

Unit	Unit Title	Recommended Instructional Days
2	Introduction to Computer Programming (Code.org)	Trimester 2
<p>Disciplinary Concept:</p> <p>CS NI IC AP</p>	<p>Practice:</p> <p>Collaborating Around Computing and Design</p> <p>Recognizing and Defining Computational Problems</p> <p>Developing and Using Abstractions</p> <p>Creating Computational Artifacts</p> <p>Testing and Refining Computational Artifacts</p> <p>Communicating About Computing and Design</p>	<p>Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CSDT within Unit</p>
<p>Core Idea:</p>	<p>Performance Expectation/s:</p>	
<p>Individuals use computing devices to perform a variety of tasks accurately and quickly. Computing devices interpret and follow the instructions they are given literally. A computing system is composed of software and hardware. Describing a problem is the first step toward finding a solution when computing stems do not work as expected.</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 function 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</p>	<p><u>Essential Question/s:</u></p> <p>How can we use computers to solve problems and create amazing things?</p> <p>Why is it important to keep our online information safe?</p> <p>What are the different parts of a computer, and what happens when they don't work the way they should?</p> <p><u>Activity Description:</u></p>

<p>Connecting devices to a network or the Internet provides great benefits, but care must be taken to use authentication measures, such as strong passwords, to protect devices and information from unauthorized access.</p> <p>Computing technology has positively and negatively changed the way individuals live and work (e.g., entertainment, communication, productivity tools).</p> <p>Real world information can be stored and manipulated in programs as data (e.g., numbers, words, colors, images).</p> <p>Computers follow precise sequences of steps that automate tasks.</p> <p>Complex tasks can be broken down into simpler instructions, some of which can be broken down even further.</p> <p>People work together to develop programs for a purpose, such as expressing ideas or addressing problems.</p> <p>The development of a program involves identifying a sequence of events, goals, and expected outcomes, and addressing errors (when necessary)</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>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.6: Debug errors in an algorithm or program that includes sequences and simple loops.</p>	<p>Discuss computer etiquette and engage in an online activity that involves dragging and dropping puzzle pieces. Model using an interactive whiteboard or a whiteboard with a projector. (Lesson 1: learn to Drag & Drop, Code.Org).</p> <p>Watch a video introducing programming with blocks, and model how to complete the activity. Engage in online sequential algorithm activities (Lesson 2: Sequencing with Scrat; Angry Birds, Code.org)</p> <p>Watch a video introducing programming with Rey and BB-8, model activity. Use programming skills to navigate a tricky course (Lesson 3: Programming with Angry Birds, Code.org).</p> <p>Watch “The Harvester” video and model skill. Engage students in additional skill-building activities. Watch an additional video to learn about debugging with the Step Button, model, and engage in skill-building activities. Provide opportunity for students to engage in Challenge activity and wrap-up practice activities (Lesson 5: Programming with Harvester, Code.org)</p> <p>Enrichment Activities: Loops (Lesson 6-9) and Events (Lessons 10-11)</p> <p>Interdisciplinary Connections: Content: ELA</p> <p>A.R.1, A.R.4, A.R. 7, A.R.10, RL.K.10, RF.K.1a, A.W.2, A.W.3, A.W.4, A.W.7 A.W.8, A.W.10, W.K.2, W.K.3, W.K.7, W.K.8, W.K. 10, A.SL.1, A.SL.2 A.SL.4, A.SL.5, A.SL.6, SL.K.1a, SL.K.1b, SL.K.2, SL.K.3, SLK.4, SL.K.5, SL.K.6, A.L.1.6, L.K.1a, L.K.6</p>
<p>Social and Emotional Learning: <i>Competencies</i></p>	<p>Social and Emotional Learning: <i>Sub-Competencies</i></p>	

<p>Self Awareness</p> <p>Self-Management</p> <p>Social Awareness</p> <p>Responsible-Decision Making</p> <p>Relationship Skills</p>	<ul style="list-style-type: none"> ● Recognize one’s feelings and thoughts ● Recognize the impact of one’s feeling and thoughts on one’s own behavior ● Recognize one’s personal traits, strengths, and limitations ● Recognize the skills needed to establish personal and educational goals ● Recognize and identify the thoughts, feelings, and perspectives of others ● Demonstrate an understanding of the need for mutual respect when viewpoints differ ● Develop, implement, and model effective problem-solving and critical thinking skills ● Establish and maintain healthy relationships ● Utilize positive communication and social skills to interact effectively with others 	
<p style="text-align: center;">Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>		<p style="text-align: center;">Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>
<p><u>Formative Assessments</u></p> <ul style="list-style-type: none"> ● Observations ● Student online dashboard (Code.Org) 	<p><u>Benchmarks:</u></p> <ul style="list-style-type: none"> ● Performance Assessment 	

<ul style="list-style-type: none"> Self-Assessments/Reflection Independent online activities 		<p>Summative Assessments:</p> <ul style="list-style-type: none"> District/Department Assessment 	
<p>Differentiated Student Access to Content: Teaching and Learning <i>Resources/Materials</i></p>			
<p>Core Resources</p>	<p>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></p>	<p>ELL Core Resources</p>	<p>Gifted & Talented Core Resources</p>
<ul style="list-style-type: none"> Code.Org (Pre-Reader Express 2024/2025) Commonsense.org 	<ul style="list-style-type: none"> Reteaching Spanish version of lesson activities 	<ul style="list-style-type: none"> Dictionary for native language Earlier versions of Pre-reader Express provide language options 	<ul style="list-style-type: none"> Enrichment/Extension activities
<p>Supplemental Resources</p>			
<p>Technology:</p> <ul style="list-style-type: none"> Chromebooks, MacBook Projector Interactive Whiteboard Clever Code.Org (Pre-Reader Express) YouTube Common Sense Media <p>Other</p> <ul style="list-style-type: none"> Pencils, crayons, markers 			
<p>Differentiated Student Access to Content: Recommended <i>Strategies & Techniques</i></p>			
<p>Core Resources</p>	<p>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></p>	<p>ELL Core Resources</p>	<p>Gifted & Talented Core</p>

<ul style="list-style-type: none"> Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat instructions as needed. 	<ul style="list-style-type: none"> Special Education: Adhere to IEP/504s. 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. Students at Risk of School Failure: Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat instructions as needed. 	<ul style="list-style-type: none"> English Language Learners: Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of online or paper bilingual dictionaries, and modified assessment and/or rubric. 	<ul style="list-style-type: none"> Provide extension activities related to the topic being discussed. Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect students to related talent development opportunities.
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<p>NJSLS CAREER READINESS, LIFE LITERACIES & KEY</p>	<p>Disciplinary Concept: Creativity and Innovation, Critical Thinking and Problem-solving, Digital Citizenship, Technological Literacy</p>
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SKILLS	<i>Core Ideas:</i>	<ul style="list-style-type: none"> ● Brainstorming can create new, innovative ideas ● Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem. ● Digital tools have a purpose. ● Collaboration can simplify the work an individual has to do and sometimes produce a better product.
	<i>Performance Expectation/s:</i>	<ul style="list-style-type: none"> ● 9.4.2.CI.1; 9.4.2.CT.3; 9.4.2.TL.4; 9.4.2.TL.7
	Career Readiness, Life Literacies, & Key Skills Practices	
	<ul style="list-style-type: none"> ● Act as a responsible and contributing community member and employee. ● Demonstrate creativity and innovation. ● Utilize critical thinking to make sense of problems and persevere in solving them. ● Use technology to enhance productivity, increase collaboration and communicate effectively. 	

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>		LGBT and Disabilities Law: <i>N.J.S.A. 18A:35-4.35</i>		Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>		Standards in Action: <i>Climate Change</i>