

**FAIRFIELD TOWNSHIP SCHOOL
Science Curriculum Guide Grade 3**

Key:

Climate

Equity and Inclusion

SEL

Holocaust

Amistad

Career Readiness, Life Literacies, and Key Skills

Subject: Science	Grade Level: 3
Unit 1: Motion and Forces; Electricity and Magnetism	Pacing: 8 Weeks
Essential Questions	Enduring Understandings
<p>How fast can objects move?</p> <p>How can you describe the motion of an object?</p> <p>What makes an object move?</p> <p>How can patterns help you predict a motion?</p> <p>How do balanced and unbalanced forces</p>	<ul style="list-style-type: none"> ● Forces and Motion Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object’s speed or direction of motion. (3-PS2-1) ● The patterns of an object’s motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it. (3-PS2-2) ● Types of Interactions Objects in contact exert forces on each other. (3-PS2-1)

<p>affect an object's motion?</p> <p>What kind of factors affect electric force?</p> <p>What are the causes and effects of electric forces between objects?</p> <p>What factors affect magnetic forces between objects?</p>	<ul style="list-style-type: none"> • Electric and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, on their orientation relative to each other. (3-PS2-3), (3-PS2-4)
<p>NJSL Standards</p>	<p>Classroom Applications</p>
<p>3-PS2-1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</p> <p>3-PS2-2 Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.</p>	<p>Science Quest: Students will learn about how objects move. In the classroom, students will study this through lessons and activities that include:</p> <p>Dropping paper from different heights and recording the data</p> <p>The motion and speeds of trains</p> <p>The motion and speeds of balls</p> <p>Speed and changes of position of humans and objects</p> <p>Using patterns to predict future motion of objects such as playground equipment and toys such as balls and pinball machines</p> <p>Identifying forces - contact, tension, spring, friction- and their effect on objects</p> <p>Describing noncontact forces - gravity, magnetism, electricity - and their effect on objects</p>

3-PS2-3 Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.

3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.

Explaining how balanced and unbalanced forces affect an object's motion

Vocabulary:

position, direction, motion, distance, speed, predict, force, contact forces, tension force, spring force, friction, noncontact forces, gravity, exert, balanced forces, net force, electric charge, neutral, repel, attract, electric force, conductor, insulator, static discharge, natural magnet, permanent magnet, electromagnet, magnetic pole, magnetic field

Teaching Strategies/Materials:

Elevate Science text/workbook

Lesson Structure: Anticipatory Set, Mini-Lesson, Whole Group, Small Group, Independent Work, Closure

Strategies: Think-Pair-Share, Read Aloud, Jigsaw, Investigations, Guided Explorations, Projects

Materials: Mentor Texts, DVDs, Internet, Technology (Smart Board, student computers/laptops, PowerPoint, Websites, etc.), supplemental books, visual aids, manipulatives, supplemental materials for investigations

Differentiation Strategies/Modifications

SWD/ Students at risk of failure: 1:1 teacher redirect / re-teach, peer helper, visual aids, modified tests/quizzes, modified homework

Gifted/Enrichment: computer-based research, high level task, class presentation

Connections to other content areas, including Career Readiness, Life Literacies, and Key Skills :

Connections to NJSL - English Language Arts

- RI.3.1 Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-PS2-1), (3-PS2-3)
- RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-PS2-3)
- RI.3.8 Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence) to support specific points the author makes in a text. (3-PS2-3)
- W.3.7 Conduct short research projects that build knowledge about a topic. (3-PS2-1), (3-PS2-2)
- W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-PS2-1), (3-PS2-2)
- SL.3.3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. (3-PS2-3)

Connections to NJSL - Mathematics

- MP.2 Reason abstractly and quantitatively. (3-PS2-1)
- MP.5 Use appropriate tools strategically. (3-PS2-1)
- 3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (3-PS2-1)

Career Readiness, Life Literacies, and Key Skills –

9.4.2.CI.1: Demonstrate openness to new ideas and perspectives.

9.4.2.CI.2: Demonstrate originality and inventiveness in work.

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).

Unit Resources:

Savvas Elevate Science for 3rd Grade, Topic 1 :Motion and Forces p.1-49
Topic 2: Electricity and Magnetism p.50-83

STEM Quest PBL

Websites:

<https://www.fs.usda.gov/ccrc/index.php/>

<http://strandmaps.nsdl.org/?id=SMS-MAP-1332>

Science Refreshers

<http://nsdl.org/refreshers/science/>

Science Kids <http://www.sciencekids.co.nz/gamesactivities/gases.html>

<http://archive.fossweb.com/modulesK-2/SolidsandLiquids/activities/changeit.swf>

http://coolsciencelab.com/ice_cream.htm

Unit Assessment Opportunities:

- Journal Entries and Response Sheets
- Observations, Questioning, and discussions
- Comprehension Checks in literature
- Class Webs
- Presentations
- Collaboration
- Projects
- Rubrics (<http://www.nextgenscience.org/resources>)
- Unit Test
- Lesson Check
- Lesson Quiz
- Performance Expectations Activities
- Topic Tests

FAIRFIELD TOWNSHIP SCHOOL
Science Curriculum Guide Grade 3 Unit 2

Subject: Science	Grade Level: 3
Unit 2: Weather and Climate	Pacing: 8 weeks
Essential Questions	Enduring Understandings
<p>What are ways to reduce the impacts of hazardous weather?</p> <p>How can temperatures damage a house?</p> <p>How does the amount of water change over time?</p> <p>How does precipitation form?</p> <p>What are 3 weather factors that scientists measure?</p> <p>How can I stay safe in severe weather?</p> <p>What can barometric pressure tell you?</p>	<ul style="list-style-type: none"> ● Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (3-ESS2-1) ● Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS2-2) ● A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. (3-ESS3-1) ● Research on a problem, such as climate change, should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. (3-5-ETS1-2)

<p>What factors affect climate?</p> <p>In what ways can climate change and how is the global climate changing?</p>	
<p>NJSL Standards</p>	<p>Classroom Applications</p>
<ul style="list-style-type: none"> • 3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. • 3-ESS2-2 Obtain and combine information to describe climates in different regions of the world. • 3-ESS3-1 Make a claim about the merit of a design solution that reduces the impacts of climate change and/or a weather-related hazard. 	<p>Science Classroom Activities/Quests:</p> <p>Students will explore how water can damage a roof</p> <p>Students will find out how weather in different seasons can affect a roof and will find and construct ways to protect a roof</p> <p>Students will build a barometer and use it to measure and record changes in the weather</p> <p>Students will study tree rings to learn about the climate of an area</p> <p>Students will demonstrate how the greenhouse effect works</p> <p>Climate change activity:</p> <p>https://mysteryscience.com/lessons?query=climate</p>

- 3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- 3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem
- 3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Climate change lessons:

<https://www.brainpop.com/science/weather/climatechange/>

Holocaust

Amistad

African American & Differently abled/LGBTQ Scientists:

<https://www.brainpop.com/search/?keyword=scientists>

10 famous scientists with disabilities

- Thomas Edison. Born in 1847, Thomas Edison lost much of his hearing by his early twenties. ...
- Temple Grandin. ...
- Ralph Braun. ...
- Sang-Mook Lee. ...
- Stephen Hawking. ...
- Geerat Vermeij. ...
- Farida Bedwei. ...
- Richard Mankin.

<https://royalsociety.org/topics-policy/diversity-in-science/scientists-with-disabilities/>

<https://www.discovery.com/science/LGBT-Scientists-Who-Changed-World>

PRIDE Day STEM Activity:

<https://prideinstem.org/lgbtstemday/>

Vocabulary: atmosphere, weather, humidity, evaporate, condense, precipitation, temperature, barometric pressure, storm, flood, hurricane, tornado, drought, climate,

polar, temperate, tropical, equator, latitude, elevation, greenhouse effect, greenhouse gas, climate change, arid,

Teaching Strategies/Materials:

Lesson Structure: Anticipatory Set, Mini-Lesson, Whole Group, Small Group, Independent Work, Closure

Strategies: Think-Pair-Share, Read Aloud, Jigsaw, Investigations, Guided Explorations, Projects

Materials: Mentor Texts, DVDs, Internet, Technology (Smart Board, student computers/laptops, PowerPoint, Websites, etc.), supplemental books, visual aids, manipulatives, supplemental materials for investigations

Differentiation Strategies/Modifications

SWD/ Students at risk of failure: 1:1 teacher redirect / re-teach, peer helper, visual aids, modified tests/quizzes, modified homework

Gifted/Enrichment: computer-based research, high level task, class presentation

Connections to other content areas, including Career Readiness, Life Literacies, and Key Skills.

Connections to NJSLS - English Language Arts

- RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS2-1)
- RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-ESS2-2)

- RI.3.9 Compare and contrast the most important points and key details presented in two texts on the same topic. (3-ESS2-2)
- W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-ESS2-2)
- RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (3-5-ETS1-2)
- RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (3-5-ETS1-2)
- RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (3-5-ETS1-2)
- W.5.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (3-5-ETS1-1), (3-5-ETS1-3)
- W.5.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work and provide a list of sources. (3-5-ETS1-1), (3-5-ETS1-3)
- W.5.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. (3-5-ETS1-1), (3-5-ETS1-3)

Connections to NJSLs - Mathematics

- MP.2 Reason abstractly and quantitatively. (3-ESS2-1), (3-ESS2-2)
- MP.4 Model with mathematics. (3-ESS2-1), (3-ESS2-2)
- MP.5 Use appropriate tools strategically. (3-ESS2-1)
- 3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (3-ESS2-1)
- 3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in bar graphs. (3-ESS2-1)

Career Readiness, Life Literacies, and Key Skills –

9.4.2.CI.1: Demonstrate openness to new ideas and perspectives.

9.4.2.CI.2: Demonstrate originality and inventiveness in work.

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).

Unit Resources:

Savvas Elevate Science for 3rd Grade Topic 3: Weather p. 84-125

Savvas Elevate Science for 3rd Grade Topic 4: Climate P.126-167

Hands-on & Virtual Labs

STEM Quest PBL

List of books to be used:

*See media center for additional resources

Websites:

<https://www.fs.usda.gov/ccrc/index.php/>

Education.com

Easyscienceforkids.org

Kidsgrowingstrong.org/Plant Needs

Ducksters.com/science/photosynthesis.php

Animalatlas.tv

Unit Assessment Opportunities:

- Journal Entries and Response Sheets
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- Comprehension Checks in literature
- Class Webs
- Presentations

- Collaboration
- Projects
- Rubrics (<http://www.nextgenscience.org/resources>)
- Unit Test
- Lesson Check
- Lesson Quiz
- Performance Expectations Activities
- Topic Tests

FAIRFIELD TOWNSHIP SCHOOL
Science Curriculum Guide Grade 3 Unit 3

Subject: Science	Grade Level: 3
Unit 3: Life cycles and traits;	Pacing: 8 weeks

Adaptations and Survival	
Essential Questions	Enduring Understandings
How do traits of living things vary?	Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1)
How can organisms be grouped?	Many characteristics of organisms are inherited from their parents. (3-LS3-1)
How do all life cycles follow the same pattern?	Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. (3-LS3-2)
How are life cycles similar and different?	Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1)
How do offspring compare to their parents?	The environment also affects the traits that an organism develops. (3-LS3-2)
How can the environment affect an organism?	Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size (3-LS2-1)
What happens to living things when their environments change?	Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. (3-LS4-2)
How do living things adapt to survive?	For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)
What types of animals form groups to help them survive?	Populations live in a variety of habitats and change in those habitats affects the organisms living there. (3-LS4-4)

<p>How do animals respond to seasonal changes?</p>	
<p>NJSL Standards</p>	<p>Classroom Applications</p>
<p>• 3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.</p> <p>3-LS3-1 Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms</p> <p>• 3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment.</p>	<p>Science activities and quests:</p> <p>Students will make a model of a life cycle</p> <p>Students will compare animal family footprints to find inherited similarities and differences</p> <p>Students will describe ways they would change the traits of a fruit or vegetable to improve it</p> <p>Students will study the career of an Ecologist</p> <p>Students will study various birds beaks to relate it to the food they eat</p> <p>Students will develop/engineer a habitat for a frog</p> <p>Students will simulate birds flying solo vs in a group</p> <p>Students will create a simulation of how rising sea waters may impact a habitat</p> <p>Students will compare traits of an animal and how those traits could help/hurt their survival in various conditions</p> <p>Vocabulary: organism, reproduce, trait, inherit, variation, influence, adaptation, migrate, advantage, hibernate, dormant, impact</p>

• 3-LS2-1 Construct an argument that some animals form groups that help members survive.

• 3-LS4-2 Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

• 3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types

Teaching Strategies/Materials:

Lesson Structure: Anticipatory Set, Mini-Lesson, Whole Group, Small Group, Independent Work, Closure

Strategies: Think-Pair-Share, Read Aloud, Jigsaw, Investigations, Guided Explorations, Projects

Materials: Mentor Texts, DVDs, Internet, Technology (Smart Board, student computers/laptops, PowerPoint, Websites, etc.), supplemental books, visual aids, manipulatives, supplemental materials for investigations

Differentiation Strategies/Modifications

SWD/ Students at risk of failure: 1:1 teacher redirect / re-teach, peer helper, visual aids, modified tests/quizzes, modified homework

Gifted/Enrichment: computer-based research, high level task, class presentation

of plants and animals that live there may change.

Connections to other content areas, including Career Readiness, Life Literacies, and Key Skills.

Connections to NJSLS - English Language Arts

- RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). (3-LS1-1)
- SL.3.5 Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.(3-LS1-1)
- RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS3-1), (3-LS3-2)
- RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS3-1), (3-LS3-2)
- W.3.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS3-1), (3-LS3-2)
- SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace. (3-LS3-1), (3-LS3-2)
- *RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS2-1)
- W.3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-LS2-1)

Connections to NJSLS - Mathematics

- 3.NBT Number and Operations in Base Ten (3-LS1-1)
- 3.NF Number and Operations—Fractions (3-LS1-1)
- MP.2 Reason abstractly and quantitatively. (3-LS3-1), (3-LS3-2)
- MP.4 Model with mathematics. (3-LS3-1), (3-LS3-2)
- 3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. (3-LS4-2), (3-LS4-3)

• 3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3-LS3-1), (3-LS3-2)

Readiness, Life Literacies, and Key Skills –

9.4.2.CI.1: Demonstrate openness to new ideas and perspectives.

9.4.2.CI.2: Demonstrate originality and inventiveness in work.

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).

Unit Resources:

Savvas Elevate Science for 3rd Grade, Topic 5: Life Cycles and Traits p.168-209

Savvas Elevate Science for 3rd Grade, Topic 6: Adaptations and Survival p. 210-251

Hands-on & Virtual Labs

STEM Quest PBL

List of books to be used:

Websites:

<https://www.fs.usda.gov/ccrc/index.php/>

<http://strandmaps.nsdl.org/?id=SMS-MAP-1332>

Science Refreshers

<http://nsdl.org/refreshers/science/>

<http://www.sciencekids.co.nz/earth.html>

<http://science.nationalgeographic.com/science/earth/>

SEL -

<https://www.brainpop.com/social-emotional-learning/>

SEL Biographies: <https://www.brainpop.com/social-emotional-learning/>

Unit Assessment Opportunities:

- Journal Entries and Response Sheets
- Observations, Questioning, and Discussions
- Comprehension Checks in Literature
- Class Webs
- Presentations
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- Lesson Quiz
- Performance Expectations Activities
- Topic Tests

FAIRFIELD TOWNSHIP SCHOOL
Science Curriculum Guide Grade 3 Unit 4

Subject: Science

Grade Level: 3

Unit 4: Fossil Evidence	Pacing: 8 weeks
Essential Questions	Enduring Understandings
<ul style="list-style-type: none"> • How have living things and environments changed? • What can a fossil tell you? • What is a fossil? • How do fossils form? • What can fossil footprints tell you about an animal? • When did animals appear on earth? • How have some living things responded to climate change? 	<p>Some kinds of plants and animals that once lived on Earth are no longer found anywhere. (3-LS4-1)</p> <p>Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments. (3-LS4-1)</p> <p>For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)</p>
NJSL Standards	Classroom Applications
3-LS4-1 Analyze and interpret data from fossils to provide	<p>Students will work with a partner to describe and compare fossils</p> <p>Students will model how minerals affect bones</p>

evidence of the organisms and the environments in which they lived long ago.

• 3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

Students will learn how to use rulers to measure and analyze fossils

Students will study the career of a paleontologist

Vocabulary: Fossil, extinct, evidence, argue

Teaching Strategies/Materials:

Lesson Structure: Anticipatory Set, Mini-Lesson, Whole Group, Small Group, Independent Work, Closure

Strategies: Think-Pair-Share, Read Aloud, Jigsaw, Investigations, Guided Explorations, Projects

Materials: Mentor Texts, DVDs, Internet, Technology (Smart Board, student computers/laptops, PowerPoint, Websites, etc.), supplemental books, visual aids, manipulatives, supplemental materials for investigations

Differentiation Strategies/Modifications

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Gifted/Enrichment: computer-based research, high level task, class presentation

Connections to other content areas, including Career Readiness, Life Literacies, and Key Skills:

Connections to NJSL - English Language Arts

• RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS4-1), (3-LS4-2), (3-LS4-3), (3-LS4-4)

- RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS4-1), (3-LS4-2), (3-LS4-3), (3-LS4-4)
- RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS4-1), (3-LS4-2), (3-LS4-3), (3-LS4-4)
- W.3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-LS4-1), (3-LS4-3), (3-LS4-4)
- W.3.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS4-1), (3-LS4-2), (3-LS4-3), (3-LS4-4)
- W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-LS4-1)
- SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace. (3-LS4-2), (3-LS4-3), (3-LS4-4)

Connections to NJSL - Mathematics

- MP.2 Reason abstractly and quantitatively. (3-LS4-1), (3-LS4-2), (3-LS4-3), (3-LS4-4)
- MP.4 Model with mathematics. (3-LS4-1), (3-LS4-2), (3-LS4-3), (3-LS4-4)
- MP.5 Use appropriate tools strategically. (3-LS4-1)
- 3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. (3-LS4-2), (3-LS4-3)
- 3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3-LS4-1)

Readiness, Life Literacies, and Key Skills –

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9.4.2.CT.3- Use a variety of types of thinking to solve problems (e.g. inductive, deductive).

Unit Resources:

Savvas Elevate Science for 3rd Grade, Topic 7: Fossil Evidence p.252-293

Hands-on & Virtual Labs
STEM Quest PBL

List of Books to be read:

Websites:

<https://www.fs.usda.gov/ccrc/index.php/>

Education.com

Easyscienceforkids.org

Kidsgrowingstrong.org/Plant Needs

Ducksters.com/science/photosynthesis.php

Animalatlas.tv

Unit Assessment Opportunities:

- Journal Entries and Response Sheets
- Observations, Questioning, and discussions
- Comprehension Checks in literature
- Class Webs
- Presentations
- Collaboration
- Projects
- Rubrics (<http://www.nextgenscience.org/resources>)
- Unit Test
- Lesson Check
- Lesson Quiz
- Performance Expectations Activities
- Topic Tests

Technology

8.1.5.A.1 to 3 - Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.

- Understand and use technology systems.
- Select and use applications effectively and productively.

8.1.5.D.1 to 4 - Digital Citizenship : Students understand human, cultural, societal issues related to technology and practice legal and ethical behaviors

- Advocate and practice safe, legal, and responsible use of information and technology.
- Demonstrate personal responsibility for lifelong learning.
- Exhibit leadership for digital citizenship.

8.1.5.E.1 - Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.

- Plan strategies to guide inquiry.
- Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.