

East Newark Public School

Science Curriculum

Grade K



Equity Statement:

East Newark Public School District does not discriminate on the basis of race, color, creed, religion, sex, ancestry, or national origin. The East Newark Board of Education ensures that all students enrolled in the schools of this district shall be afforded equal educational opportunities in strict accordance with the law. No student shall be denied access to or benefit from any educational program or activity on the basis of the student's race, color, creed, religion, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, gender identity or expression, socioeconomic status, or disability. The Board directs the Superintendent to allocate faculty, administrators, support staff members, curriculum materials, and instructional equipment supplies among classes of this district in a manner that ensures equivalency of educational opportunity throughout this district. The school district's curricula will eliminate discrimination, promote mutual acceptance and respect among students, and enable students to interact effectively with others, regardless of race, color, creed, religion, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, gender identity or expression, socioeconomic status, or disability.

Course Description:

The East Newark Public School kindergarten science program is designed to introduce and develop a foundation in science through four major units of study. Students will gain an understanding of many important areas of Life, Earth, and Physical Sciences, and will utilize and understand scientific processes. All courses are designed to prepare students for their school science courses and for solving simple scientific problems and issues in their everyday lives.

The material is presented at a moderate pace and can be adjusted for various levels taught. Lessons are based on discussions and student-driven activities. Hands-on activities are meant to show connections to real-life science applications, and to promote critical thinking and problem solving skills. Students who are placed in this course based on ESL placement will also receive appropriate accommodations based upon their ESL level. Students receiving Special Education services will receive modifications and accommodations to information and assessments as indicated in their Individual Education Plan.

Course Modifications:

The course instructor will determine, with the assistance of administrators, teacher assistants/aides, educational specialists, and/or special education teachers, what modifications will be made for his/her students. Such examples of modifications can include, but not be limited to:

- Extended time as needed
- Modification of tests and quizzes
- Preferential seating
- Alternative/Formative assessment (projects)
- Effective teacher questioning (ranging from simple recall to higher order critical thinking questions)
- Supplemental materials
- Cooperative learning
- Teacher tutoring
- Peer tutoring
- Differentiated Instruction

Best Practices:

Best practices come from research-based, effective methodologies in presenting material in a manner to engage all students in the learning process. Thorough planning and collaborative discussions about instructional practices are part of the ongoing practice of teachers. Student activities and practices that reflect effective methodology include, but are not limited to, providing students with:

- Regular opportunities to investigate topics in depth
- The ability to exercise choice and responsibility by choosing their own topics
- Opportunities for active participation in the classroom and the community
- Exploration of open-ended questions that challenge their thinking
- Opportunities for reading, writing, observing, discussing, and debating ideas
- Activities that include independent inquiry and cooperative learning
- Assessment of student learning that promotes lifelong responsible citizenship rather than the sole memorization of facts
- Strategies and tools to read and comprehend informational text

Grade K Scope and Sequence:

Unit	Estimated Pacing
Introduction to Science and Engineering	5 weeks
Forces and Interactions: Pushes and Pulls	6 weeks
Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment	16 weeks
Weather and Climate	9 weeks

Marking Period	Unit Title	Recommended Instructional Days
1	Introduction to Science and Engineering	5 weeks
NJSL-S - Science: <i>Title</i>	NJSL-S - Science: <i>Performance Expectations</i>	Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSL-S within Unit
Engineering Design	<ul style="list-style-type: none"> ● K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. ● K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. ● K-2-ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. 	<p>Essential Question/s:</p> <ol style="list-style-type: none"> 1. What happens when you mix soap and water? 2. How do senses help you learn? 3. What sinks? 4. What floats? 5. How can you make a big bubble? <p>Activity Description:</p> <ul style="list-style-type: none"> ● Article analysis ● Vocabulary activities ● Video/photo analysis ● Weekly Phenomenon Investigation: Mix soap and water. What happens? ● Discuss: How can solving a problem help me feel better? Who can support me when solving a problem? How do you feel when you accomplish a task? ● Exploration: Discover what happens when you mix soap and water ● Science Memory Card Game ● Have students draw a picture of themselves as a scientist on one side of a paper and as an engineer on the other side of the paper. ● Draw a picture of your favorite thing to study in the world around you. Use words or letters to label your picture. ● Weekly Phenomenon Investigation: How do senses help you learn? ● Discuss: Which of your five senses helps you the most? How does your sense of touch help you know about the world? How do your senses help you communicate with others? ● Graphic Organizer: Observation Tools ● Senses (Hearing) Experiment: Students will shake Easter eggs filled with various items. There will be two Easter eggs filled with the
FOUNDATION Disciplinary: <i>Core Idea</i>	FOUNDATION Disciplinary: <i>Statement</i>	
ETS1.A: Defining and Delimiting Engineering Problems	<ul style="list-style-type: none"> ● A situation that people want to change or create can be approached as a problem to be solved through engineering. ● Asking questions, making observations, and gathering information are helpful in thinking about problems. ● Before beginning to design a solution, it is important to clearly understand the problem. 	
ETS1.B: Developing Possible Solutions	Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating	

	ideas for a problem's solutions to other people.	<p>same contents. Students will shake the shakers and use their ears to try to find the pairs that are filled with the same materials.</p> <ul style="list-style-type: none"> ● Activity: Five Senses of Science ● Draw a picture of something you experienced that was exciting to your senses. Write about what senses you used and how each sense was used during the experience. For example, "I saw a rainbow with my eyes," or, "I can taste and smell cookies with my tongue and nose." ● Weekly Phenomenon Investigation: What sinks? What floats? ● Discuss: How can thinking like an engineer help you with your friends and family relationships? How can thinking like a scientist help you in your community? Why is it important to be able to communicate your ideas clearly? What can happen to your relationships if you communicate before you obtain and evaluate information? Has this ever happened to you before? ● Think about what kind of scientist or engineer you might like to be. Draw a picture of yourself. Add details, letters, and words. ● Sort: Safe or Not Safe ● Graphic Organizer: My Toolbox ● Sink or Float Exploration Activity ● Students will learn about the steps in the engineering design process as they engineer a bubble wand. <p>Interdisciplinary Connections: Content: ;NJSLS#:</p> <p>ELA/Literacy -</p> <ul style="list-style-type: none"> ● RI.K.1: With prompting and support, ask and answer questions about key details in a text. ● W.K.2: Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. ● SL.K.3: Ask and answer questions in order to seek help, get information, or clarify something that is not understood. ● SL.K.5: Add drawings or other visual displays to descriptions as desired to provide additional detail. <p>Mathematics -</p> <ul style="list-style-type: none"> ● MP.2 - Reason abstractly and quantitatively. ● MP.4 - Model with mathematics. ● MP.5 - Use appropriate tools strategically. <p>Technology -</p>
ETS1.C: Optimizing the Design Solution	Because there is always more than one possible solution to a problem, it is useful to compare and test designs.	
FOUNDATION Science and Engineering Practices: Core Idea	FOUNDATION Science and Engineering Practices: Statement	
Asking Questions and Defining Problems	<ul style="list-style-type: none"> ● Ask questions based on observations to find more information about the natural and/or designed world(s). ● Define a simple problem that can be solved through the development of a new or improved object or tool. 	
Developing and Using Models	Develop a simple model based on evidence to represent a proposed object or tool.	
Analyzing and Interpreting Data	Analyze data from tests of an object or tool to determine if it works as intended.	
FOUNDATION Crosscutting Concepts: Core Idea	FOUNDATION Crosscutting Concepts: Statement	
Structure and Function	The shape and stability of structures of natural and designed objects are related to their function(s).	
Social and Emotional Learning: Competencies	Social and Emotional Learning: Sub-Competencies	
<ul style="list-style-type: none"> ● Self-Awareness ● Self-Management ● Responsible Decision Making ● Social Awareness ● Relationship Skills ● Motivation 	<ul style="list-style-type: none"> ● Emotional Awareness ● Internal Regulation ● Behavior Control ● Goal Pursuance ● Appreciating Social and Environment Diversity ● Adaptive Behavior ● Communication ● Social Engagement ● Constructive Thinking ● Consequence Evaluation 	

	<ul style="list-style-type: none"> ● Respect for Self and Others ● Enthusiasm ● Initiative ● Resilience 	<ul style="list-style-type: none"> ● 8.1.2.DA.3: Identify and describe patterns in data visualizations. ● 8.1.2.DA.4: Make predictions based on data using charts or graphs. 	
Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i>		Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i>	
Formative Assessments: <ul style="list-style-type: none"> ● Participation in class discussions/debates ● Exit tickets ● Quizzes ● In-class assignments/activities ● Presentations ● Group assignments ● IXL results 		Benchmarks: <ul style="list-style-type: none"> ● Writing prompts ● Mid-Unit Assessments Summative Assessments: <ul style="list-style-type: none"> ● Unit test ● Unit project ● Lab activities 	
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
<ul style="list-style-type: none"> ● Science Studies Weekly - Kindergarten ● Teacher created reading guides and presentations 	<ul style="list-style-type: none"> ● Modified/leveled readings from Science Studies Weekly - Kindergarten ● Teacher created reading guides and presentations 	<ul style="list-style-type: none"> ● Translated and modified readings from Science Studies Weekly - Kindergarten ● Translated teacher created reading guides and presentations 	<ul style="list-style-type: none"> ● Science Studies Weekly - Kindergarten ● Teacher created reading guides and presentations
Supplemental Resources			
<ul style="list-style-type: none"> ● Chromebooks ● SmartBoard ● IXL ● Teacher Online Resources ● Science A-Z ● BrainPop ● Applicable educational videos 			
Differentiated Student Access to Content: Recommended Strategies & Techniques			
Core Resources	Alternate Core Resources	ELL Core Resources	Gifted & Talented Core

	<i>IEP/504/At-Risk/ESL</i>		
<ul style="list-style-type: none"> • Encourage creative expression and thinking by allowing students to choose how to approach a problem or assignment. • Jigsaws • Think-Pair-Share • Boost engagement with material by providing opportunities for differentiation, group work, and alternative assignments/assessments where appropriate • Provide feedback utilizing a growth mindset and praise what is done correctly based upon effort, attitude and strategy. 	<ul style="list-style-type: none"> • Provide graphic organizers for additional support or encourage students to create digital multimedia to showcase knowledge. • Use prompts and model directions • Provide opportunities to model talk during read alouds, and scaffold talk during whole class and small group discussions • Extended time for revisions or opportunity to identify and develop areas of personal interest 	<ul style="list-style-type: none"> • Utilize visual supports and graphic organizers • Use prompts and model directions • Provide opportunities to model talk during read alouds, and scaffold talk during whole class and small group discussions • Device used for translation purposes • Provide additional wait time for student responses to questions to allow students the ability to undergo the process of translation between languages, composition of response and attempted response. 	<ul style="list-style-type: none"> • Encourage students to explore concepts in depth and encourage independent studies or investigations. • Modeling or independent student-led research • Use of higher leveled text and/or writing assignments • Utilize differentiation in the areas of acceleration, enrichment, and grouping
NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Disciplinary Concept:		
	<i>Core Ideas:</i>	Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem.	
	<i>Performance Expectation/s:</i>	<ul style="list-style-type: none"> • 9.4.2.CT.1: Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem. • 9.4.2.CT.2: Identify possible approaches and resources to execute a plan. • 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). 	
	Career Readiness, Life Literacies, & Key Skills Practices		
	<ul style="list-style-type: none"> • Act as a responsible and contributing community members and employee. • Attend to financial well-being. • Consider the environmental, social and economic impacts of decisions. • Demonstrate creativity and innovation. • Utilize critical thinking to make sense of problems and persevere in solving them. • Model integrity, ethical leadership and effective management • Plan education and career paths aligned to personal goals. • Use technology to enhance productivity increase collaboration and communicate effectively. • Work productively in teams while using cultural/global competence. 		

Marking Period	Unit Title	Recommended Instructional Days
1-2	Forces and Interactions: Pushes and Pulls	6 weeks
NJSLs - Science: Title	NJSLs - Science: Performance Expectations	Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLs-S within Unit
Motion and Stability: Forces and Interactions	<ul style="list-style-type: none"> ● K-PS2-1: Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. ● K-PS2-2: Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull. 	<p>Essential Question/s:</p> <ol style="list-style-type: none"> 1. What do tools do? 2. What is motion? 3. What is speed? 4. What is direction? 5. How does a fidget spinner spin so fast? 6. What is a push? 7. What will happen if you push the domino? 8. What is a pull? 9. How will the camper move? 10. What holds toys together? <p>Activity Description:</p> <ul style="list-style-type: none"> ● Article analysis ● Vocabulary activities ● Video/photo analysis ● Discuss: Can you cut a string with a pencil? How important is it to have the right tool for a job? How do your ears help you? What can your eyes do? How do your hands help you? How do your feet help you? What can your nose do? ● Students will learn about structure and function and how the shape of a living thing or the parts of a designed object affect what they do. ● Write about some of the things your hands can do. ● Weekly Phenomenon: How does a fidget spinner spin so fast? ● Discuss: How does movement help you accomplish your daily tasks? How can knowing about forces and movement help you stay safe? ● Students will participate in a collaborative dance activity in order to explore the concept of movement as created by body forces. They will learn that forces cause movement and that the speed of an object is determined by the strength of a force.
Engineering Design	<ul style="list-style-type: none"> ● K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. ● K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. ● K-2-ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. 	
FOUNDATION Disciplinary: Core Idea	FOUNDATION Disciplinary: Statement	
PS2.A: Forces and Motion	<ul style="list-style-type: none"> ● Pushes and pulls can have different strengths and directions. ● Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. 	
PS2.B: Types of Interactions	When objects touch or collide, they push on one another and can change motion.	

PS3.C: Relationship Between Energy and Forces	A bigger push or pull makes things speed up or slow down more quickly. (secondary)	<ul style="list-style-type: none"> Students will explore how the shape of an object affects its movement by creating an object out of play clay and observing its movement. Students will participate in an experiment that demonstrates how friction is a force that slows objects down. Imagine that you are on the top of a hill and need to move quickly and safely to the bottom of the hill. Write about how you would get to the bottom of the hill. Weekly Phenomenon: What will happen if you push the domino? Discuss: Think about how you respond to things. Is there something that makes you feel happy? Is there something that makes you feel sad? Is there anything you do that might make someone feel sad? How can you treat others to help them be happy? Students will learn what a push is. They will learn about unbalanced and balanced pushes. They will experiment with the strength of different pushes. Write about how you use pushes to move things on the playground. Students will learn how a pull affects the motion of an object. They will experiment with different strengths of pulls. Discuss: What can you do if someone pushes or pulls you? Can you think of a time that you pulled someone to help them? What are some ways you can treat others with kindness? Writing: Have you ever pulled something? What did you pull and where did you pull it? Students will create a race track and explore using a toy car with a magnet attached to navigate their track. They will explore different pushes and pulls as they move their toy car. <p>Interdisciplinary Connections: Content: ;NJSL#:</p> <p>ELA/Literacy -</p> <ul style="list-style-type: none"> RI.K.1 - With prompting and support, ask and answer questions about key details in a text. SL.K.3 - Ask and answer questions in order to seek help, get information, or clarify something that is not understood. SL.K.5: Add drawings or other visual displays to descriptions as desired to provide additional detail. W.K.7 - Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). <p>Mathematics -</p>
ETS1.A: Defining and Delimiting Engineering Problems	<ul style="list-style-type: none"> A situation that people want to change or create can be approached as a problem to be solved through engineering. Asking questions, making observations, and gathering information are helpful in thinking about problems. Before beginning to design a solution, it is important to clearly understand the problem. 	
ETS1.B: Developing Possible Solutions	Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.	
ETS1.C: Optimizing the Design Solution	Because there is always more than one possible solution to a problem, it is useful to compare and test designs.	
FOUNDATION Science and Engineering Practices: Core Idea	FOUNDATION Science and Engineering Practices: Statement	
Planning and Carrying Out Investigations	With guidance, plan and conduct an investigation in collaboration with peers.	
Scientific Investigations Use a Variety of Methods	Scientists use different ways to study the world.	
Asking Questions and Defining Problems	<ul style="list-style-type: none"> Ask questions based on observations to find more information about the natural and/or designed world(s). Define a simple problem that can be solved through the development of a new or improved object or tool. 	
Developing and Using Models	Develop a simple model based on evidence to represent a proposed object or tool.	
Analyzing and Interpreting Data	Analyze data from tests of an object or tool to determine if it works as intended.	

FOUNDATION Crosscutting Concepts: <i>Core Idea</i>	FOUNDATION Crosscutting Concepts: <i>Statement</i>	<ul style="list-style-type: none"> ● MP.2 - Reason abstractly and quantitatively. ● K.MD.A.1 - Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. ● K.MD.A.2 - Directly compare two objects with a measurable attribute in common, to see which object has “more of”/”less of” the attribute, and describe the difference. ● <p>Technology -</p> <ul style="list-style-type: none"> ● 8.1.2.DA.3: Identify and describe patterns in data visualizations. ● 8.1.2.DA.4: Make predictions based on data using charts or graphs.
Cause and Effect	Simple tests can be designed to gather evidence to support or refute student ideas about causes.	
Structure and Function	The shape and stability of structures of natural and designed objects are related to their function(s).	
Social and Emotional Learning: <i>Competencies</i>	Social and Emotional Learning: <i>Sub-Competencies</i>	
<ul style="list-style-type: none"> ● Self-Awareness ● Self-Management ● Responsible Decision Making ● Social Awareness ● Relationship Skills ● Motivation 	<ul style="list-style-type: none"> ● Emotional Awareness ● Internal Regulation ● Behavior Control ● Goal Pursuance ● Appreciating Social and Environment Diversity ● Adaptive Behavior ● Communication ● Social Engagement ● Constructive Thinking ● Consequence Evaluation ● Respect for Self and Others ● Enthusiasm ● Initiative ● Resilience 	
Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i>		Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i>
Formative Assessments: <ul style="list-style-type: none"> ● Participation in class discussions/debates ● Exit tickets ● Quizzes ● In-class assignments/activities ● Presentations ● Group assignments ● IXL results 		Benchmarks: <ul style="list-style-type: none"> ● Writing prompts ● Mid-Unit Assessments Summative Assessments: <ul style="list-style-type: none"> ● Unit test ● Unit project ● Lab activities
Differentiated Student Access to Content:		

Teaching and Learning Resources/Materials			
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"> • Science Studies Weekly - Kindergarten • Teacher created reading guides and presentations 	<ul style="list-style-type: none"> • Modified/leveled readings from Science Studies Weekly - Kindergarten • Teacher created reading guides and presentations 	<ul style="list-style-type: none"> • Translated and modified readings from Science Studies Weekly - Kindergarten • Translated teacher created reading guides and presentations 	<ul style="list-style-type: none"> • Science Studies Weekly - Kindergarten • Teacher created reading guides and presentations
Supplemental Resources			
<ul style="list-style-type: none"> • Chromebooks • SmartBoard • IXL • Teacher Online Resources • Science A-Z • BrainPop • Applicable educational videos 			
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"> • Encourage creative expression and thinking by allowing students to choose how to approach a problem or assignment. • Jigsaws • Think-Pair-Share • Boost engagement with material by providing opportunities for differentiation, group work, and alternative assignments/assessments where appropriate • Provide feedback utilizing a growth mindset and praise what is done correctly based upon effort, attitude and strategy. 	<ul style="list-style-type: none"> • Provide graphic organizers for additional support or encourage students to create digital multimedia to showcase knowledge. • Use prompts and model directions • Provide opportunities to model talk during read alouds, and scaffold talk during whole class and small group discussions • Extended time for revisions or opportunity to identify and develop areas of personal interest 	<ul style="list-style-type: none"> • Utilize visual supports and graphic organizers • Use prompts and model directions • Provide opportunities to model talk during read alouds, and scaffold talk during whole class and small group discussions • Device used for translation purposes • Provide additional wait time for student responses to questions to allow students the ability to undergo the process of translation between languages, composition of response and attempted response. 	<ul style="list-style-type: none"> • Encourage students to explore concepts in depth and encourage independent studies or investigations. • Modeling or independent student-led research • Use of higher leveled text and/or writing assignments • Utilize differentiation in the areas of acceleration, enrichment, and grouping
	Disciplinary Concept:		

NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Core Ideas:	Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem.
	Performance Expectation/s:	<ul style="list-style-type: none"> ● 9.4.2.CT.1: Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem. ● 9.4.2.CT.2: Identify possible approaches and resources to execute a plan. ● 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
	Career Readiness, Life Literacies, & Key Skills Practices	
	<ul style="list-style-type: none"> ● Act as a responsible and contributing community members and employee. ● Attend to financial well-being. ● Consider the environmental, social and economic impacts of decisions. ● Demonstrate creativity and innovation. ● Utilize critical thinking to make sense of problems and persevere in solving them. ● Model integrity, ethical leadership and effective management ● Plan education and career paths aligned to personal goals. ● Use technology to enhance productivity increase collaboration and communicate effectively. ● Work productively in teams while using cultural/global competence. 	

Marking Period	Unit Title	Recommended Instructional Days
2-3	Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment	16 weeks
NJSLS - Science: Title	NJSLS - Science: Performance Expectations	Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-S within Unit
From Molecules to Organisms: Structures and Processes	<ul style="list-style-type: none"> ● K-LS1-1: Use observation to describe patterns of what plants and animals need to survive. 	Essential Question/s: <ol style="list-style-type: none"> 1. How big is this tree? 2. Gelatin can shake. Is it alive? 3. What happens when you touch a mimosa plant? 4. What does this animal need to live? 5. How are humans, plants, and animals alike? 6. Why is the bird stealing food? 7. What is cause and effect? What caused this? 8. Why is the tree not washing away? 9. Where did this nest come from?
Earth's Systems	<ul style="list-style-type: none"> ● K-ESS2-2: Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. 	
Earth and Human Activity	<ul style="list-style-type: none"> ● K-ESS3-1: Use a model to represent the relationship between the needs of 	

	<p>different plants or animals (including humans) and the places they live.</p> <ul style="list-style-type: none"> ● K-ESS3-3: Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. 	<p>10. Why are they cleaning the beach? 11. Where did the pond come from? 12. How are toys like real life? 13. Do animals and plants need each other? 14. Does a gorilla need the forest? 15. Why is food being grown this way?</p>
Engineering Design	<ul style="list-style-type: none"> ● K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. ● K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. ● K-2-ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. 	<p>Activity Description:</p> <ul style="list-style-type: none"> ● Article analysis ● Vocabulary activities ● Video/photo analysis ● Matching activities ● Discuss: How old are you? How tall are you? What size shoes do you wear? ● Students will learn that scientists and engineers measure in order to accurately describe the world. Students can learn how to measure using nonstandard units. ● Write about something that is about as tall as you are. How do you know that it is about the same size as you? ● Weekly Phenomenon: Gelatin can shake. Is it alive? ● Discuss: How can I show responsibility for the living things in my life? Change happens every day. How does change help me grow? ● Students will learn to differentiate between living and nonliving things and will use this knowledge to construct an argument around whether gelatin is alive or not. ● Writing: What are some living and nonliving things at your house? ● Weekly Phenomenon: What happens when you touch a mimosa plant? ● Students will learn about patterns of what plants need in order to survive. ● Discuss: What is your favorite kind of plant? What nutrients does your body need to help you keep growing? How can you help care for plants you see? ● Writing: Have you ever taken care of a plant? What did you do to help it grow? If you have never taken care of a plant before, what kind of plant would you like to grow? How would you help it? ● Weekly Phenomenon: What does a sea anemone need to live? ● Students will learn that animals are living things with needs that have to be fulfilled in order to survive. They will learn that animals have developed many ways to meet their needs.
FOUNDATION Disciplinary: Core Idea	FOUNDATION Disciplinary: Statement	
LS1.C: Organization for Matter and Energy Flow in Organisms	All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.	
ESS2.E: Biogeology	Plants and animals can change their environment.	
ESS3.A: Natural Resources	Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.	
ESS3.C: Human Impacts on Earth Systems	Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.	
ETS1.A: Defining and Delimiting Engineering Problems	<ul style="list-style-type: none"> ● A situation that people want to change or create can be approached as a 	

	<p>problem to be solved through engineering.</p> <ul style="list-style-type: none"> Asking questions, making observations, and gathering information are helpful in thinking about problems. Before beginning to design a solution, it is important to clearly understand the problem. 	<ul style="list-style-type: none"> Discuss: How do animals benefit you or your community? What can you learn from animals? How can you support what animals need? Write about your favorite animal. What does that animal need to be happy? Weekly Phenomenon: How are humans, plants, and animals alike? Discuss: How are you the same as other living things? How do your actions affect other living things? Why should we care about other living things? Students will learn that humans are living things and have needs that need to be fulfilled in order to survive. They will learn that humans have developed many ways to meet their needs. Make a list of the things that every kindergartener needs. Discuss: What is your favorite kind of animal? How can you treat animals with kindness? What can you do if you see someone being unkind to animals? What can you do to protect animal habitats? Writing: Have you ever seen an animal near your school? Write about what kind of animal you saw. If you have never seen an animal near the school, write about an animal you would expect to see near the school. Students will think about how the needs of animals and humans interact as they build something that will help a bird meet its needs. Discuss: What is the effect of kindness on others? When you share, what is the effect it has? What is something that causes you to smile? When you smile, what is the effect on others? Students will learn the difference between a cause and effect and how the two are connected. Imagine you find a flower growing on the playground. Write about a cause that would make a flower grow on the playground. Discuss: What do you like to do outside? What are some of your favorite plants to see? How do you feel when you spend time outside? What is the environment like where you live? What kinds of things do you see, hear, and smell? Students will learn about different ways that plants can change their environment. Draw a picture of a place where you have seen plants. Write about how the plants make you feel when you are there. Discuss: Why is it important to have different plants and animals? What would the Earth look like without bugs? Students will match changes in the environment to specific animals. Draw a picture of your favorite animal. What does that animal need to be happy?
ETS1.B: Developing Possible Solutions	Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.	
ETS1.C: Optimizing the Design Solution	Because there is always more than one possible solution to a problem, it is useful to compare and test designs.	
FOUNDATION Science and Engineering Practices: Core Idea	FOUNDATION Science and Engineering Practices: Statement	
Engaging in Argument from Evidence	Construct an argument with evidence to support a claim.	
Obtaining, Evaluating, and Communicating Information	Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas.	
Asking Questions and Defining Problems	<ul style="list-style-type: none"> Ask questions based on observations to find more information about the natural and/or designed world(s). Define a simple problem that can be solved through the development of a new or improved object or tool. 	
Developing and Using Models	<ul style="list-style-type: none"> Develop a simple model based on evidence to represent a proposed object or tool. Use a model to represent relationships in the natural world. 	
Analyzing and Interpreting Data	<ul style="list-style-type: none"> Analyze data from tests of an object or tool to determine if it works as intended. 	

	<ul style="list-style-type: none"> Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. 	<ul style="list-style-type: none"> Discuss: What does the environment at your house feel like? Is there anything you would change about your environment if you could? What can you do to improve the environment in your community? What can you do to improve the environment in your classroom? Students will learn that humans can change the environment to meet their needs. They will learn how science and engineering can help humans decide how to affect their environment. Write about a way you can help your environment. Discuss: How do you use water every day? Who helps you meet your needs? What buildings do you know that help meet your needs? Students will learn about how beavers meet their needs and will engineer a dam in order to mimic how beavers build structures to meet their needs. Draw and write about something in your house that was invented to meet your needs. Weekly Phenomenon: How are toys like real life? Discuss: What is your favorite animal? What is your favorite stuffed animal toy? What is the most unique stuffed animal you have seen? What did you like about it? How can you take good care of your stuffed animals? How can you take good care of a real animal? Students will learn that scientists and engineers use models. They will learn that models help scientists and engineers explain concepts. Make a chart that shows how you are connected to the important people in your life. Weekly Phenomenon: Do animals and plants need each other? Discuss: Who is a person you need in your life right now? Who is a person who helps you? How do you help your friends? How do you help your family? Who can you ask for help if you need it? What are your favorite kinds of plants? What are your favorite animals? Students will learn that a food chain is a type of model that shows how organisms are connected by the energy that they use. Draw a food chain to show how you are connected to plants and animals. Label the parts of the food chain. Weekly Phenomenon: Does a gorilla need the forest? Discuss: What are some things you need to survive? What can you do if you need help getting something you need? What are the things you have at your house that keep you safe and healthy? What do you do to take care of your body? Students will learn that animals and plants live in different habitats.
Scientific Knowledge is Based on Empirical Evidence	Scientists look for patterns and order when making observations about the world.	
FOUNDATION Crosscutting Concepts: <i>Core Idea</i>	FOUNDATION Crosscutting Concepts: <i>Statement</i>	
Patterns	Patterns in the natural and human designed world can be observed and used as evidence.	
Cause and Effect	Events have causes that generate observable patterns.	
Systems and System Models	Systems in the natural and designed world have parts that work together.	
Structure and Function	The shape and stability of structures of natural and designed objects are related to their function(s).	
Social and Emotional Learning: <i>Competencies</i>	Social and Emotional Learning: <i>Sub-Competencies</i>	
<ul style="list-style-type: none"> Self-Awareness Self-Management Responsible Decision Making Social Awareness Relationship Skills Motivation 	<ul style="list-style-type: none"> Emotional Awareness Internal Regulation Behavior Control Goal Pursuance Appreciating Social and Environment Diversity Adaptive Behavior Communication Social Engagement Constructive Thinking Consequence Evaluation Respect for Self and Others Enthusiasm Initiative Resilience 	

- Write about your favorite animal. Draw a picture of where the animal lives. Use your five senses to describe what the animal's habitat is like.
- Discuss: What are some things you do to help take care of your community? What can you do to help keep your home area clean and safe? What is something you can recycle? What is something you can reuse?
- Students will communicate ideas that can reduce the impact of humans on the environment.
- Draw and write about a choice you can make to help the environment where you live.

Interdisciplinary Connections: Content: ;NJSLS#:

ELA/Literacy -

- R.K.1 - With prompting and support, ask and answer questions about key details in a text.
- W.K.1 - Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book.
- W.K.2 - Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
- W.K.7 - Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).
- SL.K.3 - Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
- SL.K.5 - Add drawings or other visual displays to descriptions as desired to provide additional detail.
- RF.K.1.D: Recognize and name all upper- and lowercase letters of the alphabet.
- RF.K.3.C: Read common high-frequency words by sight (e.g., the, of, to, you, she, my, is, are, do, does).

Mathematics -

- MP.2 - Reason abstractly and quantitatively.
- MP.4 - Model with mathematics.
- K.CC - Counting and Cardinality

		<ul style="list-style-type: none"> ● K.MD.A.2 - Directly compare two objects with a measurable attribute in common, to see which object has “more of”/”less of” the attribute, and describe the difference. <p>Technology -</p> <ul style="list-style-type: none"> ● 8.1.2.DA.3: Identify and describe patterns in data visualizations. ● 8.1.2.DA.4: Make predictions based on data using charts or graphs. 	
Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i>		Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i>	
Formative Assessments: <ul style="list-style-type: none"> ● Participation in class discussions/debates ● Exit tickets ● Quizzes ● In-class assignments/activities ● Presentations ● Group assignments ● IXL results 		Benchmarks: <ul style="list-style-type: none"> ● Writing prompts ● Mid-Unit Assessments Summative Assessments: <ul style="list-style-type: none"> ● Unit test ● Unit project ● Lab activities 	
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
<ul style="list-style-type: none"> ● Science Studies Weekly - Kindergarten ● Teacher created reading guides and presentations 	<ul style="list-style-type: none"> ● Modified/leveled readings from Science Studies Weekly - Kindergarten ● Teacher created reading guides and presentations 	<ul style="list-style-type: none"> ● Translated and modified readings from Science Studies Weekly - Kindergarten ● Translated teacher created reading guides and presentations 	<ul style="list-style-type: none"> ● Science Studies Weekly - Kindergarten ● Teacher created reading guides and presentations
Supplemental Resources			
<ul style="list-style-type: none"> ● Chromebooks ● SmartBoard ● IXL ● Teacher Online Resources ● Science A-Z ● BrainPop ● Applicable educational videos 			
Differentiated Student Access to Content: Recommended Strategies & Techniques			

Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core
<ul style="list-style-type: none"> Encourage creative expression and thinking by allowing students to choose how to approach a problem or assignment. Jigsaws Think-Pair-Share Boost engagement with material by providing opportunities for differentiation, group work, and alternative assignments/assessments where appropriate Provide feedback utilizing a growth mindset and praise what is done correctly based upon effort, attitude and strategy. 	<ul style="list-style-type: none"> Provide graphic organizers for additional support or encourage students to create digital multimedia to showcase knowledge. Use prompts and model directions Provide opportunities to model talk during read alouds, and scaffold talk during whole class and small group discussions Extended time for revisions or opportunity to identify and develop areas of personal interest 	<ul style="list-style-type: none"> Utilize visual supports and graphic organizers Use prompts and model directions Provide opportunities to model talk during read alouds, and scaffold talk during whole class and small group discussions Device used for translation purposes Provide additional wait time for student responses to questions to allow students the ability to undergo the process of translation between languages, composition of response and attempted response. 	<ul style="list-style-type: none"> Encourage students to explore concepts in depth and encourage independent studies or investigations. Modeling or independent student-led research Use of higher leveled text and/or writing assignments Utilize differentiation in the areas of acceleration, enrichment, and grouping
NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Disciplinary Concept:		
	Core Ideas:	Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem.	
	Performance Expectation/s:	<ul style="list-style-type: none"> 9.4.2.CT.1: Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem. 9.4.2.CT.2: Identify possible approaches and resources to execute a plan. 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). 	
	Career Readiness, Life Literacies, & Key Skills Practices		
	<ul style="list-style-type: none"> Act as a responsible and contributing community members and employee. Attend to financial well-being. Consider the environmental, social and economic impacts of decisions. Demonstrate creativity and innovation. Utilize critical thinking to make sense of problems and persevere in solving them. Model integrity, ethical leadership and effective management Plan education and career paths aligned to personal goals. Use technology to enhance productivity increase collaboration and communicate effectively. Work productively in teams while using cultural/global competence. 		

Marking Period	Unit Title	Recommended Instructional Days
4	Weather and Climate	9 weeks
NJSLS - Science: <i>Title</i>	NJSLS - Science: <i>Performance Expectations</i>	Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-S within Unit
Energy	<ul style="list-style-type: none"> ● K-PS3-1: Make observations to determine the effect of sunlight of Earth's surface. ● K-PS3-2: Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on Earth's surface. 	<p>Essential Question/s:</p> <ol style="list-style-type: none"> 1. How do you know if it will rain? 2. What is a pattern? 3. Do things change when the sun comes up? 4. What happened to the grapes? 5. What happened to the ice cream? 6. How are clouds made? 7. What is weather? 8. How do people predict the weather? 9. What makes weather dangerous? 10. What is a hurricane? 11. What is a tornado? 12. What is a blizzard? 13. What can the wind move? <p>Activity Description:</p> <ul style="list-style-type: none"> ● Article analysis ● Vocabulary activities ● Video/photo analysis ● Matching activity ● Weekly Phenomenon: How do you know if it will rain? ● Discuss: Are there any patterns in your behavior that you think you should adjust or change? What are your favorite patterns in your day? What do you predict will happen if you treat others with kindness? What do you predict will happen if you treat others unkindly? ● Students will learn that patterns are phenomena that repeat and are predictable. ● Draw a picture of your daily pattern. Draw what you do every day in the morning, afternoon, and evening. Label your picture. ● Weekly Phenomenon: Do things change when the sun comes up? ● Discuss: What do you do when the sun goes down? What do you do when the sun comes up? How have you changed in the last year?
Earth's Systems	<ul style="list-style-type: none"> ● K-ESS2-1: Use and share observations of local weather conditions to describe patterns over time. 	
Earth and Human Activity	<ul style="list-style-type: none"> ● K-ESS3-2: Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. 	
Engineering Design	<ul style="list-style-type: none"> ● K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. ● K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. ● K-2-ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. 	
<p>FOUNDATION Disciplinary: <i>Core Idea</i></p>	<p>FOUNDATION Disciplinary: <i>Statement</i></p>	
PS3.B: Conservation of Energy and Energy Transfer	Sunlight warms Earth's surface.	

ESS3.B: Natural Hazards	Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.	<p>What changes do you need to make at night? What changes do you need to make in the morning?</p> <ul style="list-style-type: none"> • Students will investigate the effects of sunlight on Earth’s surface. • Write about a sunny day. What do you do on a sunny day? How do you feel on a sunny day? • Discuss: How do you protect yourself from the sun? Why do you want to protect yourself from the sun? If you spend a lot of time in the sun, how can you protect your physical well-being? What can you do if you feel hot and sweaty while playing outside? • Students will explore different ways that animals and people protect themselves from the sun. • Write about the ways you protect yourself from the sun when you play outside. • Discuss: What is your favorite flavor of ice cream? What can you do if you are hot and in the sun? How can you protect yourself from the heat of the sun? • Students will observe the effect of sunlight on Earth and will build a structure that will reduce the effect of sunlight. • Imagine you sold ice cream. Describe how you would sell it. Describe what kind of ice cream you would sell. • Weekly Phenomenon: How are clouds made? • Discuss: How can different types of weather affect the way I feel? Why do we need different types of weather? Who benefits from the changing weather? • Students will learn that weather is the condition of the atmosphere at a given time. They will learn about different types of weather, such as wind, snow, and rain, as well as how weather maps and weather symbols show the weather. • Fold a paper in half. On one side, write down what the weather is like today. On the other side, make a prediction of what the weather will be like tomorrow. • Weekly Phenomenon: How do people predict the weather? • Discuss: When you leave your house in the morning, what can you wear if you know it will be cold? How does knowing about the weather help you make decisions about your day? What could be a problem if you didn’t know about the weather until you went outside? • Students will learn that weather patterns occur when the weather stays the same for a period of time or occurs in a predictable manner. Students will learn about daily, monthly, and seasonal weather patterns.
ESS2.D: Weather and Climate	Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.	
ETS1.A: Defining and Delimiting Engineering Problems	<ul style="list-style-type: none"> • A situation that people want to change or create can be approached as a problem to be solved through engineering. • Asking questions, making observations, and gathering information are helpful in thinking about problems. • Before beginning to design a solution, it is important to clearly understand the problem. 	
ETS1.B: Developing Possible Solutions	Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people.	
ETS1.C: Optimizing the Design Solution	Because there is always more than one possible solution to a problem, it is useful to compare and test designs.	
FOUNDATION Science and Engineering Practices: Core Idea	FOUNDATION Science and Engineering Practices: Statement	
Planning and Carrying Out Investigations	Make observations (firsthand or from media) to collect data that can be used to make comparisons.	
Constructing Explanations and Designing Solutions	Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem.	

Scientific Investigations Use a Variety of Methods	Scientists use different ways to study the world.	<ul style="list-style-type: none"> • Which season is your favorite? Draw a picture of your favorite season and write about why it is your favorite. • Weekly Phenomenon: What makes weather dangerous? • Discuss: How do you feel when it is stormy outside? How can you help your neighbors after a severe storm? What can you do now to prepare for severe weather in your area? • Write a safety plan to show how your family can be safe during severe weather. • Weekly Phenomenon: What can the wind move? • Discuss: How does knowing the weather help you take care of your body and physical well-being? How do you dress for different kinds of weather? Why do people have drills like “fire drills” and “earthquake drills”? • Students will engineer a device that can measure wind speed, wind direction, or both. • Draw a picture of a plan for a weather tool. Write about how your tool will measure the wind. <p>Interdisciplinary Connections: Content: ;NJSLS#:</p> <p>ELA/Literacy -</p> <ul style="list-style-type: none"> • RI.K.1 - With prompting and support, ask and answer questions about key details in a text. • SL.K.3 - Ask and answer questions in order to seek help, get information, or clarify something that is not understood. • W.K.7 - Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). <p>Mathematics -</p> <ul style="list-style-type: none"> • MP.2 -Reason abstractly and quantitatively. • MP.4 - Model with mathematics. • K.CC.A- Know number names and the count sequence. • K.MD.A.1 - Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. • K.MD.A.2 - Directly compare two objects with a measurable attribute in common, to see which object has “more of”/”less of” the attribute, and describe the difference. • K.MD.B.3 - Classify objects into given categories; count the number of objects in each category and sort the categories by count.
Asking Questions and Defining Problems	<ul style="list-style-type: none"> • Ask questions based on observations to find more information about the natural and/or designed world(s). • Define a simple problem that can be solved through the development of a new or improved object or tool. 	
Developing and Using Models	Develop a simple model based on evidence to represent a proposed object or tool.	
Analyzing and Interpreting Data	<ul style="list-style-type: none"> • Analyze data from tests of an object or tool to determine if it works as intended. • Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. 	
Science Knowledge is Based on Empirical Evidence	Scientists look for patterns and order when making observations about the world.	
Obtaining, Evaluating, and Communicating Information	Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.	
FOUNDATION Crosscutting Concepts: Core Idea	FOUNDATION Crosscutting Concepts: Statement	
Patterns	Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.	
Cause and Effect	Events have causes that generate observable patterns.	
Structure and Function	The shape and stability of structures of natural and designed objects are related to their function(s).	
Interdependence of Science, Engineering, and Technology	People encounter questions about the natural world every day.	
Influence of Engineering, Technology, and Science on Society and the Natural World	People depend on various technologies in their lives; human life would be very different without technology.	

<p>Social and Emotional Learning: <i>Competencies</i></p>	<p>Social and Emotional Learning: <i>Sub-Competencies</i></p>	<p>Technology -</p> <ul style="list-style-type: none"> 8.1.2.DA.3: Identify and describe patterns in data visualizations. 8.1.2.DA.4: Make predictions based on data using charts or graphs. 	
<ul style="list-style-type: none"> Self-Awareness Self-Management Responsible Decision Making Social Awareness Relationship Skills Motivation 	<ul style="list-style-type: none"> Emotional Awareness Internal Regulation Behavior Control Goal Pursuance Appreciating Social and Environment Diversity Adaptive Behavior Communication Social Engagement Constructive Thinking Consequence Evaluation Respect for Self and Others Enthusiasm Initiative Resilience 		
<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>Formative Assessments:</p> <ul style="list-style-type: none"> Participation in class discussions/debates Exit tickets Quizzes In-class assignments/activities Presentations Group assignments IXL results 		<p>Benchmarks:</p> <ul style="list-style-type: none"> Writing prompts Mid-Unit Assessments <p>Summative Assessments:</p> <ul style="list-style-type: none"> Unit test Unit project Lab activities 	
<p>Differentiated Student Access to Content: Teaching and Learning Resources/Materials</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"> Science Studies Weekly - Kindergarten Teacher created reading guides and presentations 	<ul style="list-style-type: none"> Modified/leveled readings from Science Studies Weekly - Kindergarten Teacher created reading guides and presentations 	<ul style="list-style-type: none"> Translated and modified readings from Science Studies Weekly - Kindergarten Translated teacher created reading guides and presentations 	<ul style="list-style-type: none"> Science Studies Weekly - Kindergarten Teacher created reading guides and presentations

Supplemental Resources			
<ul style="list-style-type: none"> ● Chromebooks ● SmartBoard ● IXL ● Teacher Online Resources ● Science A-Z ● BrainPop ● Applicable educational videos 			
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"> ● Encourage creative expression and thinking by allowing students to choose how to approach a problem or assignment. ● Jigsaws ● Think-Pair-Share ● Boost engagement with material by providing opportunities for differentiation, group work, and alternative assignments/assessments where appropriate ● Provide feedback utilizing a growth mindset and praise what is done correctly based upon effort, attitude and strategy. 	<ul style="list-style-type: none"> ● Provide graphic organizers for additional support or encourage students to create digital multimedia to showcase knowledge. ● Use prompts and model directions ● Provide opportunities to model talk during read alouds, and scaffold talk during whole class and small group discussions ● Extended time for revisions or opportunity to identify and develop areas of personal interest 	<ul style="list-style-type: none"> ● Utilize visual supports and graphic organizers ● Use prompts and model directions during read alouds, and scaffold talk during whole class and small group discussions ● Device used for translation purposes ● Provide additional wait time for student responses to questions to allow students the ability to undergo the process of translation between languages, composition of response and attempted response. 	<ul style="list-style-type: none"> ● Encourage students to explore concepts in depth and encourage independent studies or investigations. ● Modeling or independent student-led research ● Use of higher leveled text and/or writing assignments ● Utilize differentiation in the areas of acceleration, enrichment, and grouping
NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Disciplinary Concept:		
	Core Ideas:	Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem.	
	Performance Expectation/s:	<ul style="list-style-type: none"> ● 9.4.2.CT.1: Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem. ● 9.4.2.CT.2: Identify possible approaches and resources to execute a plan. ● 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). 	
	Career Readiness, Life Literacies, & Key Skills Practices		

	<ul style="list-style-type: none"> ● Act as a responsible and contributing community members and employee. ● Attend to financial well-being. ● Consider the environmental, social and economic impacts of decisions. ● Demonstrate creativity and innovation. ● Utilize critical thinking to make sense of problems and persevere in solving them. ● Model integrity, ethical leadership and effective management ● Plan education and career paths aligned to personal goals. ● Use technology to enhance productivity increase collaboration and communicate effectively. ● Work productively in teams while using cultural/global competence.
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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>