

Englewood Public School District

Science

Grade 3

Third Marking Period

Unit 4: Traits

Overview: In this unit of study, students acquire an understanding that organisms have different inherited traits and that the environment can also affect the traits that an organism develops. The crosscutting concepts of *patterns* and *cause and effect* are called out as organizing concepts for these disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in *analyzing and interpreting data*, *constructing explanations*, and *designing solutions*. Students are also expected to use these practices to demonstrate understanding of the core ideas. This unit is based on 3-LS3-1 and 3-LS3-2.

Time Frame: 15 to 20 days

Enduring Understandings:

Many characteristics of organisms are inherited from their parents.

Different organisms vary in how they look and function because they have different inherited information.

Many characteristics involve both inheritance and environment.

Essential Questions:

What kinds of traits are passed on from parent to offspring?

What environmental factors might influence the traits of a specific organism?

Standards	Topics and Objectives	Activities	Resources	Assessments
(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.	Topics Traits Twenty-First Century Themes and Skills include: Environmental Literacy <ul style="list-style-type: none"> The Four C's Environmental Literacy 	<u>She Sorts Sea Shells by the Seashore:</u> Students work in pairs or small groups to classify seashells into groups. Students must provide clarification on why they were placed in each group. (RI.3.3, SL.3.4, MP.5, 1.MD.C.1, CRP8, 9.2.4.A.1)	<u>She Sorts Sea Shells by the Seashore:</u> <ul style="list-style-type: none"> <u>Web Graphic Organizer</u> <u>Student Sample T-Chart</u> <u>Power Point for Exploration</u> <u>Student Worksheet 1</u> <u>Student Worksheet 2</u> 	Formative Assessment: <u>She Sorts Seashells by the Seashore:</u> Student Worksheets <u>What Made the Giraffe Decide to be Tall?</u> Student Drawings and Explanations
(3-LS3-2): Use evidence to support the explanation that traits can be influenced by the	Objectives	<u>What Made the Giraffe Decide to be Tall?</u>	<u>What Made the Giraffe Decide to be Tall?</u> <ul style="list-style-type: none"> <u>Giraffe Organizer</u> 	Benchmark Assessment: Exact Path

environment.	<p><u>She Sorts Sea Shells by the Seashore:</u></p> <p>Students will classify seashells by observing similarities and differences in patterns.</p> <p><u>What Made the Giraffe Decide to be Tall?</u></p> <p>Students will explain that any given physical or behavioral characteristic has advantages and disadvantages.</p> <p><u>Nest Building Think Like a Bird:</u></p> <p>Students will demonstrate understanding of environmental influence on an animals' survival.</p> <p><u>Mammals and Their Parents, Perfect Together:</u></p> <p>Students will identify and interpret traits that are found in mammals by noticing differences among animals of the same species. Make a claim that traits are inherited from parents that is supported by evidence.</p>	<p>Students brainstorm reasons why they think a giraffe has a long neck. With partners, students review different informational articles on giraffes and record data on their note sheet. Students then view a short video about giraffes and record this information as well. Students then create a labeled drawing of a giraffe. The students will focus on what adaptations allow a giraffe to survive, environmental conditions, and living in a group. (8.2.2.C.1, CRP4,W.3.2)</p> <p><u>Nest Building Think Like a Bird:</u></p> <p>Student will work cooperatively to plan, design, and construct a bird nest that can fit in the branch provided and meet stated criterion. Egg will stay in the nest even when the branch is shaken, simulating wind in a tree. (CRP6, MP.2, MP.4, RI.3.1)</p> <p><u>Mammals and Their Parents, Perfect Together:</u></p> <p>Students work in groups to make observations about squirrels, whales and giraffes using have – can – are formats. Students will then brainstorm even though all mammals, they have specific traits. Students then write a statement explaining how animals inherit traits from</p>	<ul style="list-style-type: none"> • <u>Reading Passage</u> • <u>Additional Reading Passage</u> • <u>Giraffe Facts</u> <p><u>Additional Resources:</u></p> <ul style="list-style-type: none"> • <u>National Geographic Backyard Birding website</u> • <u>Does a Giraffe Ever Feel Small?</u> • <u>There's a Giraffe in My Soup</u> • <u>Seashells By The Seashore</u> • <u>http://gws.ala.org/category/animals</u> <p><u>Nest Building Think Like a Bird:</u></p> <p><u>Day 1:</u></p> <p>Preview activities/Explanation</p> <ul style="list-style-type: none"> • Images of nests • Videos of birds building nests https://www.youtube.com/watch?v=IneBlxZn6sg • <u>Book: The Best Nest</u>, P.D. Eastman • <u>https://www.lessonplanet.com/search?keywords=best+nest</u> • <u>https://www.rif.org/literacy-central/book/best-nest</u> <p><u>Day 2:</u></p> <p>Building materials in a</p>	<p><u>Summative Assessments:</u></p> <p><u>Nest Building Think Like a Bird:</u></p> <p>Completed nests</p> <p><u>Mammals and their Parents, Perfect Together:</u></p> <p>Student essay</p> <p><u>Alternative Assessments:</u></p> <p>Sort and classify natural phenomena using similarities and differences.</p> <p>Analyze and interpret data to make sense of phenomena using logical reasoning.</p> <p>Students should be able to refer specifically to the text when answering questions, articulate the main idea, and describe the key ideas using supporting details in their explanations.</p> <p>Reflection journals</p> <p>Students should describe the relationship between scientific ideas or concepts, using language that pertains to time, sequence, and cause and effect.</p> <p>Charts, tables, graphic aids</p> <p>Students need opportunities to write informative/explanatory texts to convey ideas and information gathered through investigations and from other</p>
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	<p>their parents. (RI.3.1, RI.3.2, 9.2.4.A.1, 8.1.5.F.1, 6.1.4.B.6)</p>	<p>container for each group</p> <ul style="list-style-type: none">• Branch with a “Y” /supplied by teacher• Some twigs and flexible twigs, string, leaves, grasses, ivy, lint, feathers, raffia, moss, etc.(students asked to bring in)• String/twine can be no longer than 20cm long/ max. 4 per group• Egg, plastic and filled/supplied by teacher• Refection/rubric to evaluate nest constructed• Follow-up writing prompt <p><u>Mammals and Their Parents, Perfect Together:</u></p> <ul style="list-style-type: none">• <u>Powerpoint</u>• <u>Whale Have-Can- Are</u>• <u>Giraffe/Squirrel Have – Can – Are</u>• <u>Mammals Inherited Traits Writing</u>• <u>Rubric</u>• <u>Student Sample</u>	<p>resources.</p> <p>Students should be expected to use key details and appropriate facts about that organism to compose an informative piece of writing.</p> <p>Students should report orally on a given topic related to traits and the way they are influenced by the environment.</p> <p>Written report</p>
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Accommodations and Modifications:

Students with special needs: Support staff will be available to aid students related to IEP specifications. 504 accommodations will also be attended to by all instructional leaders. Physical expectations and modifications, alternative assessments, and scaffolding strategies will be used to support this learning. The use of Universal Design for Learning (UDL) will be considered for all students as teaching strategies are considered.

ELL/ESL students: Students will be supported according to the recommendations for “can do’s” as outlined by WIDA – https://www.wida.us/standards/CAN_DOs/

This particular unit has limited language barriers due to the physical nature of the curriculum.

Students at risk of school failure: Formative and summative data will be used to monitor student success at first signs of failure student work will be reviewed to determine support. This may include parent consultation, basic skills review and differentiation strategies. With considerations to UDL, time may be a factor in overcoming developmental considerations. More time and will be made available with a certified instructor to aid students in reaching the standards.

Gifted and Talented Students: Students excelling in mastery of standards will be challenged with complex, high level challenges related to the complexity in planning and carrying out investigations and analyzing and interpreting data.

English Language Learners	Special Education	At-Risk	Gifted and Talented
<ul style="list-style-type: none">● Provide two sets of textbooks, one for home and one for school● Speak and display terminology● Teacher modeling● Peer modeling● Provide ELL students with multiple literacy strategies.● Word walls● Use peer readers● Give page numbers to help the students find answers● Provide a computer for written work● Provide visual aides● Provide additional time to	<ul style="list-style-type: none">● Provide two sets of textbooks, one for home and one for school● Utilize modifications & accommodations delineated in the student’s IEP● Work with paraprofessional● Use multi-sensory teaching approaches.● Work with a partner● Provide concrete examples● Restructure lesson using UDL principals (http://www.cast.org/our-work/about-	<ul style="list-style-type: none">● Structure lessons around questions that are authentic, relate to students’ interests, social/family background and knowledge of their community.● Using visual demonstrations, illustrations, and models● Give directions/instructions verbally and in simple written format. Oral prompts can be given.● Peer Support● Increase one on one time● Teachers may modify instructions by modeling what the student is expected to do● Instructions may be printed out in large print and hung	<ul style="list-style-type: none">● Inquiry-based instruction● Independent study● Higher order thinking skills● Adjusting the pace of lessons● Interest based content● Real world scenarios● Student Driven Instruction● Engage students with a variety of Science and Engineering practices to provide students with multiple entry points and multiple ways to demonstrate their understand-ings.● Use project-based science learning to connect science with observable phenomena.● Structure the learning around explaining or solving a social or

complete a task <ul style="list-style-type: none"> ● Use graphic organizers 	udl.html#.VXmoXcfD_UA). <ul style="list-style-type: none"> ● Provide students with multiple choices for how they can represent their understandings (e.g. multisensory techniques-auditory/visual aids; pictures, illustrations, graphs, charts, data tables, multimedia, modeling). 	up for the student to see during the time of the lesson. <ul style="list-style-type: none"> ● Review behavior expectations and make adjustments for personal space or other behaviors as needed. ● Provide opportunities for students to connect with people of similar backgrounds (e.g. conversations via digital tool such as SKYPE, experts from the community helping with a project, journal articles, and biographies). 	community-based issue. <ul style="list-style-type: none"> ● Collaborate with after-school programs or clubs to extend learning opportunities.
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Interdisciplinary Connections:

ELA-NJSLS/ELA:

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-LS3-1), (3-LS3-2)

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),(3-LS4-2)

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)

Mathematics:

MP.2: Model with mathematics. (1-ESS1-2)

MP.5: Use appropriate tools strategically. (1-ESS1-2)

MP.4: Reason abstractly and quantitatively. (K-2-ETS1-1)

Social Studies:

6.1.4.B.6: Compare and contrast characteristics of regions in the United States based on culture, economics, and physical environment to understand the concept of regionalism.

Career Ready Practices:

CRP6: Demonstrate creativity and innovation.

CRP4: Communicate clearly and effectively and with reason.

CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.

Integration of 21st Century Standards NJSLS 9:

9.2.4.A.1: Identify reasons why people work, different types of work, and how work can help a person achieve personal and professional goals.

Integration of Technology Standards NJSLS 8:

8.1.5.F.1: Apply digital tools to collect, organize, and analyze data that supports a scientific finding.

Key Vocabulary:

Animal: a living thing that is not a human being or plant

Mammal: a type of animal that feeds milk to its young and that usually has hair or fur covering most of its skin

Reptile: an animal (such as a snake, lizard, turtle, or alligator) that has cold blood, that lays eggs, and that has a body covered with scales or hard parts

Bird: any of a class of warm-blooded egg-laying vertebrate animals with the body covered with feathers and the forelimbs modified as wings

Amphibian: any organism that is able to live both on land and in water; *especially* : any of a class of cold-blooded vertebrate animals (as frogs and salamanders)

that in many respects are between fishes and reptiles

Fish: a cold-blooded vertebrate animal with a typically long scaly tapering body, limbs developed as fins, and a vertical tail fin that lives and breathes in water

Inherited Trait: a characteristic that is passed down from generation to generation

Environment: everything that surrounds and influences an organism

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data <ul style="list-style-type: none">Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS3-1) Constructing Explanations and Designing Solutions	LS3.A: Inheritance of Traits <ul style="list-style-type: none">Many characteristics of organisms are inherited from their parents. (3-LS3-1)Other characteristics result from individuals' interactions with the environment, which can range from diet	Patterns <ul style="list-style-type: none">Similarities and differences in patterns can be used to sort and classify natural phenomena. (3-LS3-1) Cause and Effect

<ul style="list-style-type: none"> • Use evidence (e.g., observations, patterns) to support an explanation. (3-LS3-2) ▪ 	<p>to learning. Many characteristics involve both inheritance and environment. (3-LS3-2)</p> <p>LS3.B: Variation of Traits</p> <ul style="list-style-type: none"> • Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1) • The environment also affects the traits that an organism develops. (3-LS3-2) 	<ul style="list-style-type: none"> • Cause and effect relationships are routinely identified and used to explain change. (3-LS3-2)
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Englewood Public School District

Science

Grade 3

Third Marking Period

Unit 5: Continuing the Cycle

Overview: In this unit of study, students develop an understanding of the similarities and differences in organisms' life cycles. In addition, students 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. The crosscutting concepts of *patterns* and *cause and effect* are called out as organizing concepts for these disciplinary core ideas. Students demonstrate grade-appropriate proficiency in *developing and using models and constructing explanations and designing solutions*. Students are also expected to use these practices to demonstrate understanding of the core ideas. This unit is based on 3-LS1-1 and 3-LS4-2.

Time Frame: 10 to 15 Days

Enduring Understandings:

Plants and animals have unique and diverse life cycles.

Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing.

Essential Questions:

Do all living things have the same life cycle?

Are there advantages to being different?

Standards	Topics and Objectives	Activities	Resources	Assessments
3-LS1-1: Develop models to describe that organisms have unique and diverse life cycles but all have in common	<p>Topics</p> <p>Life Cycles of Plants and Animals</p> <p>Objectives</p>	<p><u>Plant Life Cycles:</u></p> <p>Students observe a live flowering plant and label its parts. Students then investigate</p>	<p><u>Website:</u> <u>Scholastic Teaching Resources</u></p> <p><u>Plant Life Cycle:</u> <u>From Seed to Flower</u></p> <p><u>Materials:</u></p> <ul style="list-style-type: none"> One flowering potted plant 	<p>Formative Assessments:</p> <p><u>Plant Life Cycle:</u> Student diagrams</p>

<p>birth, growth, reproduction, and death.</p> <p>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.</p>	<p><u>Plant Life Cycles:</u> Students investigate the life cycle of a plant by observing changes in a time-lapse video.</p> <p><u>Frogs:</u> Students will model the life cycle of the frog by examining each cycle and identifying at least 3 facts for each.</p> <p><u>Fish, Vertebrates of the Sea:</u> Students will compare and contrast the characteristics of the same species by examining the position and location of a fish's mouth.</p> <p><u>Animal Groups:</u> Students will read short</p>	<p>different seeds both externally and internally. Watch a video of a plant growing. Have them draw a diagram illustrating how human growth and development is similar to plants. Students then take a walk to identify different tree stages of life. (3-LS4-2, RI.3.1, 8.1.5.F.1, 6.1.4.B.9)</p> <p><u>Frogs:</u> Students review what they know about the life cycle of a frog. During the power point presentation students will go in depth with each stage. Students will then find 3 similarities and</p>	<ul style="list-style-type: none"> • A variety of fruits • White paper • Crayons or markers <p><u>Extension Activities:</u> <u>Germinator</u> <u>Sock Seeds</u></p> <p><u>Frogs:</u></p> <ul style="list-style-type: none"> • <u>Lesson Power Point</u> • <u>Frog Focus Page</u> • <u>Comparing Life Cycles</u> <p><u>Fish, Vertebrates of the Sea:</u></p> <ul style="list-style-type: none"> • <u>Fish Powerpoint</u> • <u>Fish Worksheet 1</u> • <u>Student Sample</u> • <u>New Environment Homework</u> • <u>Homework Sample</u> <p><u>Animal Groups:</u></p> <ul style="list-style-type: none"> • <u>Animal Group Video</u> • <u>Claims, Evidence and Reasoning Intro</u> • <u>Reading Passages</u> <p><u>Articles:</u> <u>Let's Hear It For Ladybugs!</u> <u>Simply Butterflies!</u></p> <p><u>Books:</u> <u>The Tiny Seed</u> <u>A Tree Is a Plant</u> <u>The Magic School Bus Plants a Seed</u></p>	<p><u>Frogs:</u> Student Worksheets</p> <p><u>Fish, Vertebrates of the Sea:</u> Class Notes Diagram</p> <p>Benchmark Assessment: Exact Path</p> <p>Summative Assessments:</p> <p><u>Fish, Vertebrates of the Sea:</u> Essay</p> <p><u>Animal Groups:</u> Science Journal</p> <p><u>Alternative Assessments:</u> Identify cause-and-effect relationships in order to explain change. Think Pair Share Sort and organisms</p>
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passages about animals that live in groups and participate in a discussion about how groups benefit some (but not all) animals.

3 differences between a frog's life cycle and that of another organism. (RI.3.2, RI.3.3, RI.3.7)

Fish, Vertebrates of the Sea:

Students will work in groups to make a list of what they know about fish. They will add new facts to their notes, during classwork. Students then predict what type of food a fish would eat based on their mouth placement. Student groups will meet with another group to discuss their results. Students will draw and label a diagram of a fish.

Additional Resources:

<https://www.kidzone.ws/lw/frogs/facts3.htm>

<https://www.storyjumper.com/book/index/19628338/Frog-Life-Cycle>

<http://scholasticlibrary.digital.scholastic.com/978-0-531-26353-2.html>

<https://jr.brainpop.com/science/plants/plantlifecycle/>

<https://easyscienceforkids.com/lifecycle-of-a-fish/>

<https://ngss.nsta.org/Resource.aspx?ResourceID=476>

[https://www.sciencea-](https://www.sciencea-z.com/main/UnitResource/unit/7/life-science/grades-3-4/life-cycles)

[z.com/main/UnitResource/unit/7/life-science/grades-3-4/life-cycles](https://www.sciencea-z.com/main/UnitResource/unit/7/life-science/grades-3-4/life-cycles)

(inherited traits) using similarities and differences in patterns.

Inquiry based

Make predictions using patterns of change.

Questioning

Students can draw scaled picture graphs or bar graphs to represent data.

Students will analyze their data to help understand that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.

Checklists

Students can also use Venn diagrams or T-charts to compare traits among

	<p>(CRP4, CRP8, 3MD.7b)</p> <p><u>Animal Groups:</u></p> <p>To activate their interest students will watch a short video on different animal groups. Students will then act out some of the scenarios they saw. Students will then create a claim about animal groups and research it. Students will then work in either a group writing down the information or participate in a modified Socratic seminar.</p> <p>(SL.3.4, SL.3.5, W.3.2, 9.2.4.A.1)</p>	<p>individuals from a common species</p>
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Accommodations and Modifications:

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Gifted and Talented Students: Students excelling in mastery of standards will be challenged with complex, high level challenges related to the complexity in planning and carrying out investigations and analyzing and interpreting data.

English Language Learners	Special Education	At-Risk	Gifted and Talented
<ul style="list-style-type: none"> ● Give page numbers to help the students find answers ● Speak and display terminology ● Teacher modeling ● Peer modeling ● Provide ELL students with multiple literacy strategies. ● Word walls ● Use peer readers ● Provide a computer for written work ● Provide two sets of textbooks, one for home and one for school ● Provide visual aides ● Provide additional time to complete a task ● Use graphic organizers 	<ul style="list-style-type: none"> ● Provide concrete examples ● Utilize modifications & accommodations delineated in the student’s IEP ● Work with paraprofessional ● Use multi-sensory teaching approaches. ● Work with a partner ● Restructure lesson using UDL principals (http://www.cast.org/our-work/about-udl.html#.VXmoXcfD_UA). ● Provide students with multiple choices for how they can represent their understandings (e.g. multisensory techniques-auditory/visual aids; 	<ul style="list-style-type: none"> ● Using visual demonstrations, illustrations, and models ● Give directions/instructions verbally and in simple written format. Oral prompts can be given. ● Peer Support ● Increase one on one time ● Teachers may modify instructions by modeling what the student is expected to do ● Instructions may be printed out in large print and hung up for the student to see during the time of the lesson. ● Review behavior expectations and make adjustments for personal space or other behaviors as needed. ● Structure lessons around questions that are authentic, relate to students’ interests, 	<ul style="list-style-type: none"> ● Collaborate with after-school programs or clubs to extend learning opportunities. ● Curriculum compacting ● Inquiry-based instruction ● Independent study ● Higher order thinking skills ● Adjusting the pace of lessons ● Interest based content ● Real world scenarios ● Student Driven Instruction ● Engage students with a variety of Science and Engineering practices to provide students with multiple entry points and multiple ways to demonstrate their understand -ings. ● Use project-based science learning to connect science with observable phenomena. ● Structure the learning around explaining or solving a social or

	<p>pictures, illustrations, graphs, charts, data tables, multimedia, modeling).</p>	<p>social/family background and knowledge of their community.</p> <ul style="list-style-type: none"> • Provide opportunities for students to connect with people of similar backgrounds (e.g. conversations via digital tool such as SKYPE, experts from the community helping with a project, journal articles, and biographies). 	community-based issue.
Interdisciplinary Connections:			
<p>ELA-NJSLS/ELA:</p> <p>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-LS3-1), (3-LS3-2)</p> <p>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)</p> <p>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)</p> <p>W.3.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS3-1), (3-LS3-2),(3-LS4-2)</p> <p>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)</p> <p>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)</p> <p>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)</p>			
<p>Mathematics:</p> <p>MP.2: Model with mathematics.</p> <p>3.MD.C.7.b: Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning</p>			

Career Ready Practices: CRP4: Communicate clearly and effectively and with reason. CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
Integration of Technology Standards NJSLS 8: 8.1.5.F.1: Apply digital tools to collect, organize, and analyze data that supports a scientific finding.
Integration of 21st Century Standards NJSLS 9: 9.2.4.A.1: Identify reasons why people work, different types of work, and how work can help a person achieve personal and professional goals.
Social Studies: 6.1.4.B.9: Relate advances in science and technology to environmental concerns, and to actions taken to address them.

Key Vocabulary: Life Cycle: The sequence of changes undergone by an organism as it develops from its earliest stage to the same stage in the next generation. Root: The part of a plant that grows downward in the soil. Roots provide support and take up water and nutrients Stem: Any stalk supporting leaves, flowers, or fruit. Reproduce: To produce new plants or new animals. Growth: When an organism gets bigger and more complex. Flowers: A structure from which fruits and seeds develop
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Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Developing and Using Models <ul style="list-style-type: none"> Develop models to describe phenomena. (3-LS1-1) Constructing Explanations and Designing Solutions <ul style="list-style-type: none"> Use evidence (e.g., observations, patterns) to construct an explanation. (3-LS4-2) 	LS1.B: Growth and Development of Organisms <ul style="list-style-type: none"> Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1) LS4.B: Natural Selection <ul style="list-style-type: none"> Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and 	Patterns <ul style="list-style-type: none"> Patterns of change can be used to make predictions. (3-LS1-1) Cause and Effect <ul style="list-style-type: none"> Cause and effect relationships are routinely identified and used to explain change. (3-LS4-2),(3-LS4-3) <div>-----</div> <div>----- <i>Connections to Nature of Science</i> -----</div> Scientific Knowledge is Based on Empirical Evidence

		reproducing. (3-LS4-2)	<ul style="list-style-type: none">• Science findings are based on recognizing patterns. (3-LS1-1)	
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