

Marking Period	Unit Title	Recommended Instructional Days
TR3	Learning About Design Thinking	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
ED NT	Fostering an Inclusive Computing and Design Culture Collaborating Around Computing and Design Communicating About Computing and Design	
Core Idea:	Performance Expectation/s:	
Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions. Innovation and the improvement of existing technology involves creative thinking.	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. 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>Essential Question/s: What is design thinking and what problems can it help us solve? What does empathy mean and why is it important? Why is it important to test our designs?</p> <p>Activity Description: 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.</p> <p>Discuss how to build a bridge. Present students with materials and ask them to draw a bridge that could help the boy cross the river. After they draw their design (working in pairs or teams of 4 students), the students will build a prototype using the materials provided. Test the design and then revise the design if necessary.</p> <p>Read <i>The Three Little Pigs</i> and discuss with students why they should empathize with the pigs. Discuss the types of houses they could build for the pigs to help save them from the wolf. Working through the steps of</p>
Social and Emotional Learning: Competencies	Social and Emotional Learning: Sub-Competencies	
Self-Awareness Self-Management Social Awareness	<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 	

<p>Responsible Decision-Making</p> <p>Relationship Skills</p>	<ul style="list-style-type: none"> • Understand and practice strategies for managing one’s own emotions, thoughts, and behaviors. • 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>the design thinking process, students will create the house they believe would be the best design and explain why.</p> <p>Read <i>Good Night Bears</i> or <i>Baby Bears Not Hibernating</i> and discuss hibernation and dens. Research dens. Discuss key details in the text that tell why it is important for the bear to have a warm den during the winter. Draw a design for a den to keep the bear warm, build and test. Discuss with students how they might change the design to make it better.</p> <p>Read <i>The Tortoise and the Hare</i>. Discuss why they think the tortoise and the hare do not want to race on a windy day. Discuss the challenge with the students and ask them to draw something that would detect the wind. Discuss drawings and then in pairs or groups of 3-4, have students design a wind detector. Wrap-up with a video discussing the difference between weather and climate</p> <p>Interdisciplinary Connections: Content: ELA RL.K.1; RL.K.10; SL.K.1; SL.K.2; SL.K.3; SL.K.5 NGSS K-ESS2-1</p>	
<p>Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>		<p>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"> • Exit Slips • Quizzes • Self Assessments/Reflection • Lesson Activity Worksheets/Drawings 		<p><u>Benchmarks:</u></p> <ul style="list-style-type: none"> • Performance Assessment • Unit Assessments • Projects <p><u>Summative Assessments:</u></p> <ul style="list-style-type: none"> • District/Department Assessments 	
<p>Differentiated Student Access to Content: Teaching and Learning Resources/Materials</p>			
<p>Core Resources</p>	<p>Alternate Core Resources</p>	<p>ELL Core Resources</p>	<p>Gifted & Talented Core Resources</p>

	<i>IEP/504/At-Risk/ESL</i>		
<ul style="list-style-type: none"> STEM/STEAM K projects 	<ul style="list-style-type: none"> Reteaching worksheets Spanish version of lesson activities 	<ul style="list-style-type: none"> Dictionary for 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 Schoology GAFE Youtube <p>Other:</p> <ul style="list-style-type: none"> Pencils, crayons, markers, paper, glue, scissors https://www.youtube.com/watch?v=y6JOkWFK26c (Teacher Resource Design Thinking in Kindergarten) STEM materials (i.e., craft sticks, cotton balls, etc.) https://www.youtube.com/watch?v=ptE3WGvL2co&feature=youtu.be https://climatekids.nasa.gov/weather-climate/ 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 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 	<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

	<p>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>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.
	<p><i>Performance Expectation/s:</i></p>	<p>9.4.2.CI.1; 9.4.2.CI.2; 9.4.2.CT.2</p>
	<p>Career Readiness, Life Literacies, & Key Skills Practices</p>	
	<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. 	

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>	X	Standards in Action: <i>Climate Change</i>
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