

Scope and Sequence

Content Area	Discovery	Course Title/Grade Level:	Gate 2
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Topic/Unit Name	Suggested Pacing (Days/Weeks)
<u>Topic/Unit #1</u> Self- Awareness	September/ October
<u>Topic/Unit #2</u> Gifts	November/ December
<u>Topic/Unit #3</u> Mystery Festival	January/ February
<u>Topic/Unit #4</u> Ancient Egypt	March / April
<u>Topic/Unit #5</u> Materials Engineering and Designing Walls in Ancient China	May/ June

Topic/Unit 1 Title	Self- Awareness	Approximate Pacing	8 weeks
STANDARDS			
NJSLS (Content)			
<p>NAGC Standards :</p> <p>Gifted Education Programing Standards:</p> <p>Standard 1: Learning and Development</p> <p>1.1 <u>Self Understanding</u>- Students with Gifts and Talents demonstrate self- knowledge with respect to their interests, strengths, identities, and needs in socio-emotional development and intellectual, academic, creative leadership, and artistic domains.</p> <p>1.2 <u>Self - Understanding</u>- Students with gifts and talents possess a developmentally appropriate understanding of how they learn and grow;they recognize the influences of their beliefs, traditions, and values on their learning and behavior.</p> <p>1.3. <u>Self-Understanding</u>. Students with gifts and talents demonstrate understanding of and respect for similarities and differences between themselves and their peer group and others in the general population.</p> <p>1.4. <u>Awareness of Needs</u>. Students with gifts and talents access resources from the community to support cognitive and affective needs, including social interactions with others having similar interests and abilities or experiences, including same-age peers and mentors or experts.</p> <p>1.5. Awareness of Needs. Students’ families and communities understand similarities and differences with respect to the development and characteristics of advanced and typical learners and support students with gifts and talents’ needs.</p> <p>1.6. Cognitive and Affective Growth. Students with gifts and talents benefit from meaningful and challenging learning activities addressing their unique characteristics and needs.</p> <p>1.7. Cognitive and Affective Growth. Students with gifts and talents recognize their preferred approaches to learning and expand their repertoire.</p> <p>1.8. Cognitive and Affective Growth. Students with gifts and talents identify future career goals that match their talents and abilities and resources needed to meet those goals (e.g., higher education opportunities, mentors, financial support)</p> <p>Career Readiness, Life Literacies, and Key Skills</p> <p>9.4 Life Literacies and Key Skills :</p> <p>Creativity and Innovation: 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives</p> <p>9.4.2.CI.2: Demonstrate originality and inventiveness in work .</p> <p>9.4.2.CT.3 Uses a variety of types of thinking to solve problems (e.g.,inductive, deductive)</p>			

Interdisciplinary Connections:	Career Readiness, Life Literacies, and Key Skills
<p>Self-Awareness Activities Mindfulness Curriculum Ready Set Respect Curriculum Character Education Curriculum</p>	<p>Creativity and Innovation 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)</p> <p>Critical Thinking and Problem Solving</p> <p>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 reasoning)</p>
Computer Science and Design and Thinking	Career Ready Practices:
<p>Engineering and Design</p> <p>Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions. • 8.2.2.ED.1: Communicate the function of a product or device. • 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. • 8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process. Limitations (constraints) must be considered when engineering designs.</p>	<p>CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity.</p>

8.2.2.ED.4: Identify constraints and their role in the engineering design process.

Interaction of Technology and Humans

- **8.2.2.WITH.1: Identify products that are designed to meet human wants or needs.**
- **8.2.2.ITH.2: Explain the purpose of a product and its value.**

CRP12. Work productively in teams while using cultural global competence.

UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS

What does it mean to be smart?

What characteristics do you have that make you smart?

What kinds of things do you think about?

What kinds of things make you a unique person?

What kind of smart are you? (Multiple Intelligences)

What makes you unique?

How are you creative?

What makes you a good thinker?

What qualities do you have that make you have task commitment?

What do you dream about?

What personality traits do you have?

What are some things that you love to do?

STUDENT LEARNING OBJECTIVES

Key Knowledge	Process/Skills/Procedures/Application of Key Knowledge
<p>Students will know: <i>Understanding of self by completing activities that are unique to the individual student.</i></p>	<p>Students will be able to: <i>Students will be able to complete a series of self-awareness activities that will help them acknowledge their personal self, likes and dislikes, and be more aware of who they are as a person.</i> <i>Students will be able to design , package and advertise themselves by creating a grocery store product that symbolizes their personality.</i></p> <ul style="list-style-type: none"> - <i>Create a product that symbolizes your personality</i> - <i>Design the product</i> - <i>Create a name and logo for your product.</i> - <i>Create a slogan and ingredients for your product.</i> - <i>Share and present your product design with others.</i>

ASSESSMENT OF LEARNING

<p>Summative Assessment (Assessment at the end of the learning period)</p>	<p>Portfolio Rubrics Notes</p>
<p>Formative Assessments (Ongoing assessments during the learning period to inform instruction)</p>	<p>Anecdotal Records Teacher Observation</p>
<p>Alternative Assessments (Any learning activity or assessment that asks students to <i>perform</i> to demonstrate their knowledge, understanding and proficiency)</p>	
<p>Benchmark Assessments (used to establish baseline achievement data and</p>	

measure progress towards grade level standards; given 2-3 X per year)

RESOURCES

Core instructional materials:
Primary Thinking Skills
Primary Creativity

Supplemental materials:

Modifications for Learners

Gifted and Talented

Note: These strategies are to be implemented based on individual student needs when applicable.

Gifted and Talented Extension Activities

Thematic topics for discussion and research

Provide advanced/supplementary reading materials

Use authentic resources to promote a deeper understanding of concepts

Provide opportunities for open-ended, self-directed activities

Encourage creativity/Provide opportunities to develop depth and breadth of knowledge in the subject area (examples: create drawings/illustrations, use of music, create poems/songs, write opinion letters, create videos/stories/comic strips, etc.)

Conduct product research to see how products are promoted and labeled.

Use higher level questioning technique

Provide activities that contain a higher level of thinking

Provide puzzles and activities that promote self expression.

Topic/Unit 2 Title	Gifts	Approximate Pacing	8 weeks
STANDARDS			
NJSLS (Content)			
<p>NJ: 2016 SLS: English Language Arts NJ: Grade 2</p> <p>Reading: Literature</p> <p>Key Ideas and Details NJSLSA.R1 Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text. RL.2.1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.</p> <p>Writing NJSLSA.W3 Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences. W.2.3. Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.</p> <p>Research to Build and Present Knowledge W.2.7. Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). W.2.8. Recall information from experiences or gather information from provided sources to answer a question.</p>			

Speaking and Listening

Comprehension and Collaboration

NJSLSA.SL1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

SL.2.1. Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

NJSLSA.SL2 Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

SL.2.2. Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

NJSLSA.SL3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

SL.2.3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

Presentation of Knowledge and Ideas

NJSLSA.SL4 Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

SL.2.4. Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.

Language

Vocabulary Acquisition and Use

NJSLSA.L4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

L.2.4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 2 reading and content, choosing flexibly from an array of strategies.

Career Readiness, Life Literacies, and Key Skills

Creativity and Innovation: 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.3 Uses a variety of types of thinking to solve problems (e.g.,inductive, deductive)

Interdisciplinary Connections:

Career Readiness, Life Literacies, and Key Skills

<p>Social and Emotional Learning</p> <ul style="list-style-type: none"> ● Recognize one’s feelings and thoughts ● Understand and practice strategies for managing one's own emotions, thoughts, and behaviors ● Recognize the skills needed to establish and achieve personal and educational goals ● Develop, implement and model effective problem solving and critical thinking skills ● Utilize positive communication and social skills to interact effectively with others 	<p>Creativity and Innovation 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)</p> <p>Critical Thinking and Problem Solving 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 reasoning)</p> <p>9.4 Life Literacy and KeySkills</p> <p>Information and Media Literacy - Digital tools and media resources provide access to vast stores of information that can be searched.</p> <p>9.4.22IML.1 Identify a simple search term to find information in a search engine or digital resource. Engineering and Design</p>
<p>Computer Science and Design and Thinking</p>	<p>Career Ready Practices:</p>
<p>Engineering and Design</p>	<p>CRP1. Act as a responsible and contributing citizen and employee.</p>

<p>Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions. •</p> <p>8.2.2.ED.1: Communicate the function of a product or device. •</p> <p>8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. •</p> <p>8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process. Limitations (constraints) must be considered when engineering designs.</p> <p>8.2.2.ED.4: Identify constraints and their role in the engineering design process.</p> <p>Interaction of Technology and Humans</p> <p>• 8.2.2.WITH.1: Identify products that are designed to meet human wants or needs.</p> <p>• 8.2.2.ITH.2: Explain the purpose of a product and its value.</p>	<p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP5. Consider the environmental, social and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p>
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UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS

Enduring Understanding : Gifts have different values to different people.
The value of a gift determines if it is preserved.
Preserved gifts reflect society's value

Essential Questions: What is a gift?

What kind of gifts and talents do you have? What type of things can be gifts? Are all gifts purchased?

- What does fragile mean?
- What is an heirloom?
- How do you receive by giving?
- What gifts do good leaders give to the people?
- Why do we preserve certain gifts and not others?
- How do you protect a gift?
- How do you put a value on a gift?
- How is the American Flag a gift?
- How do we keep our gifts safe?
- How are people judged by the gifts they leave society?

- Why is it important to preserve gifts
- What type of things can be gifts?
- Are all gifts purchased?
- What does fragile mean?
- What is an heirloom?
- How do you receive by giving?
- What gifts do good leaders give to the people?
- Why do we preserve certain gifts and not others?
- How do you protect a gift?
- How do you put a value on a gift?
- How is the American Flag a gift?
- How do we keep our gifts safe?
- How are people judged by the gifts they leave society?
- Why is it important to preserve gifts?

STUDENT LEARNING OBJECTIVES

Key Knowledge	Process/Skills/Procedures/Application of Key Knowledge
<p>The following content areas will be covered:</p> <p>Preservation: Historical preservation of gifts.</p> <p>Value: Judgement of value by others</p> <p>Types of gifts (Gift of self, gifts of family, gift to nature, gift to our country, gifts of leaders)</p> <p>Being a giver Gift of Self Family Heirlooms</p>	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> - Explore the value of giving and receiving gifts. - Discover why collecting is a major hobby? - Study the need to preserve gifts of different kinds. - Answer the question: Should our natural resources be considered precious? - Understand the gifts that they possess - Understand how we can give gifts to nature - Understand how we can give the gift of self. - Understand how leaders give gifts to the people they lead - Understand the importance of a family heirloom - Understand the importance of giving.

ASSESSMENT OF LEARNING

<p>Summative Assessment (Assessment at the end of the learning period)</p>	<p>Pre-Assessment</p> <p>Formative: Post Test</p> <p>Students are asked to finish the following thought:</p> <p>"My greatest gift is..."</p> <p>Post-Assessment</p> <p>Summative: Post Test</p> <p>Students will finish this sentence or thought, "My greatest gift is..." and compare it to responses at the beginning of the curriculum.</p>
<p>Formative Assessments (Ongoing assessments during the learning period to inform instruction)</p>	<p>Rubric</p>
<p>Alternative Assessments (Any learning activity or assessment that asks students to <i>perform</i> to demonstrate their knowledge, understanding and proficiency)</p>	<p>Teacher observation Note taking</p>
<p>RESOURCES</p>	
<p>Core instructional materials: <i>Gifts: Differentiated Curriculum</i>. Prufrock Press. 2008.</p> <p>Learning Activities: Pre-Assessment, <i>Gifts: Differentiated Curriculum</i>. Prufrock Press. 2008.</p>	
<p>Supplemental materials:</p>	

Tutankhamen's Gift by Robert Sabuda.
Alejandro's Gift by Richard E. Albert.
The Giving Tree by Shel Silverstein.
The Velveteen Rabbit by Margery Williams.
The Keeping Quilt by Patricia Polacco

Modifications for Learners

Gifted and Talented

Note: These strategies are to be implemented based on individual student needs when applicable.

1. Provide a variety of extension activities which can include:
 - Thematic topics for discussion and research
 - Provide advanced/supplementary reading materials
 - Use authentic resources to promote a deeper understanding of concepts
 - Provide opportunities for open-ended, self-directed activities
 - Facilitate communication with experts outside the classroom for real world and deeper contextual understanding
 - Encourage creativity/Provide opportunities to develop depth and breadth of knowledge in the subject area (examples: create drawings/illustrations, use of music, create poems/songs, write opinion letters, create videos/stories/comic strips, etc.)
 - Conduct research and provide a presentation of related topics
 - Design surveys to generate and analyze data to be used in discussion
 - Debate topics of interest/cultural importance
 - Provide complex, authentic reading sources that provide data and support for concepts covered in the course
 - Use higher level questioning techniques
 - Provide activities that contain a higher level of thinking
 - Provide Tiered lessons
 - Provide choice boards

Topic/Unit 3 Title	Mystery Festival By: Alice Willard	Approximate Pacing	8 weeks
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STANDARDS

NJSLS (Content)

NJSLS-S: Science and Engineering Practices

NJSLS-S: K-2

Practice 3. Planning and carrying out investigations

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.

Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question.

Practice 7. Engaging in argument from evidence

Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s).

Construct an argument with evidence to support a claim.

Career Readiness, Life Literacies, and Key Skills

9.4 Life Literacies and Key Skills :

Creativity and Innovation: 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.3 Uses a variety of types of thinking to solve problems (e.g.,inductive, deductive)

Interdisciplinary Connections:

Career Readiness, Life Literacies, and Key Skills

Forensic Science Concepts

Chemistry

Creativity and Innovation

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). •

<p>Crime Scene Investigation / Crime Lab Tests</p> <p>Chromatography</p> <p>Fingerprinting</p> <p>Inductive and Deductive Thinking Skills</p>	<p>9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A)</p> <p>Critical Thinking and Problem Solving</p> <p>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 reasoning)</p> <p>9.4 Life Literacy and KeySkills</p> <p>Information and Media Literacy - Digital tools and media resources provide access to vast stores of information that can be searched.</p> <p>9.4.22IML.1 Identify a simple search term to find information in a search engine or digital resource.</p>
<p>Computer Science and Design and Thinking</p>	<p>Career Ready Practices:</p>
<p>Engineering and Design</p> <p>Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions. •</p> <p>8.2.2.ED.1: Communicate the function of a product or device. •</p> <p>8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. •</p> <p>8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process. Limitations (constraints) must be considered when engineering designs.</p>	<p>CRP1. Act as a responsible and contributing citizen and employee.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP5. Consider the environmental, social and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p>

<p>8.2.2.ED.4: Identify constraints and their role in the engineering design process.</p> <p>Interaction of Technology and Humans</p> <ul style="list-style-type: none"> • 8.2.2.WITH.1: Identify products that are designed to meet human wants or needs. • 8.2.2.ITH.2: Explain the purpose of a product and its value. 	<p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p>
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UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS

In order to solve “mysteries” there are a number of mental strategies, and physical tools that allow a person to come up with a viable solution to a variety of unresolved quandaries. As we understand more about science and the human body we are better able to get accurate answers. Also, we realize that even when all details are collected and studied, humans are capable of making errors.

Essential Questions:

How can detectives use science to help them solve crimes?

What kinds of evidence can be left at a crime scene, and what can be learned from these pieces of evidence?

How can deductive reasoning help when solving a mystery?

How do different types of “experts” work together to help solve a crime?

What are some common characteristics of mystery stories?

STUDENT LEARNING OBJECTIVES

Key Knowledge	Process/Skills/Procedures/Application of Key Knowledge
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<p>Students will complete the following activities :</p> <p><i>Session 1: Scene of the Crime Students discover the scene of the crime, then look for, and record clues.</i></p> <p><i>Session 2: The Story The suspects are introduced, and their alibis heard. This information is used to re-examine the crime scene clues.</i></p> <p><i>Session 3: Crime Lab Stations A Students, in teams of two, conduct tests on five pieces of evidence at seperate stations, then take a new look at the suspects in light of each piece of evidence.</i></p> <p><i>Session 4: Crime Lab Stations B Students conduct tests on five more pieces of evidence at five additional stations, then take another look at the suspects in light of each piece of evidence.</i></p> <p><i>Session 5: Solving the Mystery The teacher and her class use one of the options presented to attempt to solve the crime.</i></p>	<p>Students will be able to:</p> <p>-Apply background knowledge of fingerprinting and scientific method in order to generate solutions based on observations and tests.</p> <p>-Take a complex crime scene and move from the role of collecting evidence, to being a forensic scientist to identifying a culprit.</p> <p>- Have experience completing experiments with the following content</p> <ul style="list-style-type: none"> ● Forensic Science ● Evidence ● Fingerprints ● Footprints ● Chromatography ● Acids, Bases, and Neutrals ● pH Testing ● Powder Testing ● Thread Comparison Testing ● Crystals ● Dissolving
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ASSESSMENT OF LEARNING

<p>Summative Assessment (Assessment at the end of the learning period)</p>	<p>Summative: Oral: Discussion</p> <p>Students will access their evidence packets and use their knowledge of the crime scene to draw conclusions and support their reasoning of who they think borrowed Mr. Bear during a class discussion.</p>
<p>Formative Assessments (Ongoing assessments during</p>	<p>Clue Board</p> <p>Formative: Written: Informative</p>

the learning period to inform instruction)	<p>Students will have a clue board and evidence worksheet packet that will assist them during their investigations that they can refer to and draw conclusions from when completed.</p> <p>Drawing Conclusions</p>
Alternative Assessments (Any learning activity or assessment that asks students to <i>perform</i> to demonstrate their knowledge, understanding and proficiency)	<p>Rubrics Critical Thinking Puzzles</p>
RESOURCES	
<p>Core instructional materials:</p> <ul style="list-style-type: none"> - <i>LHS GEMS Mystery Festival Teacher Guide</i> 	
<p>Supplemental materials:</p>	
<p>Modifications for Gifted Learners:</p> <p>Gifted and Talented: Critical Thinking</p> <p>Extension Activities:</p>	

Thematic topics for discussion and research.

Complete mystery word games.

Complete mystery logic puzzles

Work on visual puzzles

Read detective mysteries

Read A to Z Mysteries by Ron Roy

Complete CSI types of investigations

Provide advanced/supplementary reading materials

Use authentic resources to promote a deeper understanding of concepts

Provide opportunities for open-ended, self-directed activities.

Facilitate communication with experts outside the classroom for real world and deeper contextual understanding

Encourage creativity

Provide opportunities to develop depth and breadth of knowledge in the subject area (examples: create drawings/illustrations, use of music, create poems/songs, write opinion letters, create videos/stories/comic strips, etc.)

Conduct research and provide a presentation of related topics

Design surveys to generate and analyze data to be used in discussion

Debate topics of interest/cultural importance

Provide complex, authentic reading sources that provide data and support for concepts covered in the cour

Use higher level questioning technique

Provide assessments that contain a higher level of thinking

Provide activities that include higher level thinking

Topic/Unit 4 Title	Ancient Egypt	Approximate Pacing	8 weeks
STANDARDS			
NJSLS (Content)			
<p>RI.2.3. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.</p> <p>RI.2.4. Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.</p> <p>RI.2.5. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.</p> <p>RI.2.6. Identify the main purpose of a text, including what the author wants to answer, explain, or describe.</p> <p>RI.2.7. Explain how specific illustrations and images (e.g., a diagram showing how a machine works) contribute to and clarify a text.</p>			

RI.2.8. Describe and identify the logical connections of how reasons support specific points the author makes in a text.
 RI.2.9. Compare and contrast the most important points presented by two texts on the same topic.
 RI.2.10. Read and comprehend informational texts, including history/social studies, science, and technical texts, at grade level text complexity proficiently with scaffolding as needed.

W.2.8. Recall information from experiences or gather information from provided sources to answer a question.

SL.2.2. Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
 SL.2.3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue

Career Readiness, Life Literacies, and Key Skills

Creativity and Innovation: 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.3 Uses a variety of types of thinking to solve problems (e.g.,inductive, deductive)

Interdisciplinary Connections:	Career Readiness, Life Literacies, and Key Skills
<p>Communities of the past</p> <p>Ancient Civilizations</p> <p>World Cultures</p> <p>Archaeology</p>	<p>Creativity and Innovation</p> <p>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)</p> <p>Critical Thinking and Problem Solving</p> <p>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.,</p>

	<p>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 reasoning)</p> <p>9.4 Life Literacy and KeySkills Information and Media Literacy - Digital tools and media resources provide access to vast stores of information that can be searched.</p> <p>9.4.22IML.1 Identify a simple search term to find information in a search engine or digital resource.</p> <p>9.4.2 IML.3 Use a variety of sources including multimedia sources to find information about topics , with guidance and support from adults.</p>
Computer Science and Design and Thinking	Career Ready Practices:
<p>Engineering and Design</p> <p>Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions. •</p> <p>8.2.2.ED.1: Communicate the function of a product or device. •</p> <p>8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. •</p> <p>8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process. Limitations (constraints) must be considered when engineering designs.</p> <p>8.2.2.ED.4: Identify constraints and their role in the engineering design process.</p> <p>Interaction of Technology and Humans</p>	<p>CRP1. Act as a responsible and contributing citizen and employee.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP5. Consider the environmental, social and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p>

<ul style="list-style-type: none"> • 8.2.2.WITH.1: Identify products that are designed to meet human wants or needs. • 8.2.2.ITH.2: Explain the purpose of a product and its value. 	
UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS	
<p>Who is King Tut ?</p> <p>What was the ancient civilization of ancient Egypt like?</p> <p>How does geography influence the development of a civilization?</p> <p>Why was the Nile river considered the lifeline for ancient Egypt?</p> <p>How were the Pyramids built?</p> <p>Why were the pyramids built?</p> <p>How did religion influence the culture of ancient Egypt?</p> <p>Why was the Rosetta Stone an important discovery?</p> <p>How was life in ancient Egypt different from ours and how was it the same?</p> <p>Why were Hieroglyphics important during that time period?</p> <p>How were mummies made?</p> <p>Why was Howard Carter’s discovery so significant?</p> <p>What was found in King Tut’s tomb?</p>	
STUDENT LEARNING OBJECTIVES	
Key Knowledge	Process/Skills/Procedures/Application of Key Knowledge

<p>Students will explore the following topics of ancient Egypt:</p> <p><i>Daily life</i> <i>Nile River</i> <i>Government and Leaders</i> <i>Gods and Goddesses</i> <i>Pyramids</i> <i>King Tut</i> <i>Mummies</i> <i>Ways to mummify</i> <i>Otzi The Frozen IceMan</i> <i>Afterlife</i> <i>Hieroglyphics</i> <i>Canopic Jars</i> <i>Howard Carter and Lord Carnarvon</i></p>	<p>Students will be able to:</p> <p><i>Compare and contrast daily life to modern life.</i> List ways in which the Nile river helped create ancient civilization Explain and label the hierarchy of an ancient Egyptian civilization from peasants to Pharaohs. Research several Gods and Goddesses and tell what they were worshiped for. Understand how and why pyramids were built. Build a pyramid out of paper Build a pyramid out of toothpicks and marshmallows Understand the life of King Tut and be able to name several facts about his life. Understand why King Tut became a Pharaoh. Listen to evidence on how King Tut died. Understand and label the steps on how to make a mummy Mummify an apple and record the results Read about Otzi the IceMan and compare that kind of mummy to mummies of ancient Egypt . To understand how to write hieroglyphics Write their name in hieroglyphics Write a sentence in hieroglyphics Create a cartouche To name the ways to get to the afterlife. Tell about the afterlife. Tell the contents and purpose of the canopic jars Understand and explain the importance of the discovery of King Tut's tomb. Diagram the inside of a tomb.</p>
ASSESSMENT OF LEARNING	

Summative Assessment (Assessment at the end of the learning period)	Student Portfolios Notes
Formative Assessments (Ongoing assessments during the learning period to inform instruction)	
Alternative Assessments (Any learning activity or assessment that asks students to <i>perform</i> to demonstrate their knowledge, understanding and proficiency)	Rubrics Critical thinking activities
Benchmark Assessments (used to establish baseline achievement data and measure progress towards grade level standards; given 2-3 X per year)	
RESOURCES	
Core instructional materials: Who is King Tut by Roberta Braverman	
Supplemental materials: Ancient Egypt History Pockets : Evan Moor Publishing	
Modifications for Learners	
Gifted Modification:	

Choice Board

Tiered Leveled activities

Accountable Talk

Meaningful content

Digging Deeper into a topic to expand student interest

Effective project design (pyramids, and mummification experiments)

Personal responsibility

Higher level assignments and activities which keep students thinking and engaged.

Provide visual puzzles

Decode and Encode Hieroglyphics

Facilitate communication with experts outside the classroom for real world and deeper contextual understanding

Encourage creativity

Provide opportunities to develop depth and breadth of knowledge in the subject area (examples: create drawings/illustrations, use of music, create poems/songs, write opinion letters, create videos/stories/comic strips, etc.)

Conduct research and provide a presentation of related topics

Design surveys to generate and analyze data to be used in discussion

Debate topics of interest/cultural importance

Provide complex, authentic reading sources that provide data and support for concepts covered in the cour

Use higher level questioning technique

Provide assessments that contain a higher level of thinking

Provide activities that include higher level thinking

Provide Hands- on activities

Topic/Unit 5 Title	Materials Engineering - Designing Walls	Approximate Pacing	8 weeks
STANDARDS			
NJSLS (Content)			
<p>2-PS1 Matter and Its Interactions</p> <p>2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.</p> <p>2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.</p> <p>2-PS1-3. Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.</p> <p>K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p>			

K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

Career Readiness, Life Literacies, and Key Skills

Creativity and Innovation

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Critical Thinking and Problem Solving

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 reasoning)

Interdisciplinary Connections:	Career Readiness, Life Literacies, and Key Skills
<p>China</p> <p>Materials Engineering</p> <p>Wall Around the World</p> <p>World Structures</p> <p>Housing and Shelters around the world.</p> <p>Innovations in Gardening and garden fences and structures.</p>	<p>Creativity and Innovation</p> <p>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)</p> <p>Critical Thinking and Problem Solving</p> <p>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 reasoning)</p> <p>9.4 Life Literacy and KeySkills</p>

	<p>Information and Media Literacy - Digital tools and media resources provide access to vast stores of information that can be searched.</p> <p>9.4.22IML.1 Identify a simple search term to find information in a search engine or digital resource.</p> <p>9.4.2 IML.3 Use a variety of sources including multimedia sources to find information about topics , with guidance and support from adults.</p>
<p>Computer Science and Design and Thinking</p>	<p>Career Ready Practices:</p>
<p>Engineering and Design</p> <p>Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions. •</p> <p>8.2.2.ED.1: Communicate the function of a product or device. •</p> <p>8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. •</p> <p>8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process. Limitations (constraints) must be considered when engineering designs.</p> <p>8.2.2.ED.4: Identify constraints and their role in the engineering design process.</p> <p>Interaction of Technology and Humans</p> <p>• 8.2.2.WITH.1: Identify products that are designed to meet human wants or needs.</p> <p>• 8.2.2.ITH.2: Explain the purpose of a product and its value.</p>	<p>CRP1. Act as a responsible and contributing citizen and employee.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP5. Consider the environmental, social and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p>

UNIT/TOPIC ESSENTIAL QUESTIONS AND ENDURING OBJECTIVES/UNDERSTANDINGS	
<p>Engineering is Elementary is a curriculum program that integrates engineering with elementary science topics. Goal1: Increase children’s technological literacy . Students will acquire essential understanding and skills that include:</p> <p>Knowledge: (Know about)</p> <ul style="list-style-type: none"> - What engineering and technology are and what engineers do. - Various fields of engineering - Nearly everything in the human world has been touched by engineering - How technology affects the world both negatively and positively. - Engineers are from all races, ethnicities, and genders. - Engineering problems have multiple solutions. <p>Skills/ Experience (Be able to)</p> <ul style="list-style-type: none"> - Apply the Engineering Design Process - Apply science and math engineering - Employ creativity and careful thinking to solve problems - Envision one’s own abilities as an engineer - Troubleshoot and learn from failure - Understand the central role of materials and their properties in engineering solutions 	
STUDENT LEARNING OBJECTIVES	
Key Knowledge	Process/Skills/Procedures/Application of Key Knowledge
<p>Students will know: How do things that we use come to be? What are engineering and technology? What is material? What are tools? Who creates things that we use? What is engineering design? What do engineers do to design or improve a product or system?</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> - Identify a process and explain what a process is in an engineering context . - explain why the order of the steps in a process is important. - explain why the order of the steps in a process is important.

What do creativity and careful thinking have to do with engineering?
What are some fields of engineering?
How do people and cultures affect what technologies are developed?
How can we become better at solving engineering problems?
How do the properties of a material affect how it is used?
How do we design, improve, or evaluate a product or system?
How are science, technology, and engineering related?
What do engineers do to design or improve a new product?
How do engineers use science and math?
How do we design, improve or evaluate a product or system?
Why is it important for engineers to work together?
What kinds of problems can engineers help us solve?

- **Identify and explain the steps in the Engineering Design Process**
- **Identify and explain the role of a materials engineer in designing and improving technologies, especially processes.**
Identify the role of a materials engineer
Understand the properties of cloth, paper, brick and straw
Identify how cloth, paper, brick and straw will act if used to build with.
Experiment with cloth, paper, brick and straws to see how strong each material is.
- **Identify and implement the steps in the engineering design process.**
- **Identify the properties of a material**
- **Identify the properties of sand, soil and clay.**
- **Experiment with sand soil and clay when those materials are dry.**
- **Experiment with sand, soil and clay when those materials are wet.**
- **Compare the dry sand, clay and soil materials to the wet materials.**
- **Conduct an Earthquake test using wet sand, clay and soil.**
- **Analyze experimental results to draw conclusions about the properties of sand, clay and soil.**
- **Make improvements with the sand, clay and soil to make it stronger.**
- **Imagine what you can do with clay, sand and soil to build a structure.**
- **Plan a materials engineering process to see what materials will be best to design a wall.**
- **Create a wall out of sand, clay, and soil**
- **Construct a catapult**

- *Evaluate the wall by putting the force of the catapult on it.*
- *Evaluate and document the results.*
- *Think of ways to improve the wall.*

ASSESSMENT OF LEARNING

Summative Assessment (Assessment at the end of the learning period)	Student Portfolios Wall Construction
Formative Assessments (Ongoing assessments during the learning period to inform instruction)	Rubrics Notes
Alternative Assessments (Any learning activity or assessment that asks students to <i>perform</i> to demonstrate their knowledge, understanding and proficiency)	
Benchmark Assessments (used to establish baseline achievement data and measure progress towards grade level standards; given 2-3 X per year)	

RESOURCES

Core instructional materials:

EIE Unit : A Sticky Situation : Designing Walls

Supplemental materials:

Modifications for Learners

Gifted Modification:

Choice Board

Tiered Leveled activities

Accountable Talk

Meaningful content

Digging Deeper into a topic to expand student interest

Effective project design

Complete experiments to examine the properties of a variety of materials

Personal responsibility

Higher level assignments and activities which keep students thinking and engaged.

Provide visual puzzles

Building structures and evaluating structures

Stem related assignments involving materials engineering