-driven Information Age. The activities and projects require students to use invention, innovations and other creative, engineering- like activities for producing physical objects and performing various engineering testing through the application of organized knowledge and problem solving techniques. Technology Education, as applied in this curriculum, focuses on a systems approach to develop innovation, creativity, critical thinking and technological literacy.

Each student is actively involved in activities that develop knowledge, skills and attitudes regarding industry and technology. Emphasis is given to nurturing leadership, communication, social interaction, problem-solving and manipulative skills. Personal and social growth is fostered through interaction with other students in the technology laboratory. The technological method of problem solving is experienced by identifying a problem, collecting and analyzing data, generating alternatives, synthesizing a design or plan, developing a proposed product or service, and evaluating the process and results. Throughout this educational process, students are taught to explore their options and to make decisions about exactly how they are going to design, build and test a certain project.

Curriculum Units/Pacing Guide

Unit # / Title	Number of Weeks
Unit 1: Computing Systems/Data Analysis/Technology Literacy	5 Weeks
Unit 2: Networks & The Internet/ Impacts of Computing/ Information & Media Literacy	5 Weeks
Unit 3: Engineering, Design/ Algorithms & Programming/ Critical Thinking & Problem Solving	16 Weeks
Unit 4: Interaction of Technology & Humans/ Nature of Technology/Digital Citizenship	5 Weeks
Unit 5: Effects of Technology on the Natural World/ Ethics & Culture/ Global & Cultural Awareness	5 Weeks

Overview	Standards	Unit Skills Focus	Content-Specific Practices (when applicable)
<p>Unit 1 Computing Systems/ Data Analysis/Technology Literacy</p>	<p>8.1.2.CS.1: : Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.</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.DA.1: Collect and present data, including climate change data, in various visual formats.</p> <p>8.1.2.DA.2: Store, copy, search, retrieve, modify, and delete data using a computing device.</p> <p>8.1.2.DA.3: Identify and describe patterns in data visualizations.</p> <p>9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool.</p>	<p>Demonstrate responsible behavior when safely operating technology equipment.</p> <p>Understand terms and concepts related with applications in Google Docs</p> <p>Understand that a computing system is composed of software and hardware.</p> <p>Open and use multiple programs, windows, and/or browser tabs simultaneously.</p> <p>Use concepts and skills from basic software.</p> <p>Organize and create a Google Doc, modify data using functions.</p> <p>Explain and understand that</p>	<p>Essential Question:</p> <p>How is technology useful?</p> <p>How can word processing software be used for a range of purposes? (i.e. Google Docs, Webpages)</p> <p>How can software be used to help with tasks?</p> <p>How can software be used for presentations?</p> <p>How are hardware and software different?</p>

	9.4.2.TL.2: Create a document using a word processing application.	individuals use computing devices to perform a variety of tasks accurately and quickly. Mouse control skills.	
Suggested Resources	Google Apps, YouTube, BrainPop, NewsELA, Flocabulary		
Assessment Plan			
Formative Assessments	Summative Assessments	Benchmark Assessment	Alternative Assessments
typing.com WPM tests Click and drag activities (Google Sheets) Teacher observations Q&A Nearpod responses quick writing responses	PBL Student Self-Evaluation Typing Tests Google Sheets activities	Student Technology Project with Teacher Scoring Rubric	Student self-reflection about creation or discussion while planning project Conversation/presentation rubric to score student work and presentation of final creation Teacher Checklist to record student understanding of skills based on participation and performance of skills
Accommodations and Modifications			
English Language Learners	Students with IEPs	Economically Disadvantaged	Gifted and Talented
Use of visuals Introduce key vocabulary before lesson Teacher reads aloud Verbal prompting Modeling Work in small group Peer tutoring Use of additional resources	Provide students with additional time to complete projects Provide options, alternatives and choices to differentiate and broaden the curriculum Model for the student before independent practice to help student better understand the project or assignment	Pre-Teach vocabulary and help students to preview lesson to build background knowledge and help students make connections with their experiences to achieve lesson and unit goals Provide student with materials and supplies to support lesson and help student achieve lesson and	After completing a learning experience via the same content or process, the student may have a choice of products to show what has been learned. Provide students with opportunities to enrich and explore the tools and materials they use with the unit to help

utilizing the student's native language	Provide differentiated instruction as needed Follow all IEP modifications Provide manipulatives or the opportunity to draw solution strategies	unit goals	students build upon their skills Use higher order thinking questions and expose students to higher level vocabulary
Basic Skills Students	Students with 504 Plan	Students at Risk for Failure	
<ul style="list-style-type: none"> • Preview lessons • Preview vocabulary words Summarize as you go 	Provide students with additional time to complete projects Provide options, alternatives and choices to differentiate and broaden the curriculum Model for the student before independent practice to help student better understand the project or assignment Provide differentiated instruction as needed Follow all 504 plan modifications Provide manipulatives or the opportunity to draw solution strategies	<ul style="list-style-type: none"> • Small group instruction • Frequent breaks • Model how assignments should look • Incorporate social/emotional discussions • Encourage and monitor positive peer collaboration • Provide academic resources for both home and school use • Provide incentives to increase motivation and collaboration 	
Unit 1 Connections			
<i>NJSLS - Computer Science and Design Thinking</i> When possible, provide links to specific samples/ documents/ assignments/etc. Refer to the Computer Science and Design Thinking	<i>Career Readiness, Life Literacies and Key Skills</i> When possible, provide links to specific samples/ documents/ assignments/etc. Refer to Career Readiness, Life Literacies and Key Skills Practices	<i>9.1 Financial Literacy</i> When possible, provide links to specific samples/ documents/ assignments/etc. Refer to the Financial Literacy	<i>Interdisciplinary Connections</i> When possible, provide links to specific ELA/Math/Sci/SS standards as well as samples/ documents/ assignments/etc. Refer to the NJ Student Learning Standards

	<p>Act as a responsible and contributing community members and employee</p> <p>Attend to financial well-being</p> <p>Consider the environmental, social and economic impacts of decisions</p> <p>Utilize critical thinking to make sense of problems and persevere in solving them</p> <p>Model integrity, ethical leadership and effective management</p> <p>Plan education and career paths aligned to personal goals</p> <p>Use technology to enhance productivity increase collaboration and communicate effectively</p> <p>Work productively in teams while using cultural/global competence</p>	<p>9.1.2.CR.1: Recognize ways to volunteer in the classroom, school and community</p> <p>9.1.2. FP.1 Explain how emotions influence whether a person spends or saves.</p> <p>9.1.2.FP.2: Differentiate between financial wants and needs. •</p> <p>9.1.2.FP.3: Identify the factors that influence people to spend or save (e.g., commercials, family, culture, society).</p>	<p>2.NBT.A.1</p> <p>2.NBT.A.2</p> <p>SL.2.1.</p>
--	---	---	--

--	--	--	--

Overview	Standards	Unit Skills Focus	Content-Specific Practices (when applicable)
<p>Unit 2 Networks & The Internet/ Impacts of Computing/ Information & Media Literacy</p>	<p>8.1.2.NI.1: Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.</p> <p>8.1.2.NI.2: Describe how the Internet enables individuals to connect with others worldwide.</p> <p>8.1.2.NI.3: Create a password that</p>	<p>Identify ways to be safe on the internet.</p> <p>Explain why a safe and secure password is important.</p> <p>Use software properly for video clips, and animation in presentations.</p> <p>Using search engines, etc., search</p>	<p>Essential Questions:</p> <p>What are the basic rules of using the internet?</p> <p>How can the internet be used to find useful information?</p> <p>How can the internet be used for different purposes?</p>

	<p>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>8.1.2.IC.1: Compare how individuals live and work before and after the implementation of new computing technology.</p> <p>9.4.5.IML.6: Use appropriate sources of information from diverse sources, contexts, disciplines, and cultures to answer questions</p>	<p>for images, cut/paste them in a Google document, and then find information on the topic and cut/paste the information below the picture.</p> <p>Explain the difference between a credible and non credible source. Understand how computers and technology has improved our lives.</p>	<p>What is the appropriate behavior to use online?</p> <p>Why is it important to have a safe and secure password?</p> <p>How has technology improved our lives?</p>
--	--	---	---

Suggested Resources	code.org, scratch, NewsELA, YouTube, Email, Google Apps		
----------------------------	---	--	--

Assessment Plan			
------------------------	--	--	--

Formative Assessments	Summative Assessments	Benchmark Assessment	Alternative Assessments
Teacher observations Class discussions Questioning Tests and Quizzes Presentation Peer editing Self-evaluation Portfolios Performance tasks and projects	PBL Student Self-Evaluation	Student Technology Project with Teacher Scoring Rubric	Student self-reflection about creation or discussion while planning project Conversation/presentation rubric to score student work and presentation of final creation Teacher Checklist to record student understanding of skills based on participation and performance of skills

Accommodations and Modifications			
---	--	--	--

English Language Learners	Students with IEPs	Economically Disadvantaged	Gifted and Talented
<p>Use of visuals Introduce key vocabulary before lesson Teacher reads aloud Verbal prompting Modeling Work in small group Peer tutoring Use of additional resources utilizing the student's native language</p>	<p>Provide students with additional time to complete projects Provide options, alternatives and choices to differentiate and broaden the curriculum Model for the student before independent practice to help student better understand the project or assignment Provide differentiated instruction as needed Follow all IEP modifications Provide manipulatives or the opportunity to draw solution strategies</p>	<p>Pre-Teach vocabulary and help students to preview lesson to build background knowledge and help students make connections with their experiences to achieve lesson and unit goals Provide student with materials and supplies to support lesson and help student achieve lesson and unit goals</p>	<p>After completing a learning experience via the same content or process, the student may have a choice of products to show what has been learned. Provide students with opportunities to enrich and explore the tools and materials they use with the unit to help students build upon their skills Use higher order thinking questions and expose students to higher level vocabulary</p>
Basic Skills Students	Students with 504 Plan	Students at Risk for Failure	
<ul style="list-style-type: none"> ● Preview lessons ● Preview vocabulary words Summarize as you go 	<p>Provide students with additional time to complete projects Provide options, alternatives and choices to differentiate and broaden the curriculum Model for the student before independent practice to help student better understand the project or assignment Provide differentiated instruction as needed Follow all 504 plan modifications Provide manipulatives or the opportunity to draw solution strategies</p>	<ul style="list-style-type: none"> ● Small group instruction ● Frequent breaks ● Model how assignments should look ● Incorporate social/emotional discussions ● Encourage and monitor positive peer collaboration ● Provide academic resources for both home and school use ● Provide incentives to increase motivation and collaboration 	
Unit 2 Connections			
<i>NJSLS - Computer Science and Design Thinking</i>	<i>Career Readiness, Life Literacies and Key Skills</i>	<i>9.1 Financial Literacy</i>	<i>Interdisciplinary Connections</i>

<p>When possible, provide links to specific samples/ documents/ assignments/etc. Refer to the Computer Science and Design Thinking</p>	<p>When possible, provide links to specific samples/ documents/ assignments/etc. Refer to Career Readiness, Life Literacies and Key Skills Practices</p>	<p>When possible, provide links to specific samples/ documents/ assignments/etc. Refer to the Financial Literacy</p>	<p>When possible, provide links to specific ELA/Math/Sci/SS standards as well as samples/ documents/ assignments/etc. Refer to the NJ Student Learning Standards</p>
	<p>Act as a responsible and contributing community members and employee</p> <p>Attend to financial well-being</p> <p>Consider the environmental, social and economic impacts of decisions</p> <p>Utilize critical thinking to make sense of problems and persevere in solving them</p> <p>Model integrity, ethical leadership and effective management</p> <p>Plan education and career paths aligned to personal goals</p> <p>Use technology to enhance productivity increase collaboration and communicate effectively</p> <p>Work productively in teams while using cultural/global competence</p>	<p>9.1.2.CR.1: Recognize ways to volunteer in the classroom, school and community</p> <p>9.1.2. FP.1 Explain how emotions influence whether a person spends or saves.</p> <p>9.1.2.FP.2: Differentiate between financial wants and needs. •</p> <p>9.1.2.FP.3: Identify the factors that influence people to spend or save (e.g., commercials, family, culture, society).</p>	<p>2.NBT.A.1 2.NBT.A.2 SL.2.1.</p>
Overview	Standards	Unit Skills Focus	Content-Specific Practices (when applicable)
<p>Unit 3 Engineering, Design/ Algorithms & Programming/ Critical</p>	<p>8.1.2.AP.1: Model daily processes by creating and following algorithms to complete tasks.</p>	<p>By using code.org and https://scratch.mit.edu/ and having students code their own interactive stories, animations and games.</p>	<p>Essential Questions: How do engineers use collaboration to solve problems?</p>

<p>Thinking & Problem solving</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.3: Create programs with sequences and simple loops to accomplish tasks.</p> <p>8.1.2.AP.4: Break down a task into a sequence of steps.</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>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.</p> <p>8.2.2.ED.4: Identify constraints and their role in the engineering design process.</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>	<p>By using Scratch they will think creatively, reason systematically, and work collaboratively while sharing their projects and ideas with others online.</p> <p>Students will complete interactive puzzles using Prodigy & Code.org</p> <p>Engineers create and modify technologies to meet people's needs and wants; scientists ask questions about the natural world.</p>	<p>How can Debugging help you?</p> <p>How does breaking up a bigger problem into smaller pieces help to figure out a solution?</p> <p>How are loops helpful in coding?</p>
--	---	---	--

Suggested Resources	code.org, Scratch, CS First, Kodable, BrainPopJr., Wixie		
Assessment Plan			
Formative Assessments	Summative Assessments	Benchmark Assessment	Alternative Assessments
<p>Teacher observations Class discussions Questioning Tests and Quizzes Presentation Peer editing Self-evaluation Portfolios Performance tasks and projects</p>	<p>PBL Student Self-Evaluation</p>	<p>Student Technology Project with Teacher Scoring Rubric</p>	<p>Student self-reflection about creation or discussion while planning project Conversation/presentation rubric to score student work and presentation of final creation Teacher Checklist to record student understanding of skills based on participation and performance of skills</p>
Accommodations and Modifications			
English Language Learners	Students with IEPs	Economically Disadvantaged	Gifted and Talented
<p>Use of visuals Introduce key vocabulary before lesson Teacher reads aloud Verbal prompting Modeling Work in small group Peer tutoring Use of additional resources utilizing the student's native language</p>	<p>Provide students with additional time to complete projects Provide options, alternatives and choices to differentiate and broaden the curriculum Model for the student before independent practice to help student better understand the project or assignment Provide differentiated instruction as needed Follow all IEP modifications Provide manipulatives or the opportunity to draw solution strategies</p>	<p>Pre-Teach vocabulary and help students to preview lesson to build background knowledge and help students make connections with their experiences to achieve lesson and unit goals Provide student with materials and supplies to support lesson and help student achieve lesson and unit goals</p>	<p>After completing a learning experience via the same content or process, the student may have a choice of products to show what has been learned. Provide students with opportunities to enrich and explore the tools and materials they use with the unit to help students build upon their skills Use higher order thinking questions and expose students to higher level vocabulary</p>

Basic Skills Students	Students with 504 Plan	Students at Risk for Failure	
<ul style="list-style-type: none"> • Preview lessons • Preview vocabulary words <p>Summarize as you go</p>	<p>Provide students with additional time to complete projects</p> <p>Provide options, alternatives and choices to differentiate and broaden the curriculum</p> <p>Model for the student before independent practice to help student better understand the project or assignment</p> <p>Provide differentiated instruction as needed</p> <p>Follow all 504 plan modifications</p> <p>Provide manipulatives or the opportunity to draw solution strategies</p>	<ul style="list-style-type: none"> • Small group instruction • Frequent breaks • Model how assignments should look • Incorporate social/emotional discussions • Encourage and monitor positive peer collaboration • Provide academic resources for both home and school use • Provide incentives to increase motivation and collaboration 	
Unit 3 Connections			
<p><i>NJSLS - Computer Science and Design Thinking</i></p> <p>When possible, provide links to specific samples/ documents/ assignments/etc.</p> <p>Refer to the Computer Science and Design Thinking</p>	<p><i>Career Readiness, Life Literacies and Key Skills</i></p> <p>When possible, provide links to specific samples/ documents/ assignments/etc.</p> <p>Refer to Career Readiness, Life Literacies and Key Skills Practices</p>	<p><i>9.1 Financial Literacy & 9.2 Career Awareness</i></p> <p>When possible, provide links to specific samples/ documents/ assignments/etc.</p> <p>Refer to the Financial Literacy</p>	<p><i>Interdisciplinary Connections</i></p> <p>When possible, provide links to specific ELA/Math/Sci/SS standards as well as samples/ documents/ assignments/etc.</p> <p>Refer to the NJ Student Learning Standards</p>

	<p>Act as a responsible and contributing community members and employee</p> <p>Attend to financial well-being</p> <p>Consider the environmental, social and economic impacts of decisions</p> <p>Utilize critical thinking to make sense of problems and persevere in solving them</p> <p>Model integrity, ethical leadership and effective management</p> <p>Plan education and career paths aligned to personal goals</p> <p>Use technology to enhance productivity increase collaboration and communicate effectively</p> <p>Work productively in teams while using cultural/global competence</p>	<p>9.1.2.CR.1: Recognize ways to volunteer in the classroom, school and community</p> <p>9.1.2. FP.1 Explain how emotions influence whether a person spends or saves.</p> <p>9.1.2.FP.2: Differentiate between financial wants and needs. •</p> <p>9.1.2.FP.3: Identify the factors that influence people to spend or save (e.g., commercials, family, culture, society).</p> <p>9.1.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job.</p> <p>9.1.2.CAP.2: Explain why employers are willing to pay individuals to work.</p> <p>9.1.2.CAP.3: Define entrepreneurship and social entrepreneurship. • 9.1.2.CAP.4: List the potential rewards and risks to starting a business.</p>	<p>2.NBT.A.1</p> <p>2.NBT.A.2</p> <p>SL.2.1.</p>
--	---	---	--

Overview	Standards	Unit Skills Focus	Content-Specific Practices (when applicable)
<p>Unit 4 Interaction of Technology & Humans/ Nature of Technology/ Digital Citizenship</p>	<p>8.2.2.ITH.1: Identify products that are designed to meet human wants or needs.</p> <p>8.2.2.ITH.2: Explain the purpose of a product and its value.</p>	<p>Identify that human needs and desires determine which new tools are developed.</p> <p>Understand that engineers create and modify technologies to meet people’s needs and wants;</p>	<p>Essential Questions:</p> <p>How does technology impact our lives?</p> <p>How do engineers modify their designs & use the engineering</p>

	<p>8.2.2.ITH.3: Identify how technology impacts or improves life.</p> <p>8.2.2.ITH.4: Identify how various tools reduce work and improve daily tasks.</p> <p>8.2.2.ITH.5: Design a solution to a problem affecting the community in a collaborative team and explain the intended impact of the solution.</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> <p>9.4.5.DC.5: Identify the characteristics of a positive and negative online identity and the lasting implications of online activity.</p>	<p>scientists ask questions about the natural world.</p> <p>Digital Citizenship overview. Understand that technology has changed the way people live and work.</p> <p>Identify how various tools can improve daily tasks and quality of life.</p> <p>Explain how innovation and the improvement of existing technology involves creative thinking.</p>	<p>process?</p> <p>How does society determine how new tools are created and used?</p> <p>What does it mean to be a good digital citizen?</p> <p>Why is it important to use creative thinking when solving a problem? How can collaboration help with this?</p>
Suggested Resources	Google Apps, CS First, NewsELA, BrainPop, YouTube		
Assessment Plan			
Formative Assessments	Summative Assessments	Benchmark Assessment	Alternative Assessments
Teacher observations Class discussions	PBL Student Self-Evaluation	Student Technology Project with Teacher Scoring	Student self-reflection about creation or discussion while

Questioning Tests and Quizzes Presentation Peer editing Self-evaluation Portfolios Performance tasks and projects		Rubric	planning project Conversation/presentation rubric to score student work and presentation of final creation Teacher Checklist to record student understanding of skills based on participation and performance of skills
Accommodations and Modifications			
English Language Learners	Students with IEPs	Economically Disadvantaged	Gifted and Talented
Use of visuals Introduce key vocabulary before lesson Teacher reads aloud Verbal prompting Modeling Work in small group Peer tutoring Use of additional resources utilizing the student's native language	Provide students with additional time to complete projects Provide options, alternatives and choices to differentiate and broaden the curriculum Model for the student before independent practice to help student better understand the project or assignment Provide differentiated instruction as needed Follow all IEP modifications Provide manipulatives or the opportunity to draw solution strategies	Pre-Teach vocabulary and help students to preview lesson to build background knowledge and help students make connections with their experiences to achieve lesson and unit goals Provide student with materials and supplies to support lesson and help student achieve lesson and unit goals	After completing a learning experience via the same content or process, the student may have a choice of products to show what has been learned. Provide students with opportunities to enrich and explore the tools and materials they use with the unit to help students build upon their skills Use higher order thinking questions and expose students to higher level vocabulary
Basic Skills Students	Students with 504 Plan	Students at Risk for Failure	
<ul style="list-style-type: none"> • Preview lessons • Preview vocabulary words Summarize as you go 	Provide students with additional time to complete projects Provide options, alternatives and choices to differentiate and broaden the curriculum Model for the student before independent practice to help	<ul style="list-style-type: none"> • Small group instruction • Frequent breaks • Model how assignments should look • Incorporate social/emotional discussions 	

	<p>student better understand the project or assignment</p> <p>Provide differentiated instruction as needed</p> <p>Follow all 504 plan modifications</p> <p>Provide manipulatives or the opportunity to draw solution strategies</p>	<ul style="list-style-type: none"> • Encourage and monitor positive peer collaboration • Provide academic resources for both home and school use • Provide incentives to increase motivation and collaboration 	
Unit 4 Connections			
<p><i>NJSLS - Computer Science and Design Thinking</i></p> <p>When possible, provide links to specific samples/ documents/ assignments/etc.</p> <p>Refer to the Computer Science and Design Thinking</p>	<p><i>Career Readiness, Life Literacies and Key Skills</i></p> <p>When possible, provide links to specific samples/ documents/ assignments/etc.</p> <p>Refer to Career Readiness, Life Literacies and Key Skills Practices</p>	<p><i>9.1 Financial Literacy & 9.2 Career Awareness</i></p> <p>When possible, provide links to specific samples/ documents/ assignments/etc.</p> <p>Refer to the Financial Literacy</p>	<p><i>Interdisciplinary Connections</i></p> <p>When possible, provide links to specific ELA/Math/Sci/SS standards as well as samples/ documents/ assignments/etc.</p> <p>Refer to the NJ Student Learning Standards</p>

	<p>Act as a responsible and contributing community members and employee</p> <p>Attend to financial well-being</p> <p>Consider the environmental, social and economic impacts of decisions</p> <p>Utilize critical thinking to make sense of problems and persevere in solving them</p> <p>Model integrity, ethical leadership and effective management</p> <p>Plan education and career paths aligned to personal goals</p> <p>Use technology to enhance productivity increase collaboration and communicate effectively</p> <p>Work productively in teams while using cultural/global competence</p>	<p>9.1.2.CR.1: Recognize ways to volunteer in the classroom, school and community</p> <p>9.1.2. FP.1 Explain how emotions influence whether a person spends or saves.</p> <p>9.1.2.FP.2: Differentiate between financial wants and needs. •</p> <p>9.1.2.FP.3: Identify the factors that influence people to spend or save (e.g., commercials, family, culture, society).</p> <p>9.1.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job.</p> <p>9.1.2.CAP.2: Explain why employers are willing to pay individuals to work.</p> <p>9.1.2.CAP.3: Define entrepreneurship and social entrepreneurship. • 9.1.2.CAP.4: List the potential rewards and risks to starting a business.</p>	<p>2.NBT.A.1</p> <p>2.NBT.A.</p> <p>2 SL.2.1.</p>
Overview	Standards	Unit Skills Focus	Content-Specific Practices (when applicable)
<p>Unit 5 Effects of Technology on the Natural World/ Ethics & Culture/ Global & Cultural Awareness</p>	<p>8.2.2.ETW.1: Classify products as resulting from nature or produced as a result of technology.</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</p>	<p>Explain how the use of technology developed for the human designed world can affect the environment, including land, water, air, plants, and animals.</p> <p>Technologies that use natural sources can have negative effects on the environment, its quality, and inhabitants.</p>	<p>Essential Questions:</p> <p>What are some unintended consequences that technology has on the environment?</p> <p>What are some ways technology can help the environment?</p> <p>Why is recycling important?</p>

	<p>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>8.2.2.EC.1: Identify and compare technology used in different schools, communities, regions, and parts of the world.</p> <p>9.4.5.GCA.1: Analyze how culture shapes individual and community perspectives and points of view</p>	<p>Reusing and recycling materials can save money while preserving natural resources and avoiding damage to the environment.</p> <p>Explain how the availability of technology for essential tasks varies in different parts of the world.</p>	<p>How does access to technology vary based on where you live?</p> <p>Does every part of the world have access to the same technology?</p>
Suggested Resources	NewsELA, Brainpop, Google Apps, YouTube		
Assessment Plan			
Formative Assessments	Summative Assessments	Benchmark Assessment	Alternative Assessments
<p>Teacher observations</p> <p>Class discussions</p> <p>Questioning</p> <p>Tests and Quizzes</p> <p>Presentation</p> <p>Peer editing</p> <p>Self-evaluation</p> <p>Portfolios</p> <p>Performance tasks and projects</p>	<p>PBL</p> <p>Student Self-Evaluation</p>	<p>Student Technology Project with Teacher Scoring Rubric</p>	<p>Student self-reflection about creation or discussion while planning project</p> <p>Conversation/presentation rubric to score student work and presentation of final creation</p> <p>Teacher Checklist to record student understanding of skills based on participation and performance of skills</p>
Accommodations and Modifications			
English Language Learners	Students with IEPs	Economically Disadvantaged	Gifted and Talented

<p>Use of visuals Introduce key vocabulary before lesson Teacher reads aloud Verbal prompting Modeling Work in small group Peer tutoring Use of additional resources utilizing the student's native language</p>	<p>Provide students with additional time to complete projects Provide options, alternatives and choices to differentiate and broaden the curriculum Model for the student before independent practice to help student better understand the project or assignment Provide differentiated instruction as needed Follow all IEP modifications/504 plan Provide manipulatives or the opportunity to draw solution strategies</p>	<p>Pre-Teach vocabulary and help students to preview lesson to build background knowledge and help students make connections with their experiences to achieve lesson and unit goals Provide student with materials and supplies to support lesson and help student achieve lesson and unit goals</p>	<p>After completing a learning experience via the same content or process, the student may have a choice of products to show what has been learned. Provide students with opportunities to enrich and explore the tools and materials they use with the unit to help students build upon their skills Use higher order thinking questions and expose students to higher level vocabulary</p>
<p>Basic Skills Students</p>	<p>Students with 504 Plan</p>	<p>Students at Risk for Failure</p>	
<ul style="list-style-type: none"> ● Preview lessons ● Preview vocabulary words Summarize as you go 	<p>Provide students with additional time to complete projects Provide options, alternatives and choices to differentiate and broaden the curriculum Model for the student before independent practice to help student better understand the project or assignment Provide differentiated instruction as needed Follow all 504 plan modifications Provide manipulatives or the opportunity to draw solution strategies</p>	<ul style="list-style-type: none"> ● Small group instruction ● Frequent breaks ● Model how assignments should look ● Incorporate social/emotional discussions ● Encourage and monitor positive peer collaboration ● Provide academic resources for both home and school use ● Provide incentives to increase motivation and collaboration 	
<p>Unit 5 Connections</p>			
<p><i>NJSLS - Computer Science and Design Thinking</i> When possible, provide links to specific samples/ documents/</p>	<p>Career Readiness, Life Literacies and Key Skills When possible, provide links to specific samples/ documents/</p>	<p>9.1 Financial Literacy & 9.2 Career Awareness When possible, provide links to specific samples/ documents/ assignments/etc.</p>	<p>Interdisciplinary Connections When possible, provide links to specific ELA/Math/Sci/SS standards as well as samples/</p>

assignments/etc. Refer to the Computer Science and Design Thinking	assignments/etc. Refer to Career Readiness, Life Literacies and Key Skills Practices	Refer to the Financial Literacy	documents/ assignments/etc. Refer to the NJ Student Learning Standards
	<p>Act as a responsible and contributing community members and employee</p> <p>Attend to financial well-being</p> <p>Consider the environmental, social and economic impacts of decisions</p> <p>Utilize critical thinking to make sense of problems and persevere in solving them</p> <p>Model integrity, ethical leadership and effective management</p> <p>Plan education and career paths aligned to personal goals</p> <p>Use technology to enhance productivity increase collaboration and communicate effectively</p> <p>Work productively in teams while using cultural/global competence</p>	<p>9.1.2.CR.1: Recognize ways to volunteer in the classroom, school and community</p> <p>9.1.2. FP.1 Explain how emotions influence whether a person spends or saves.</p> <p>9.1.2.FP.2: Differentiate between financial wants and needs. •</p> <p>9.1.2.FP.3: Identify the factors that influence people to spend or save (e.g., commercials, family, culture, society).</p> <p>9.1.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job.</p> <p>9.1.2.CAP.2: Explain why employers are willing to pay individuals to work.</p> <p>9.1.2.CAP.3: Define entrepreneurship and social entrepreneurship. • 9.1.2.CAP.4: List the potential rewards and risks to starting a business.</p>	<p>2.NBT.A.1</p> <p>2.NBT.A.</p> <p>2 SL.2.1.</p>