Marking Period	Unit Title	Recommended Instructional Days
Trimester 2	**Computer Programming with Ozobots**	Approximately 14-16 days **(Meet Once Per Week)**

Disciplinary Concept:	**Practice:**	**Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CSDT within Unit**
CS AP	Collaborating Around Computing and Design Creating Computational Artifacts Testing and Refining Computational Artifacts	
Core Idea:	**Performance Expectation/s:**	
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 systems do not work as expected. 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. Computers follow precise sequences of steps that automate tasks. Complex tasks can be broken down	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.CS.2: Explain the functions of common software and hardware components of computing systems. 8.1.2.CS.3: Describe basic hardware and software problems using accurate terminology. 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	**Essential Question/s:** What is an Evo? What can it do? What is programming and code? What are color codes and how do they work to program the Ozobot? **Activity Description**: Introduce the Ozobots by reading Ozzie the Ozobot then watch an instructional video and learn about all of the parts of the Evo and what the Evo can do when programmed. Use the handout to label all of the parts of Evo (Get to know your Bot activity sheet). Pre-readers/writers can explain the parts. Explore Ozobot Blockly and the 4 categories available at Level 1. Students work in groups to drag and drop blocks into a simple block-based program writing code that will be sent to the Ozobot and the Ozobot will run the program (Color Codes: 01).

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). Algorithms & Programming	accomplish tasks. 8.1.2.AP.4: Break down a task into a sequence of steps. 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.	Through direct instruction and an instructional video, guide students to use the Color Codes key to put the missing color codes into the pathway on the activity sheet and trace the rest of the line with a black marker. Students will color in the map to complete the path (model for students) (Color Codes: 02) and move the Ozobot. Have students use the Color Codes key and their color code markers to complete each pathway on their activity sheet. They will add the Tornado Color Code into the first pathway and the Zigzag Color Code into the second pathway. Students will add both Win/Exit Color Codes on the ends of the third pathway and trace the lines on each pathway with black marker (Color Codes: 03). Use direct instruction and the instructional videos to illustrate and model for students how to program the bot to move in a specific direction at an intersection and how to make a U-Turn. Students will program the bot to move from the Start 2 location to the birdhouse using the activity sheet provided (Color Codes: 04). Go over the beginning letter for ABC order. Review the pictures on the handout for ABC Order Ozobot Trail to ensure students know which animal is on the paper. Explain to the students that they are going to follow the codes listed on the handout. They will need to put the correct code under the correct picture.
Social and Emotional Learning: ***Competencies***	**Social and Emotional Learning:** ***Sub-Competencies***	**Interdisciplinary Connections: Content:** ELA-Literacy R1; W.K.3, RF.K.1
Self Awareness Self-Management Social Awareness Responsible-Decision Making	• 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	

Relationship Skills	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:***
<u>Formative Assessments:</u> ● Exit Slips ● Quizzes ● Self Assessments/Reflection ● Lesson Activity Worksheets		**<u>Benchmarks:</u>** ● Performance Assessment ● Unit Assessments **<u>Summative Assessments:</u>** ● 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
- Schoology
- GAFE
- OzoBlockly
- classroom.ozobot.com

Other:
- Pencils, crayons, markers, paper
- Ozobot unplugged handouts K packet
- Ozobot Library Advanced Kindergarten G & T
- watch.cloudflarestream.com (videos - see lesson plans in Ozobot Classroom Library)

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	• Special Education: Adhere to IEP/504s. Utilize a multi-sensory (VAKT) approach during instruction, provide alternate presentations of skills by varying the method (repetition,	• 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	• Provide extension activities related to the topic being discussed. Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate

rubrics, repeat instructions as needed.	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.	online or paper bilingual dictionaries, and modified assessment and/or rubric.	authentic components, propose interest-based extension activities, and connect students to related talent development opportunities.

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.** ● **Digital tools have a purpose.**

	Performance Expectation/s:	• **9.4.2.CI.1; 9.4.2.CT.3; 9.4.2.TL.1; 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*