

Grade K

## **Unit 4: Sun Warms Earth**

New Jersey Student Learning Standards

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

| Marking Period   | Unit Title  | Recommended Instructional Days   |
|--|---|--|
| 2nd Trimester  | Sun Warms Earth   | 28-30 Days   |
| <b>NJSLS - Science:</b><br><i>Title</i>  | <b>NJSLS - Science:</b><br><i>Performance Expectations</i>  | <b>Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSL-S within Unit</b>   |
| <b>Energy: Sun Warms Earth</b>   | <p><b>K-PS3-1:</b> Make observations to determine the effect of sunlight on Earth’s surface.</p> <p><b>K-PS3-2:</b> Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area</p>  |  |
| <b>FOUNDATION</b><br><b>Disciplinary:</b><br><i>Core Idea</i>                      | <b>FOUNDATION</b><br><b>Disciplinary:</b><br><i>Statement</i>   |  |
| <b>PS3.B:</b> Conservation of Energy and Energy Transfer                           | Sunlight warms Earth’s surface.<br>(K-PS3-1), (K-PS3-2)   | <b>Essential Question/s:</b>   |
| <b>FOUNDATION</b><br><b>Science and Engineering Practices:</b><br><i>Core Idea</i> | <b>FOUNDATION</b><br><b>Science and Engineering Practices:</b><br><i>Statement</i>  | How Does The Sun Warm Earth?<br>How Can I Protect Myself From The Sun?<br><br><b>Activity Description:</b>   |
| Planning and Carrying Out Investigations   | <ul style="list-style-type: none"> <li>• Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. Make observations (firsthand or from media) to collect data that can be used to make comparisons. (K-PS3-1)</li> <li>• Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions. Use tools and</li> </ul> | <p>Light is what lets us see things. The sun gives off light. The amount of light from the sun changes throughout the day. This is a pattern.</p> <p>The sun warms land and water. It gives off heat. Heat makes things warmer. It can even cause ice to melt.</p> <p>The sun gives off light and heat. Heat is what makes things warm. Shade is coolness caused by shelter from the sun’s heat.</p> |

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| Constructing Explanations and Designing Solutions   | materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2)   | <p><b>Activities:</b></p> <ul style="list-style-type: none"> <li>• Unit Project - The Sun Heats Up Land and Water</li> <li>• Engineer It - Design Shade (ART/MA)</li> <li>• Engineer It- Build a Model Shelter (MA/ART)</li> <li>• Vocabulary Game (ELA)</li> <li>• You Tube - Mr. Sun - Super Simple Songs (MU)</li> <li>• YouTube - The Sun Song - Scratch Garden (MU)</li> <li>• Leveled Readers (ELA)</li> </ul> <p><b>Interdisciplinary Connections: Content: NJSL Connections to Math: K.MD.A.2.:</b> 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> <p><b>Connections to ELA W.K.7:</b> Participate in shared research and writing projects (e.g., explore a number of books by a favorite author, and express opinions about them).</p> |
| <b>FOUNDATION</b><br><b>Crosscutting Concepts:</b><br><i>Core Idea</i>  | <b>FOUNDATION</b><br><b>Crosscutting Concepts:</b><br><i>Statement</i>  |  |
| Cause and Effect<br><br>Scientific Investigations Use a Variety of Methods  | <ul style="list-style-type: none"> <li>• Events have causes that generate observable patterns. (K-PS3-1), (K-PS3-2)</li> <li>• Scientists use different ways to study the world.</li> </ul>   |  |
| <b>Social and Emotional Learning:</b><br><i>Competencies</i>  | <b>Social and Emotional Learning:</b><br><i>Sub-Competencies</i>  |  |
| <ul style="list-style-type: none"> <li>• Responsible Decision-Making</li> <li>• Relationship Skills</li> <li>• Self-Management</li> <li>• Social Awareness</li> <li>• Self Awareness</li> </ul> | <ul style="list-style-type: none"> <li>• Develop, implement, and model effective problem-solving and critical thinking skills</li> <li>• Utilize positive communication and social skills to interact effectively with others</li> <li>• Recognize the skills needed to establish and and achieve personal and educational goals</li> <li>• Demonstrate an understanding of the need for mutual respect when viewpoints differ.</li> <li>• Demonstrate an awareness of the expectations for social interactions in a variety of ways.</li> <li>• Recognize the importance of self-confidence in handling daily tasks and challenges.</li> </ul> |  |
| <b>Assessments (Formative)</b><br><i>To show evidence of meeting the standard/s, students will successfully engage within:</i>  |   | <b>Assessments (Summative)</b><br><i>To show evidence of meeting the standard/s, students will successfully complete:</i>  |
| <p><b>Formative Assessments:</b></p> <ul style="list-style-type: none"> <li>• Interactive Worktext, Apply What You Know (scoring rubrics attached), Lesson Check, and Self-Check</li> </ul>     |   | <p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>• District Assessments / Unit Test / Unit Performance Task</li> </ul> <p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>• Lesson Quiz, Interactive Worktext</li> </ul>  |

| Differentiated Student Access to Content:<br>Teaching and Learning Resources/Materials  |   |  |   |
|---|---|--|---|
| Core Resources  | Alternate Core Resources<br><i>IEP/504/At-Risk/ESL</i>  | ELL Core Resources   | Gifted & Talented Core Resources  |
| <ul style="list-style-type: none"> <li>• Workbook</li> <li>• Leveled Readers</li> <li>• Hands-on Activities</li> <li>• Interactive Worktext</li> </ul>  | <ul style="list-style-type: none"> <li>• 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</li> <li>• Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat instructions as needed.</li> </ul> | <ul style="list-style-type: none"> <li>• Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of an online bilingual dictionary, and modified assessment and/or rubric.</li> </ul> | <ul style="list-style-type: none"> <li>• Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect students to related talent development opportunities.</li> </ul> |
| Supplemental Resources  |   |  |   |
| <p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>• HMH Interactive Site</li> <li>• You Solve It Simulations</li> </ul> <p><b>Other:</b></p> <ul style="list-style-type: none"> <li>• <b>Career Education:</b> Solar Energy Plant Operator, Astronomer</li> <li>• <b>Spot Light on Scientist:</b> Benjamin Banneker &amp; Arthur Bertram Cuthbert Walker II</li> </ul> |   |  |   |

| <b>Differentiated Student Access to Content:<br/>                     Recommended <i>Strategies &amp; Techniques</i></b>  |   |  |   |
|---|---|--|---|
| <b>Core Resources</b>   | <b>Alternate Core Resources<br/><i>IEP/504/At-Risk/ESL</i></b>  | <b>ELL Core Resources</b>  | <b>Gifted &amp; Talented Core</b>   |
| <ul style="list-style-type: none"> <li>• Large group instruction</li> <li>• Small group instruction</li> <li>• Think Pair Share</li> <li>• Cooperative group work</li> <li>• Multimedia presentations</li> <li>• K-W-L</li> <li>• Manipulatives</li> <li>• Leveled Readers</li> </ul> | <ul style="list-style-type: none"> <li>• 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</li> <li>• Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat instructions as needed.</li> </ul> | <ul style="list-style-type: none"> <li>• Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of an online bilingual dictionary, and modified assessment and/or rubric.</li> </ul> | <ul style="list-style-type: none"> <li>• Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect students to related talent development opportunities.</li> </ul> |

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|  | <b>Disciplinary Concept: Creativity &amp; Innovation/Critical Thinking &amp; Problem Solving / Technology Literacy</b> |   |
|  | <b>Core Ideas:</b>   | <ul style="list-style-type: none"> <li>• Brainstorming can create new, innovative ideas.</li> <li>• Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem.</li> <li>• Collaboration can simplify the work an individual has to do and sometimes produce a better product.</li> </ul> |
|  | <b>Performance Expectation/s:</b>  | <ul style="list-style-type: none"> <li>• 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).</li> <li>• 9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g.,</li> </ul>  |

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| <b>NJSLS CAREER READINESS,<br/>LIFE LITERACIES &amp; KEY<br/>SKILLS</b> |   | <p>1.3A.2CR1a).</p> <ul style="list-style-type: none"> <li>● 9.4.2.CT.1: Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).</li> <li>● 9.4.2.CT.2: Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).</li> <li>● 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).</li> <li>● 9.4.2.TL.7: Describe the benefits of collaborating with others to complete digital tasks or develop digital artifacts (e.g., W.2.6., 8.2.2.ED.2).</li> </ul> |
|   | <b>Career Readiness, Life Literacies &amp; Key Skill Practices</b>  |   |
|   | <ul style="list-style-type: none"> <li>● Demonstrate creativity and innovation.</li> <li>● Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li>● Use technology to enhance productivity, increase collaboration and communicate effectively.</li> <li>● Work productively in teams while using cultural/global competence.</li> </ul> |   |

| New Jersey Legislative Statutes and Administrative Code<br>(place an "X" before each law/statute if/when present within the curriculum map) |   |  |   |  |   |   |  |   |   |
|---|---|--|---|--|---|---|--|---|---|
| x   | Amistad Law:<br><i>N.J.S.A. 18A<br/>52:16A-88</i> |  | Holocaust Law:<br><i>N.J.S.A. 18A:35-28</i> |  | LGBT and Disabilities<br>Law: <i>N.J.S.A.<br/>18A:35-4.35</i> | x | Diversity & Inclusion:<br><i>N.J.S.A. 18A:35-4.36a</i> | x | Standards in Action:<br><i>Climate Change</i> |