<table>
<tr><th colspan="2">Marking
Period</th><th>Unit
Title</th><th>Recommended
Instructional Days</th></tr>
<tr><td colspan="2">Trimester 2</td><td>Computer Programming with Ozobots</td><td>Approximately 14-16 days
(Meet Once Per Week)</td></tr>
<tr><td>Disciplinary Concept:</td><td>Practice:</td><td colspan="2" rowspan="2">Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CSDT within Unit</td></tr>
<tr><td>CS
AP</td><td>Collaborating Around Computing and Design

Recognizing and Defining Computational Problems

Creating Computational Artifacts

Testing and Refining Computational Artifacts</td></tr>
<tr><td>Core Idea:</td><td>Performance Expectation/s:</td><td colspan="2" rowspan="2"><u>Essential Question/s:</u>
What are the different parts of an Ozobot Evo robot?

How do I program a robot?

How are the sequences in a short story like sequences in code?.

What are loops and why do we use them when programming code?

How can you identify bugs in a program and fix them?

<u>Activity Description</u>:
Identify and label the hardware components of Ozobot Evo (Introduction to Ozobot: Get to know Evo).</td></tr>
<tr><td>Individuals use computing devices to perform a variety of tasks accurately and quickly. Computer devices interpret and follow the instructions they are given literally.
Individuals develop and follow directions as part of daily life.
A sequence of steps can be expressed as an algorithm that a computer can process.
Real world information can be stored and manipulated in programs as data (e.g., numbers, words, colors, images).
Computers follow precise sequences of steps that automate tasks.</td><td>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.
8.1.2.AP.1: Model daily processes by creating and following algorithms to complete tasks.
8.1.2.AP.2: Model the way programs store and manipulate data by using numbers or other symbols to represent information.
8.1.2.AP.3: Create programs with sequences and simple loops to accomplish tasks.
8.1.2.AP.4: Break down a task into a sequence of steps.</td></tr>
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Complex tasks can be broken down into simpler instructions, some of which can be broken down even further. People work together to develop programs for a purpose, such as expressing ideas or addressing problems. The development of a program involves identifying a sequence of events, goals, and expected outcomes, and addressing errors (when necessary)l.	8.1.2.AP.5: Describe a program's sequence of events, goals, and expected outcomes. 8.1.2.AP.6: Debug errors in an algorithm or program that includes sequences and simple loops.	Ask students what types of robots they use in real life. Discuss how they used color codes to program a robot. Have students navigate through Ozobot Blockly (using the delete, duplicate, undo and redo blocks) and run the code on Ozobot using the instructional video and student handouts (Ozobot Blockly 01). Create sequences in programming, and program the Ozobot to perform a series of commands in order according to actions in a short story (Evo the Robot) (Ozobot Blockly 02). Build a short sequence and add a count controlled loop to program Ozobot to travel in a square (Ozobot Blockly 03). Create programs using forever loops with days of the week and seasons of the year (Ozobot Blockly 04). Color and cut the Blockly Blocks Activity sheet. Using the nine blocks, students will identify incorrect blocks that are hidden in programs by holding up a paper cut-out of the blocks. (Ozobot Blockly 05). Choose 5 pictures of buildings in the community and draw a path for the Ozobot to travel to each of the buildings. Using first, then, next students will tell a story about each of the buildings they traveled to with their Ozobot (My Community). Create a word problem using addition and subtraction and code 4 different solutions with 1 being the correct solution (Ozobot is a Math Detective). **Interdisciplinary Connections: Content:** ELA SL.1.1; L.1 CCSS.MATH.CONTENT.2.NBT.B.5
Social and Emotional Learning: ***Competencies***	**Social and Emotional Learning:** ***Sub-Competencies***	
Self Awareness Self-Management Social Awareness Responsible-Decision Making Relationship Skills	• Recognize one's feelings and thoughts • Recognize the impact of one's feeling and thoughts on one's own behavior • Understand and practice strategies for managing one's own emotions, thoughts, and behaviors. • 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 ● Identify who, when, where, or how to seek help for oneself or others when needed	

Assessments (Formative) ***To show evidence of meeting the standard/s, students will successfully engage within:***	**Assessments (Summative)** ***To show evidence of meeting the standard/s, students will successfully complete:***
Formative Assessments: ● Exit Slips ● Quizzes ● Self Assessments/Reflection ● Lesson Activity Worksheets	**Benchmarks:** ● Performance Assessment ● Unit Assessments **Summative Assessments:** ● District/Department Assessments

Differentiated Student Access to Content:
Teaching and Learning *Resources/Materials*

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core Resources**
● Ozobot Classroom (plugged and unplugged resources)	● Reteaching worksheets ● Spanish version of lesson activities	● Dictionary for native language	● Enrichment/Extension activities

Supplemental Resources

Technology:
- Chromebooks, MacBook

- Projector
- Interactive Whiteboard
- SeeSaw
- GAFE
- Ozobot Blockly

Other:

- Google Meet Conferencing Tool
- Pencils, crayons, markers, paper
- Ozobot unplugged handouts K packet
- Ozobot Library Advanced Grade 1 G & T
- youtube

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

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core**
• 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.	• 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	• 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.	• 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.

	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.		

NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	**Disciplinary Concept: Creativity and Innovation, Critical Thinking and Problem-solving, Digital Citizenship, Technological LIteracy**	
	Core Ideas:	● **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.** ● **Collaboration can simplify the work an individual has to do and sometimes produce a better product.**
	Performance Expectation/s:	● **9.4.2.CI.1; 9.4.2.CT.3; 9.4.2.TL.4**
	Career Readiness, Life Literacies, & Key Skills Practices	
	● **Act as a responsible and contributing community members 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: *N.J.S.A. 18A 52:16A-88*		Holocaust Law: *N.J.S.A. 18A:35-28*		LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*		Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*		Standards in Action: *Climate Change*