




	Sep				Oct				Nov					Dec			Jan					Feb					Mar				Apr					May					Jun		
Unit:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40			
Archaeology 4th Grade 																																											
GRO Crime Scene Investigation 4th Grade 																																											
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4GRO Gifted Reach Out Program Grade 4 (BA)

Elementary Schools > 2017-2018 > Grade 4 > GRO - Gifted Reach Out > 4GRO Gifted Reach Out Program Grade 4 (BA) > Armstrong, Janet; Cave, Anna
 Wednesday, October 18, 2017, 6:35PM

















Unit	Proficiency / Objectives	Standards	Essential Questions	Enduring Understanding	Suggested Activities	Evaluation / Assessment	Core and Supplemental Resources:	21st Century Skills	Teacher Notes
Archaeology 4th Grade <i>(September-January)</i> Unit Planner /Pacing Linked Here	1. Define archaeological terms for meaningful use. 2. Discover roles of archaeologists and what they do. 3. Assess the characteristics of a society based on analysis of an artifact. 4. Identify and	NJ: 2016 SLS: English Language Arts NJ: Grade 4 Reading: Informational Text Key Ideas and Details NJLSA.R.1 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	1. How does an archaeologist uncover past cultures? 2. How does the study of archaeology reveal the identity of cultures? 3. Why is it important to study archaeology? 4. How do archaeologists	1. The goal of archaeology is to understand how and why human behavior has changed over time and to look for patterns. 2. Archaeologists use tools and specific methods to uncover ancient culture	1. Define archaeological terms for meaningful use. a. Collaborate with peers to engage in a variety of archaeological vocabulary activities. b. Play a matching game. c. Use Marzano mapping. d. Create individual student dictionary. e. Crossword puzzle, jumbled words, word finds etc. f. Use vocabulary terms in their writing. g. Make a slide show (with graphics) of vocabulary words. h. www.nps/archaeology.gov make a slideshow of vocabulary and how an archaeologist does her/his job, vocabulary matching activities. 2. Discover roles of archaeologists and what they do. a. This website explains the various roles of archaeologists -  https://www.nps.gov/archeology/public/kids/index.htm	Vocabulary Other: Quiz Technology Oral: Presentation Can be Power point, Slide Show or other tech supported presentation. Written: Journal/Diary Work collected in individual binders Oral: Discussion	Core: https://www.state.nj.us/education/aps/cccs/gandt/ New Jersey Department of Education Gifted and Talented Homepage http://www.nagc.org/resources-publications/resources National Association for Gifted and Talented resources https://www.nsgt.org/education-resources/ National Society for Gifted and Talented resources Supplemental: Barber, Jacqueline, Barrett, Katharine, Bergman, Lincoln, et al. (1996). Investigating Artifacts. Lawrence Hall of Science - Great Explorations in Math and Science (GEMS), University of California at Berkeley. Coan, Julie. (1999). Digging into archaeology. Critical thinking books and software: Pacific Grove, California. Hartland, Jessie. (2010). How	NJ: 2014 SLS: 21st Century Life and Careers NJ: All Grade 4 Career Ready Practices CRP 1. Act as a responsible and contributing	1. Next year: We need to revise our final project as we don't want to have annual 'time capsules' placed into the ground at each school. Should we bury them at Town

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	explain methods archeologists use in excavating and dating artifacts found in a site. 5. Analyze and articulate how artifacts get to a museum. 6. Explain and evaluate contributions of past civilizations and their impact on today's society.	conclusions drawn from the text. RI.4.1 Refer to details and examples in a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text. NJSLSA.R.3 Analyze how and why individuals, events, and ideas develop and interact over the course of a text. RI.4.3. Explain events, procedures,	finding us today?	s beliefs, traditions and identity 3. All cultures have attributes that reveal their identities; archaeologists uncover and analyze artifacts to determine these attributes.	(Possible use: teacher created scavenger hunt for this website or discovering vocabulary terms). b. Land of the Spirits website  http://www.virtualmuseum.ca/sgc-cms/expositions-exhibitions/esprits-spirits/English/Dig/arch101.html c. Have students create their own slideshow or self-assessment tool based on these websites. d. Estimate the size, or diameter of the pot opening by placing a rim shard on the pot diameter chart. e. Reassemble fragments of broken pottery. f. Complete an artifact data sheet. g. Participate in a simulated archaeological dig. 3. Assess the characteristics of a society based on analysis of a single artifact. a. Work in small groups. Groups will be given a coin (artifact) and a list of questions. Students will take on the role of an archaeologist as they examine the coin to make inferences, analyze details and features, brainstorm, and formulate questions. (May use American or	Other: Teacher Observation Performance: Authentic Task Create a culture time capsule Written: Informative Can be: Stratigraphy Story, Midden Analysis, Field notes on Simulated Dig, Research Report, Artifact Analysis 	the Sphinx got to the museum. Maplewood, NJ: Blue Apple Books. Macauley, David. (1979). Motel of the mysteries. Boston: Houghton Mifflin Company. Stark, Rebecca. (1994). Archaeology. (3rd ed.) Educational Impressions: Hawthorne, NJ.  https://www.nps.gov/archeology/public/kids/index.htm  http://www.virtualmuseum.ca/sgc-cms/expositions-exhibitions/esprits-spirits/English/Dig/arch101.html  http://thesga.org/wp-content/uploads/1992/03/sga_1992_arch_in_classroom.pdf  How to run a Socratic Seminar  How to hold a debate	g citize n and empl oyee. NJ: Grade 4 9.2 Career Awareness, Exploration, And Preparation Strand A: Career Awareness 9.2.4. A.1 Identify reasons why people work, differ	Hall, Board of Education Librarians or other locations in Parsippany? 2. Create assessment for time capsule project based on the process attained throughout the project. For example, critical thinking sample

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		<p>ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.</p> <p>Craft and Structure NJLSA.R.4 Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.</p>			<p>foreign coins.)</p> <p>b. Discuss and draw conclusions based on the information gathered.</p> <p>c. Research and report findings on an artifact that is provided (arrowhead).</p> <p>d. Bring in and present artifacts from their cultural heritage.</p> <p>4. identify methods archaeologists use in excavating and dating artifacts found in a site.</p> <p>a. Read stratigraphy story “A Long, Long, Time Ago...” and create a drawing or a model depicting the artifacts at each stratum.</p> <p>b. Complete Midden project.</p> <p>c. Examine and discuss Stratigraphy Board.</p> <p>d. Identify and discuss dendrochronology, varve system, radio carbon dating, thermoluminescence, uranium dating and cultural dating.</p> <p>e. Short research report: (possible ideas) - dating methods or specific fields of archaeology (eg. underwater archeology) or an archaeological mystery (eg. Chambers of Bruniquel Cave in France).</p> <p>f. Read this book: Macauley, David. (1979).</p>	<p>Archaeology slide show rubric.doc</p> <p></p> <p>Archaeology Vocabulary Quiz.docx</p> <p></p> <p>Mid-Unit Archaeology Quiz.docx</p> <p></p> <p>Time Capsule Assignment & Rubric.docx</p>		<p>ent types of work, and how work can help a person achieve personal and professional goals.</p> <p>9.2.4.A.2 Identify various life roles and civic and work-related activities in the scho</p>	<p>rubric.3. Create a rubric to assess the debate to present student justification for selection of the artifact.</p> <p></p> <p>critical thinking samplerubric.pdf</p>

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		<p>RI.4.4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.</p> <p>NJSLSA.R.9 analyze and reflect on how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.</p> <p>RI.4.9 Integrate</p>			<p>Motel of the mysteries. Boston: Houghton Mifflin Company.</p> <p>5. How do artifacts get to a museum?</p> <p>a. Take a field trip to a museum.</p> <p>b. Go on a virtual field trip.</p> <p>c. Have an archaeologist/curator come and speak to our students (Drew University) / Carmen at Edison's lab - Facetime.</p> <p>d. Read this book: Hartland, Jessie. (2010). How the Sphinx got to the museum. Maplewood, NJ: Blue Apple Books.</p> <p>Assessment – Project Based Learning (PBL) Assessment</p> <p>6. Explain contributions of past civilizations and their impact on today's society.</p> <p>a. Compare and contrast aspects of an ancient civilization to our society today (eg. food, clothing, religion, government, entertainment, economy, art and customs/traditions) or (attitude (about war, education, government), achievements, beliefs (customs, & art).</p> <p>b. Explore the meaning of culture & how it relates to us in our everyday lives.</p>			<p>ol, home, and community.</p> <p>9.2.4. A.3 Investigate both traditional and nontraditional careers and relate information to personal likes and dislikes.</p> <p>9.2.4. A.4 Explain why knowledge and skills acqui</p>	

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		<p>and reflect on (e.g. practical knowledge, historical/cultural context, and background knowledge) information from two texts on the same topic in order to write or speak about the subject knowledgeably.</p> <p>Writing Text Types and Purposes NJSLSA.W.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and</p>			<p>Determine aspects of American Culture-use culture map (see: A look at Culture attachment below). b. To understand the past, we need to tie into the future - people want to be understood - how are future generations going to view your culture? c. Create one cultural time capsule PBL (per school) for a future generation: should it be about our school? town? country? (See Time Capsule Preparation attachment below).</p> <p> An introduction to archaeology.pptx  GRO Archaeology Vocabulary.doc  Archaeology Vocabulary Words.png  Penny Questions-archaeology.doc  Midden garbage.pdf  Stratigraphy Story.doc</p>			<p>red in the elementary grades lay the foundation for future academic and career success.</p> <p>Copyright © State of New Jersey, 1996 - 2016.</p>	

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		<p>sufficient evidence.</p> <p>W.4.1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.</p> <p>NJLSA.W 2 Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.</p> <p>W.4.2. Write informative/</p>			<p> Stratigraphy Activity.docx</p> <p> Dating – How old is an artifact?.docx</p> <p> Dating Wordfind.docx</p> <p> "Dig Deeper"</p> <p> A Look at Culture.pdf</p> <p> Time Capsule Preparation Lessons.docx</p> <p> Time Capsule:Artifact Identification & Classification Form</p> <p> Time Capsule Survey Graphing Activity.pdf</p>				

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		<p>explanatory texts to examine a topic and convey ideas and information clearly.</p> <p>Production and Distribution of Writing NJSLSA.W.4.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>W.4.4. Produce clear and coherent writing in which the development and organization are appropriate</p>							

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		<p>to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)</p> <p>NJLSA.W.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p> <p>W.4.5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.</p> <p>NJLSA.W</p>							

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		<p>6 Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p>							
		<p>W.4.6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single</p>							

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		<p>sitting.</p> <p>Research to Build and Present Knowledge NJLSA.W.7 Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.</p>							
		<p>W.4.7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.</p> <p>NJLSA.W</p>							

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		<p>8 Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.</p>							
		<p>W.4.8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.</p>							

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		<p>NJLSA.W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.</p>							
		<p>W.4.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p>							
		<p>Speaking and Listening Comprehension and Collaboration NJLSA.S.L1 Prepare for and participate effectively in a range of conversati</p>							

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		<p>ons and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</p>							
		<p>SL.4.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.</p>							
		<p>SL.4.1a. Explicitly draw on previously</p>							

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		<p>read text or material and other information known about the topic to explore ideas under discussion.</p> <p>SL.4.1b. Follow agreed-upon rules for discussions and carry out assigned roles.</p> <p>SL.4.1c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.</p> <p>SL.4.1d. Review the</p>							

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		<p>key ideas expressed and explain their own ideas and understanding in light of the discussion.</p> <p>NJLSA.S L2 Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.</p> <p>SL.4.2. Paraphrase portions of a text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and</p>							

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		<p>orally).</p> <p>NJLSA.S L3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.</p> <p>SL.4.3. Identify the reasons and evidence a speaker provides to support particular points.</p> <p>Presentati on of Knowledge and Ideas NJLSA.S L4 Present informatio n, findings, and supporting evidence such that listeners can follow the line of reasoning and the</p>							

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		<p>organization, development, and style are appropriate to task, purpose, and audience.</p> <p>SL.4.4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.</p> <p>NJLSA.S L5 Make strategic use of digital media and</p>							

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		<p>visual displays of data to express information and enhance understanding of presentations.</p> <p>SL.4.5. Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.</p> <p>NJSLSA.S L6 Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when</p>							

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		<p>indicated or appropriate.</p> <p>SL.4.6. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.</p>							
		<p>NJ: 2014 SLS: Social Studies NJ: Grades K-4</p> <hr/> <p>D. History, Culture, and Perspectives</p> <p>6.1 U.S.</p>							

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		<p>History: America in the World. All students will acquire the knowledge and skills to think analytically about how past and present interactions of people, cultures, and the environment shape the American heritage. Such knowledge and skills enable students to make informed decisions that reflect fundamental rights and core democratic values as productive citizens in</p>							

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		<p>local, national, and global communities.</p> <p>6.1.4. D.13 Describe how culture is expressed through and influenced by the behavior of people.</p> <p>6.1.4. D.18 Explain how an individual's beliefs, values, and traditions may reflect more than one culture.</p>							
		<p>NJ: 2014 SLS: Technology NJ: Grades 3-5</p> <hr/> <p>8.1 Educational Technology</p> <p>8.1 Educational Technolog</p>							

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		<p>y: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge</p> <p>.</p> <p>A. Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations</p> <p>.</p>							

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		<p>8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.</p> <p>8.1.5.A.2 Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures.</p> <p>8.1.5.A.3 Use a graphic organizer to organize information about problem or issue.</p>							
		D. Digital							

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		<p>Citizenship : Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.</p>							
		<p>8.1.5.D.1 Understand the need for and use of copyrights.</p>							
		<p>8.1.5.D.2 Analyze the resource citations in online materials for proper use.</p>							
		<p>8.1.5.D.3 Demonstrate an understanding of the need to practice cyber safety, cyber</p>							

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		<p>security, and cyber ethics when using technologies and social media.</p> <p>8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.</p> <p>E: Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.</p>							

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		<p>8.1.5.E.1 Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.</p>							
		<p>F: Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems,</p>							

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		<p>and make informed decisions using appropriate digital tools and resources.</p> <p>8.1.5.F.1 Apply digital tools to collect, organize, and analyze data that support a scientific finding.</p> <p>8.2 Technology Education, Engineering, Design, and Computational Thinking B. Technology and Society: Knowledge and understanding of human, cultural</p>							

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		<p>and society values are fundamental when designing technology systems and products in the global society.</p> <p>8.2.5.B.4 Research technologies that have changed due to society's changing needs and wants.</p> <p>8.2.5.B.5 Explain the purpose of intellectual property law.</p> <p>NGSS: Science and Engineering Practices</p> <p>NGSS: 3-5</p> <p>Practice 4. Analyzing and</p>							

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		<p>interpreting data</p> <p>Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.</p> <p>Represent data in tables and/or various graphical displays (bar graphs,</p>							



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		<p>pictographs and/or pie charts) to reveal patterns that indicate relationships.</p> <p>Analyze and interpret data to make sense of phenomena, using logical reasoning, mathematics, and/or computation.</p> <p>Compare and contrast data collected by different groups in order to discuss similarities and differences in their findings.</p> <p>Analyze data to</p>							





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		refine a problem statement or the design of a proposed object, tool, or process.							
		<p>Practice 7. Engaging in argument from evidence</p> <p>Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed</p>							





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		<p>world(s).</p> <p>Compare and refine arguments based on an evaluation of the evidence presented.</p> <p>Distinguish among facts, reasoned judgment based on research findings, and speculation in an explanation.</p> <p>Respectfully provide and receive critiques from peers about a proposed procedure, explanation, or model by citing relevant evidence and posing specific</p>							





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		<p>questions.</p> <p>Construct and/or support an argument with evidence, data, and/or a model.</p> <p>NGSS: Crosscutting Concepts</p> <p>NGSS: 3-5</p> <p>Connections to the Nature of Science: Most Closely Associated with Crosscutting Concepts</p> <p>Science is a Way of Knowing</p> <p>Science is both a body of knowledge and processes that add new knowledge.</p> <p>Science is a way of knowing</p>							











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		<p>that is used by many people.</p> <p>Science is a Human Endeavor</p> <p>Men and women from all cultures and backgrounds choose careers as scientists and engineers.</p> <p>Most scientists and engineers work in teams.</p> <p>Science affects everyday life.</p> <p>Creativity and imagination are important to science.</p> <p>Copyright © State of New Jersey, 1996 - 2016.</p>							









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<p>GRO Crime Scene Investigation 4th Grade (February-June) Unit Planner /Pacing Linked Here</p>	<ol style="list-style-type: none"> Define and use vocabulary used in forensic science and our legal system. Apply and organize various thinking processes. Develop sharp observation skills utilizing the scientific method. 	<p>NJ: 2016 SLS: English Language Arts NJ: Grade 4 Reading: Literature NJLSA.R.2 Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.</p> <p>RL.4.2. Determine the key details to identify theme in a story, drama, or poem and summarize the text.</p> <p>NJLSA.R.3 Analyze</p>	<ol style="list-style-type: none"> How are mysteries solved? What skills and tools are necessary to solve a mystery? What is the connection between forensic science and our legal system? 	<ol style="list-style-type: none"> Events, objects, and people are not always what they appear to be. By employing a variety of thinking skills, logical conclusions will be determined. Specific tools uncover clues and solve mysteries. There is a useful legal 	<p>1. Define and use vocabulary found in forensic science and our legal system.</p> <ol style="list-style-type: none"> Complete crossword puzzles. Play matching games. Use word find puzzles. Master written quizzes. Keep a journal of words. Engage in Marzano activities. Test students in Memory games. Use vocabulary in student writing. <p>2. Apply and organize various thinking processes.</p> <ol style="list-style-type: none"> Work through <i>Stories with Holes</i> by Nathan Levy by using various thinking and questioning strategies. Solve a variety of mysteries. Online mysteries: http://pbskids.org/fetch/games/csi_2/game.html Examine this website: http://www.cyberbee.com/w/hodunnit/crimescene.html Analyze <i>One Minute Mysteries</i>. Complete Math Mysteries. Figure out logic puzzles. 	<p> Mystery Assessment Checklist.docx</p> <p> GRO Investigator Project Self.docx</p>	<p>Beals, Kevin and Willard, Carolyn. (1994). LHS Gems mystery festival. U.C. Berkeley: Gems Hall of Science.</p> <p>Carr, Mary Ann. ((1994). One-hour mysteries. San Luis Obispo, CA: Dandy Lion Publication.</p> <p>Levy, Nathan. (1990). Stories with holes. Hightstown, NJ: N.L. Associates, Inc.</p> <p>Great Forensic Challenge (game) by Clint Twist.</p> <p>Nilsen, Anna. (2000). Art Fraud Detective. London: Kingfisher Publications.</p> <p>Solve It! The mystery for PBL.</p> <p>Smith, Stan. (1997). Five-minute whodunnits. New York: Sterling Publishing Company, Inc.</p> <p>Walker, Pam and Wood, Elaine. (1999). Crime Scene Investigations: Real life activities for the elementary grades. West Nyack, NY: The Center for Applied Research in Education.</p>	<p>NJ: 2014 SLS: 21st Century Life and Careers NJ: Grade 4 9.2 Career Awareness Exploration, And Preparation Strand A: Career Awareness</p> <p>9.2.4. A.1 Identify reasons why</p>	<p>We will each need a copy of the Solve It! Mystery book (Laura Long has a copy for reference)</p>

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	<p>Discover affiliated occupations pertaining to forensic science.</p> <p>5. Explain police procedures to secure a crime scene.</p> <p>6. Create, write, and present an original mystery containing clues.</p> <p>7. Synthesize courtroom procedures and layout.</p>	<p>how and why individuals, events, and ideas develop and interact over the course of a text.</p> <p>RL.4.3. Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).</p> <p>Craft and Structure NJLSA.R 4 Interpret words and phrases as they are used in a text, including determining</p>		<p>and forensic science vocabulary.</p> <p>5. Engaging in mock trials can explain our legal system.</p>	<p>3. Develop sharp observation skills utilizing the scientific method.</p> <p>a. Identify characteristics of preselected person interrupting a lesson.</p> <p>b. Recall details of a crime scene: Art of Crime Detection Website.</p> <p>c. Look at a tray of objects, cover it, write down all the objects you remember.</p> <p>d. Watch this website:  https://www.youtube.com/watch?v=plcrr8Rfo28</p> <p>e. Engage in this - CSI web adventures - www.forensics.rice.edu/: Spot the difference, Test your memory, Power of observation, Handwriting analysis:  http://forensics.rice.edu/en/Fun-Stuff/OnlineActivities.html</p> <p>f. Complete - <i>What does your signature say about you?</i></p> <p>g. Discover and implement fingerprinting methodology: - Mystery Simulation using fingerprints:  http://myscience8.com/csi/wonderville_fingerprint.swf - Fingerprint pattern analysis:  http://www.tip.duke.edu/ind</p>			<p>people work, different types of work, and how work can help a person achieve personal and professional goals.</p> <p>9.2.4.A.2 Identify various life roles and civic and work-related</p>	

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		<p>technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.</p>			<p>dependent_learning/cdro_m_courses/clues_interactive.swf - Matching latent fingerprints:  http://www.tip.duke.edu/independent_learning/cdro_m_courses/clues_interactive.swf - Matching fingerprint challenge:  http://www.nist.gov/public_affairs/licweb/fingerprint_int/nist_fingerprint.html -  http://www.geocites.com/ssagraves/forensicscienceactivities.html h. Identify and draw natural and synthetic fibers using a hand lens and/or a microscope. i. Explore chromatography: Chromatography for Kids Video:  http://www.youtube.com/watch?v=PN5YiY0Wm6o - Complete the marker and coffee filter experiment. j. Engage in CSI web adventures - rookie training: forensic biology, and explore the lab. 4. Discover affiliated occupations pertaining to forensic science. a. Identify various forensic science professions.</p>			<p>activities in the school, home, and community. 9.2.4.A.3 Investigate both traditional and nontraditional careers and relate information to personal likes and dislikes. Copyright © State of New Jersey, 1996 -</p>	

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		<p>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.</p> <p>RI.4.1 Refer to details and examples in a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the</p>			<p>b. Synthesize and evaluate these occupations in student mystery. c. Introduce Forensics</p> <p>Investigators:  http://www.wonderville.ca/assets/forensics d. Discover Sherlock</p> <p>Holmes at  http://www.mystery.com e. Investigate the Federal</p> <p>Bureau of Investigation  http://www.fbi.gov/kids/k5th/aboutus3 html</p> <p>5. Explain police procedures to secure a crime scene. a. Analyze routine police procedures performed at a crime scene. b. Synthesize and evaluate the detailed procedures in individual student mystery. c. Identify and explain Locard's Principle. d. Examine the Crime Scene Investigations</p> <p>website:  http://forensics.rice.edu/</p> <p>Assessment – Project Based Learning (PBL) Assessment</p> <p>6. Create, write, and present an original mystery containing clues (PBL).</p>				2016.

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		<p>text.</p> <p>Craft and Structure NJLSA.R 4 Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.</p> <p>RI.4.4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to</p>			<p>a. Project outline - see attachment.</p> <p>b. PBL student outline - see attachment.</p> <p>c. Graphic organizer - see attachment.</p> <p>7. Synthesize courtroom procedures and layout.</p> <p>a. Participate in a mock trial.</p> <p>b. Read (Reader's Theater style) mock trials and decide the verdict.</p> <p>c. Engage in online courtroom scenario game: </p> <p>http://www.icivics.org/games/we-the-jury</p> <p> Vocabulary.pdf</p> <p> Investigator Vocabulary.pdf</p> <p> Investigator Crossword.pdf</p> <p></p> <p>http://forensics.rice.edu/en/For-Educators/Online-Activities.html</p> <p></p> <p> http://forensics.rice.edu/Fingerprinting activity</p> <p> False Alarm.pdf</p> <p> Cut Up Caper.pdf</p> <p> F.B.I..pdf</p>				

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		<p>a grade 4 topic or subject area.</p> <p>Writing NJSLSA.W.3 Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.</p> <p>W.4.3. Write narratives to develop real or imagined experiences or events using narrative technique, descriptive details, and clear event sequences.</p>			<p> Fingerprinting.pdf</p> <p> Sherlock Holmes.pdf</p> <p> Signature Comparison.pdf</p> <p> Runaway Dog Solve It.pdf</p> <p> Mystery Graphic Organizer.pdf</p> <p> The Parsippany Forensic Detective's Mystery</p> <p> Legal Terms.pdf</p> <p> Mock Trial</p>				

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		<p>W.4.3a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.</p> <p>W.4.3b. Use dialogue and description to develop experiences and events or show the responses of characters to situations.</p> <p>W.4.3e. Provide a conclusion that follows from the narrated experiences or events.</p> <p>Production</p>							

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		<p>and Distribution of Writing NJLSA.W.4.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>							
		<p>W.4.4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are</p>							

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		defined in standards 1–3 above.)							
		<p>NJLSA.W 5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p>							
		<p>W.4.5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.</p>							
		<p>NJLSA.W 6 Use technology, including the Internet, to produce and publish writing and</p>							

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		<p>to interact and collaborate with others.</p> <p>W.4.6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.</p> <p>NJLSA.W 8 Gather relevant information from multiple print and digital</p>							

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		<p>sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.</p> <p>W.4.8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.</p> <p>NJLSA.W 9 Draw evidence from literary or informational texts to</p>							

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		<p>support analysis, reflection, and research.</p> <p>W.4.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>Range of Writing NJLSA.W 10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks,</p>							

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		<p>purposes, and audiences.</p> <p>W.4.10. Write routinely over extended time frames (time for research, reflection, metacognition/self-correction and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p> <p>Speaking and Listening</p> <p>Comprehension and Collaboration</p> <p>NJLSA.S</p> <p>L1 Prepare</p>							

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		<p>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.</p>							
		<p>SL.4.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing</p>							

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		<p>their own clearly.</p> <p>NJLSA.S L3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.</p> <p>SL.4.3. Identify the reasons and evidence a speaker provides to support particular points.</p> <p>NGSS: Science and Engineering Practices NGSS: 3-5 Practice 1. Asking questions (for science) and defining problems (for engineering)</p>							

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		<p>) Asking questions and defining problems in 3–5 builds on K–2 experiences and progresses to specifying qualitative relationships.</p>							
		<p>Ask questions about what would happen if a variable is changed.</p>							
		<p>Identify scientific (testable) and non-scientific (non-testable) questions.</p>							
		<p>Ask questions that can be investigated and predict reasonable outcomes</p>							

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		<p>based on patterns such as cause and effect relationships.</p> <p>Use prior knowledge to describe problems that can be solved.</p> <p>Practice 3. Planning and carrying out investigations</p> <p>Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to</p>							

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		<p>include investigations that control variables and provide evidence to support explanations or design solutions.</p> <p>Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution.</p> <p>Make predictions about what would happen if a variable changes.</p> <p>Practice 4.</p>							

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		<p>Analyzing and interpreting data</p> <p>Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.</p>							
		<p>Analyze and interpret data to make sense of phenomena</p>							

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		<p>, using logical reasoning, mathematics, and/or computation.</p> <p>Connections to the Nature of Science: Most Closely Associated with Practices</p> <p>Scientific Investigations Use a Variety of Methods</p> <p>Science methods are determined by questions.</p> <p>Science investigations use a variety of methods, tools, and techniques.</p> <p>Scientific Knowledge is Based on</p>							

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		<p>Empirical Evidence</p> <p>Science uses tools and technologies to make accurate measurements and observations.</p> <p>Scientific Knowledge is Open to Revision in Light of New Evidence</p> <p>Science explanations can change based on new evidence.</p> <p>Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena</p> <p>Science theories are</p>							

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		<p>based on a body of evidence and many tests.</p> <p>NGSS: Crosscutting Concepts</p> <p>NGSS: 3-5</p> <hr/> <p>Crosscutting Statements</p> <p>1. Patterns</p> <p>–</p> <p>Observed patterns in nature guide organization and classification and prompt questions about relationships and causes underlying them.</p> <p>Patterns can be used as evidence to support an explanation</p> <p>.</p> <p>2. Cause</p>							

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		<p>and Effect: Mechanism and Prediction – Events have causes, sometimes simple, sometimes multifaceted. Deciphering causal relationships, and the mechanisms by which they are mediated, is a major activity of science and engineering.</p> <p>Cause and effect relationships are routinely identified, tested, and used to explain change.</p> <p>Connections to the Nature of</p>							

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		<p>Science: Most Closely Associated with Crosscutting Concepts Science is a Human Endeavor</p> <p>Creativity and imagination are important to science.</p> <p>NGSS: Disciplinary Core Ideas NGSS: Grade 4</p> <p>ETS1: Engineering Design ETS1.B: Developing Possible Solutions</p> <p>Research on a problem should be carried out before beginning to design a solution. Testing a</p>							

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		<p>solution involves investigating how well it performs under a range of likely conditions. (3-5-ETS1-2)</p> <p>At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. (3-5-ETS1-2)</p> <p>ETS1.C: Optimizing the Design Solution</p> <p>Different solutions need to be tested in order to determine</p>							

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		<p>which of them best solves the problem, given the criteria and the constraints. (3-5-ETS1-3) (secondary to 4-PS4-3)</p>							
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