

<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. 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. 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. Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions.</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. 8.1.2.AP.1: Model daily processes by creating and following algorithms to complete 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. 8.2.2.ED.1: Communicate the function of a product or device. 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. 8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process.</p>	<p><u>Essential Question/s:</u></p> <p>How can we tell the Sphero indi where to go and what to do?</p> <p>Why do we have traffic signs, and how can we use them to help indi move safely?</p> <p>How can we use colors to tell indi where to go and how fast to move?</p> <p>How can we come up with new ideas and make them better to solve problems?</p> <p>What does it mean to care about how someone else feels, and why is that important?</p> <p>Why is it important to test our designs/paths?</p> <p><u>Activity Description:</u></p> <p>Watch a video discussing design thinking that presents a problem. Explain to students why it is important to understand and share the feelings of another person. Discuss ways that might help the boy in the wheelchair cross the water. Discuss the importance of listening to the ideas of team/group members.</p>
<p>Social and Emotional Learning: <i>Competencies</i></p>	<p>Social and Emotional Learning: <i>Sub-Competencies</i></p>	<p>Explore the indi and learn about its parts. Use colored tiles to observe how the indi reacts when placed on specific-colored tiles. What did they hear? What did they see? How does the indi know how to do that? Add a second tile, change distances, observe, and discuss. (Lesson 1: Meet Sphero indi).</p>
<p>Self-Awareness Self-Management Social Awareness Responsible Decision-Making Relationship Skills</p>	<ul style="list-style-type: none"> ● Recognize one's feelings and thoughts ● Recognize the impact of one's feelings and thoughts on one's own behavior ● Understand and practice strategies for managing one's own emotions, thoughts, and behaviors. 	<p>Review traffic signs with students and discuss their purpose. Break into small groups and provide simple instructions for students to use the colored tiles (purple and red) to control indi (Lesson 2: Stops and Celebrations). Reflect using Journal page. Which traffic sign did they use? How did indi react?</p>

	<ul style="list-style-type: none"> ● Recognize and identify the thoughts, feelings, and perspectives of others. ● Develop, implement and model effective problem-solving and critical thinking skills. ● Identify the consequences associated with one's actions in order to make constructive choices ● Establish and maintain healthy relationships 	<p>Model how to make indi turn left or right. Working in small groups, use poster paper to design a route around obstacles for indi to follow (Lessons 3 and 4: Left or right). Reflect.</p> <p>Using the design thinking process, create a path for the indi robot to follow. Use large poster paper to create a path and then place the color tile to move the robot from the beginning of the path to the end. Test the design, improve (if necessary), and retest. Reflect using Journal pages.</p> <p>Read <i>Little Red Riding Hood</i> and discuss the key events of the story to represent indi's path (i.e., indi goes to the market, indi meets the wolf, indi runs to Grandma's house). State the challenge/problem: Create a path for indi to tell the story. Brainstorm how to represent each part of the story on large poster paper to create drawings Use the color tiles to build the path on the poster paper. Test the path with the indi telling the story as the indi follows the path. Improve, if necessary, and retest. Reflect.</p> <p>Interdisciplinary Connections: Content: ELA RL.K.1; RL.K.10; SL.K.1; SL.K.2; SL.K.3; SL.K.4; SL.K.5 Math K.G.A.1</p>
<p align="center">Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>		<p 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 ● Discussion ● Self Assessments/Reflection ● Lesson Activity Worksheets/Drawings 	<p><u>Benchmarks:</u></p> <ul style="list-style-type: none"> ● Performance Assessment <p><u>Summative Assessments:</u></p> <ul style="list-style-type: none"> ● District/Department Assessments 	
<p align="center">Differentiated Student Access to Content: Teaching and Learning Resources/Materials</p>		

Core Resources			
Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core Resources
<ul style="list-style-type: none"> Sphero indi educator class pack with guides 	<ul style="list-style-type: none"> Sphero indo Multi-lingual guide 	<ul style="list-style-type: none"> Dictionary for the native language 	<ul style="list-style-type: none"> Enrichment/Extension activities
Supplemental Resources			
<p>Technology:</p> <ul style="list-style-type: none"> Chromebooks, MacBook Projector Interactive Whiteboard YouTube (Follow guidelines provided during the school 2024-2025 regarding embedding YouTube videos). https://sphero.com/pages/sphero-indi (teacher resource) <p>Other:</p> <ul style="list-style-type: none"> Large poster paper (Art) Journal Pages Pencils, crayons, markers, paper, glue, scissors https://www.youtube.com/watch?v=y6JOkWFK26c (Teacher Resource Design Thinking in Kindergarten) https://www.youtube.com/watch?v=ptE3WGvL2co&feature=youtu.be Books (Early Childhood) 			
Differentiated Student Access to Content: Recommended <i>Strategies & Techniques</i>			
Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core
<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 	<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, 	<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 	<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,

<p>and/or rubrics, repeat instructions as needed.</p>	<p>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> <ul style="list-style-type: none"> • 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. 	<p>dictionaries, and modified assessment and/or rubric.</p>	<p>propose interest-based extension activities, and connect students to related talent development opportunities.</p>
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<p>NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS</p>	<p>Disciplinary Concept:</p>	
	<p><i>Core Ideas:</i></p>	<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.
	<p><i>Performance Expectation/s:</i></p>	<p>9.4.2.CI.1; 9.4.2.CI.2; 9.4.2.CT.3; 9.4.2.TL.1; 9.4.2.TL.7</p>

	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. ● Work productively in teams while using cultural/global competence.

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>