

Grade 2

Unit 2: Matter

New Jersey Student Learning Standards

Established 2016-2017

Revised 2018-2019

Revised 2019-2020

Revised 2020-2021

Revised 2022-2023

Revised 2023-2024

Revised 2024-2025

<ul style="list-style-type: none"> ● PS1.A Structure and Properties of Matter ● PS1.B Chemical Reactions ● ETS1.C Optimizing the Design Solution 	<ul style="list-style-type: none"> ● Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. ● Different properties are suited to different purposes. ● A great variety of objects can be built up from a small set of pieces ● Heating and cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not. ● asking questions, making observations, and gathering information help in thinking about problems to be solved 	<p><u>Essential Question/s:</u></p> <ul style="list-style-type: none"> ● How can I identify properties of Matter? ● How can objects be put together? ● How does matter change? <p><u>Activity Description:</u></p> <ul style="list-style-type: none"> ● Explore the properties of materials and choose materials based on their properties in order to help guide the solutions built <p>Interdisciplinary Connections: Connections to Math:</p> <ul style="list-style-type: none"> ● 2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. ● 2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. ● MP2 Reason abstractly and quantitatively. ● MP4 Model with mathematics. ● MP5 Use appropriate tools strategically. <p>Connections to ELA:</p> <ul style="list-style-type: none"> ● RI.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. ● RI.2.3 Describe the connection between a series of historical events, scientific ideas
<p align="center">FOUNDATION Science and Engineering Practices: <i>Core Idea</i></p>	<p align="center">FOUNDATION Science and Engineering Practices: <i>Statement</i></p>	
<ul style="list-style-type: none"> ● Planning and Carrying Out Investigations ● Analyzing and Interpreting Data ● Constructing Explanations and Designing Solutions ● Engaging in Argument from Evidence 	<ul style="list-style-type: none"> ● Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question ● Analyze data from tests of an object or tool to determine if it works as intended ● Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena 	

<ul style="list-style-type: none"> Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena 	<ul style="list-style-type: none"> Construct an argument with evidence to support a claim Science searches for cause and effect relationships to explain natural events 	<p>or concepts, or steps in technical procedures in a text.</p> <ul style="list-style-type: none"> RI.2.8 Describe how reasons support specific points the author makes in a text W.2.1 Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section. W.2.8 Recall information from experiences or gather information from provided sources to answer a question.
<p align="center">FOUNDATION Crosscutting Concepts: <i>Core Idea</i></p>	<p align="center">FOUNDATION Crosscutting Concepts: <i>Statement</i></p>	
<ul style="list-style-type: none"> Patterns Cause and Effect Energy and Matter 	<ul style="list-style-type: none"> Patterns in the natural and human designed world can be observed Events have causes that generate observable patterns Simple tests can be designed to gather evidence to support or refute student ideas about causes Objects may break into smaller pieces and be put together into larger pieces, or change shapes 	
<p align="center">Social and Emotional Learning: <i>Competencies</i></p>	<p align="center">Social and Emotional Learning: <i>Sub-Competencies</i></p>	
<ul style="list-style-type: none"> Responsible Decision-Making Relationship Skills Self-Management Social Awareness Self Awareness 	<ul style="list-style-type: none"> Develop, implement, and model effective problem-solving and critical thinking skills Utilize positive communication and social skills to interact effectively with others Recognize the skills needed to establish and achieve personal and educational goals Demonstrate an understanding of the need for mutual respect when viewpoints differ. Demonstrate an awareness of the expectations for social interactions in a variety of ways. Recognize the importance of self-confidence in handling daily tasks and challenges. 	

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"> Lesson Check 		Benchmarks/Summative Assessments: <ul style="list-style-type: none"> Unit Test Performance Based Assessment 	
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"> Workbook Leveled Readers Hands-on Activities Interactive Worktext 	<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 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. 	<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 an online bilingual dictionary, 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, and connect students to related talent development opportunities.

Supplemental Resources

Technology:

- *Changes to Matter: use evidence to support a claim that some changes to matter are reversible and some are irreversible, and will recognize observable patterns when matter changes.*
- *Explore Melting: conduct an investigation to determine the fastest way to cause ice to change to water.*
- *Engineer It - Build a Model Boat: design tests to determine which materials have properties that are best suited for a model boat.*

Other:

- *Math - Partition Shapes; Use Symbols; Solve Word Problems*
- *ELA - Recall Information; Gather Information; Ask and Answer Questions; Describe Connections ; Describe How Reasons Support a Text; Write an Opinion Piece*
- *Social Studies*
 - *People in Science & Engineering: Eugene Tssui, Zaha Hadid, Evangelina Villegas*
 - *Careers in Science & Engineering: Chefs at Work*

**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"> ● Large group instruction ● Small group instruction ● Think Pair Share ● Cooperative group work ● Multimedia presentations ● K-W-L ● Manipulatives ● Leveled Readers 	<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 ● 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. 	<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 an online bilingual dictionary, 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, and connect students to related talent development opportunities.

NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Disciplinary Concept: Creativity & Innovation/Critical Thinking & Problem Solving / Technology Literacy	
	Core Ideas:	<ul style="list-style-type: none"> Brainstorming can create new, innovative ideas. Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem. Collaboration can simplify the work an individual has to do and sometimes produce a better product.
	Performance Expectation/s:	<ul style="list-style-type: none"> 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). 9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a). 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). 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). 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). 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).
	Career Readiness, Life Literacies & Key Skill Practices	
	<ul style="list-style-type: none"> Demonstrate creativity and innovation. Utilize critical thinking to make sense of problems and persevere in solving them. 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)

	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>		Standards in Action: <i>Climate Change</i>
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