

Grade 3

Unit 4: Life Cycles & Inherited Traits

New Jersey Student Learning Standards

Established: 2016-2017
Revised: 2018-2019
Revised: 2019-2020
Revised: 2020-2021
Revised: 2022-2023

Trimester	Unit Title		Recommended Instructional Days
2	Unit 4: Life Cycles & Inherited Traits		30 Days
NJSLS - Science: Title	NJSLS - Science: Performance Expectations	Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-S within Unit	
Life Science	3-LS1-1 3-LS3-1		
FOUNDATION Disciplinary: Core Idea	FOUNDATION Disciplinary: Statement		
<ul style="list-style-type: none"> • Growth & Development of Organisms • Inheritance of Traits • Variation of Traits 	Understand that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death and certain traits are inherited from parents.	<p><u>Essential Question/s:</u></p> <ul style="list-style-type: none"> • What are some plant life cycles? • What are some animal life cycles? • What are inherited plant and animal traits? • How can climate change negatively impact life cycles? <p><u>Activity Description:</u></p> <ul style="list-style-type: none"> • “Life Cycle Model”- Unit Project (beginning of unit) • “Cool Beans! (And Warm and Hot Ones, Too)” - Unit Performance Task • “In Full Bloom Flipbook”-Apply What You Know (Lesson 1) ART • “How Do Plants Grow?”-Hands-On Activity (Lesson 1) MA • “Plant Growth Paused?”-Extra Hands-On Activity (Lesson 1) TECH • “Design a Nest”-Apply What You Know (Lesson 2) • “Compare and Contrast Poster”-Apply What You Know (Lesson 2) • “Observing Mealworm Metamorphosis”-Hands-On Activity (Lesson 2) 	
FOUNDATION Science and Engineering Practices: Core Idea	FOUNDATION Science and Engineering Practices: Statement		
<ul style="list-style-type: none"> • Developing and Using Models • Analyzing and Interpreting Data • Scientific Knowledge Is Based on Empirical Evidence • Scientific Investigations Use a Variety of Methods 	<ul style="list-style-type: none"> • Analyze and interpret data to make sense of a phenomenon, construct explanations & design solutions, and use evidence to support an explanation. 		
FOUNDATION Crosscutting Concepts: Core Idea	FOUNDATION Crosscutting Concepts: Statement		

<ul style="list-style-type: none"> Identifying Patterns Identifying Cause & Effect 	<ul style="list-style-type: none"> Understand that similarities and differences in patterns can be used to sort and classify natural phenomena. Cause and effect relationships are routinely identified and used to explain change. 	<ul style="list-style-type: none"> “Plan a Life Cycle Observation”- Extra Hands-On Activity (Lesson 2) TECH “Pick a Hand”-Apply What You Know (Lesson 3) “Monster Traits”-Hands-On Activity (Lesson 3) “Invent Your Own Animal Family”- Extra Hands-On Activity (Lesson 3) TECH "You Ain't Nothing But a Hound Dog" ReadWorks Passage & Question Set: Traits SCI/ELA Butterfly Life Cycle Song MU Climate Change: Design/Create shade for plants during the hotter than normal summer months.
<p>Social and Emotional Learning: <i>Competencies</i></p>	<p>Social and Emotional Learning: <i>Sub-Competencies</i></p>	<p>Amistad Law/Diversity & Inclusion</p> <p>Take if Further: Conduct a research study on Roger Arliner Young, who was the first African American woman to receive a doctorate in zoology. This may be done in connection with SE page 229 - Discover More - People in Science & Engineering or throughout the unit.</p> <p>Interdisciplinary Connections - English Language Arts:</p> <p>RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. RI.3.7 Use information gained from illustrations and the words in a text to demonstrate an understanding of the text. RI.3.8 Describe the logical connection between particular sentences and paragraphs. RI.3.9 Compare and contrast the most important points and details. W.3.7 Conduct short research projects that build knowledge about a topic. RF.3.3.C Decode multisyllable words.</p> <p>Interdisciplinary Connections - Mathematics: 3.NBT Number and Operations in Base Ten 3.NF Number and Operations-Fractions MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics.</p>
<ul style="list-style-type: none"> Self-Awareness Self-Management Social Awareness Responsible Decision-Making Relationship Skills 	<ul style="list-style-type: none"> Recognize the importance of self-confidence in handling daily tasks and challenges Recognize the skills needed to establish and achieve personal and educational goals Demonstrate an understanding of the need for mutual respect when viewpoints differ Develop, implement, and model effective problem-solving and critical thinking skills Utilize positive communication and social skills to interact effectively with others 	

		<p>3.MD.B.4 Show data by making a line plot, where the horizontal scale is marked off in appropriate units - whole numbers, halves, or quarters.</p> <p style="text-align: center;">Science Dimensions/Go Math Correlations</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">HMH Science Dimensions Math Content</th> <th style="text-align: center;">HMH Science Dimensions Pages</th> <th style="text-align: center;">Go Math Aligned Lessons</th> </tr> </thead> <tbody> <tr> <td>Lesson 1: Problem Solving - Multiplication</td> <td style="text-align: center;">Pages 189; 193</td> <td style="text-align: center;">Lesson 4.10</td> </tr> <tr> <td>Lesson 2: Multiplication With 5 & 10</td> <td style="text-align: center;">Page 227</td> <td style="text-align: center;">Lessons 4.2; 4.10</td> </tr> <tr> <td>Lesson 3: Graphs - Interpret & Organize Data; Use and Make Line Plots</td> <td style="text-align: center;">Pages 238; 239; 249</td> <td style="text-align: center;">Lessons 2.1; 2.7</td> </tr> </tbody> </table>	HMH Science Dimensions Math Content	HMH Science Dimensions Pages	Go Math Aligned Lessons	Lesson 1: Problem Solving - Multiplication	Pages 189; 193	Lesson 4.10	Lesson 2: Multiplication With 5 & 10	Page 227	Lessons 4.2; 4.10	Lesson 3: Graphs - Interpret & Organize Data; Use and Make Line Plots	Pages 238; 239; 249	Lessons 2.1; 2.7
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<p>Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>		<p>Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>												
<p><u>Formative Assessments:</u></p> <ul style="list-style-type: none"> • Apply what you know; Lesson check; Self check; Evidence notebooks 		<p><u>Summative Assessments:</u></p> <ul style="list-style-type: none"> • End of lesson quizzes; End of unit assessment <p><u>Alternative:</u></p> <ul style="list-style-type: none"> • Performance Assessment (back of assessment guide) Lab Practical <p><u>Suggested Writing Prompts:</u></p> <ol style="list-style-type: none"> 1. Write an essay explaining the life cycle of a flowering plant. Be sure to include the appropriate Science vocabulary. 2. Conduct research on an animal or plant of your choice. Describe and illustrate its life cycle. 3. Write an essay that compares and contrasts plant and animal life 												

	<p>cycles using textual evidence from your Science book to support your response.</p> <p>4. Conduct research on a white-tailed deer. Write an essay that explains how it is the same and different from the life cycle of a butterfly.</p>
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**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"> ● Evidence Notebook ● Equipment Kit ● On Level Readers ● Online Simulations ● Dimensions TE ● Dimensions SE 	<p>In addition to Core Resources:</p> <ul style="list-style-type: none"> ● Extra Support Readers ● Science and Engineering Practices Online Handbook 	<p>In addition to Core Resources:</p> <ul style="list-style-type: none"> ● Science Thesaurus ● Extra Support Readers ● Science and Engineering Practices Online Handbook 	<p>In addition to Core Resources:</p> <ul style="list-style-type: none"> ● Enrichment Readers

Supplemental Resources

<p>Technology:</p> <ul style="list-style-type: none"> ● Chromebook ● SMARTBoard <p>Ed Science Platform:</p> <ul style="list-style-type: none"> ● Digital Assessments ● Digital Performance Tasks ● You Solve It Simulations ● Google Expeditions ● Student eBook ● Video-Based Projects ● Science Tools ● Online Glossary ● National Geographic
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Differentiated Student Access to Content: Recommended <i>Strategies & Techniques</i>			
Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core
<ul style="list-style-type: none"> ● Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic ● Provide individual instruction as needed 	<ul style="list-style-type: none"> ● Utilize a multi-sensory (VAKT) approach during instruction ● Provide alternate presentations of skills by varying the method (repetition, simple explanations, additional examples, modeling, etc.) ● Modify test content and/or format ● Allow students to retake test for additional credit, ● Provide additional times and preferential seating as needed, ● Review, restate and repeat directions ● Provide study guides, and/or break assignments into segments of shorter tasks 	<ul style="list-style-type: none"> ● Extend time requirements ● Preferred seating ● Positive reinforcement ● Check often for understanding/review ● Oral/visual directions/prompts when necessary ● Supplemental materials including use of online bilingual dictionaries, and modified assessment and/or rubric. 	<ul style="list-style-type: none"> ● Create an enhanced set of introductory activities ● Integrate active teaching/learning opportunities ● Incorporate authentic components ● Propose interest-based extension activities ● Connect student to related talent development opportunities
NJSLS CAREER READINESS, LIFE LITERACIES & KEY	<p>Disciplinary Concept:</p> <ol style="list-style-type: none"> 1. Career Awareness & Planning 2. Creativity and Innovation 3. Critical Thinking & Problem-Solving 4. Global & Cultural Awareness 		

SKILLS	5. Information and Media Literacy 6. Technology Literacy	
	<i>Core Ideas:</i>	<ul style="list-style-type: none"> ● An individual's passions, aptitude and skills can affect his/her employment and earning potential. ● Collaboration with individuals with diverse perspectives can result in new ways of thinking and/or innovative solutions ● Curiosity and a willingness to try new ideas (intellectual risk-taking) contributes to the development of creativity and innovation skills. ● The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills. ● Individuals from different cultures may have different points of view and experiences. ● Culture and geography can shape an individual's experiences and perspectives. ● Specific situations require the use of relevant sources of information. ● Different digital tools have different purposes. ● Collaborating digitally as a team can often develop a better artifact than an individual working alone.
	<i>Performance Expectation/s:</i>	<ul style="list-style-type: none"> ● 9.2.5.CAP.1: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes. ● 9.2.5.CAP.3: Identify qualifications needed to pursue traditional and non-traditional careers and occupations. ● 9.2.5.CAP.4: Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements

		<ul style="list-style-type: none">● 9.4.5.CI.1: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change● 9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to expand one’s thinking about a topic of curiosity (e.g., 8.2.5.ED.2, 1.5.5.CR1a).● 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).● 9.4.5.GCA.1: Analyze how culture shapes individual and community perspectives and points of view (e.g., 1.1.5.C2a, RL.5.9, 6.1.5.HistoryCC.8).● 9.4.5.IML.6: Use appropriate sources of information from diverse sources, contexts, disciplines, and cultures to answer questions (e.g., RI.5.7, 6.1.5.HistoryCC.7, 7.1.NM. IPRET.5).● 9.4.5.TL.3: Format a document using a word processing application to enhance text, change page formatting, and include appropriate images, graphics, or symbols.● 9.4.5.TL.5: Collaborate digitally to produce an artifact (e.g., 1.2.5CR1d).
	Career Readiness, Life Literacies, & Key Skills Practices	
	<ul style="list-style-type: none">● Act as a responsible and contributing community member and employee.● 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.	

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)									
X	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>	X	Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>	X	Standards in Action: <i>Climate Change</i>