

**Randolph Township Schools  
Randolph Middle School  
Forensic Science Curriculum**

*“The important thing is to never stop questioning.”  
-Albert Einstein*

**STEM Department**

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**Curriculum Developed:**

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**Date of Board Approval:**

August 18, 2020

**Randolph Township Schools  
Randolph Middle School  
Forensic Science Curriculum**

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**Randolph Township Schools  
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**Mission Statement**

*We commit to inspiring and empowering all students in Randolph schools to reach their full potential as unique, responsible and educated members of a global society.*

**Affirmative Action Statement  
Equality and Equity in Curriculum**

The Randolph Township School district ensures that the district's curriculum and instruction are aligned to the state's standards. The curriculum provides equity in instruction, educational programs and provides all students the opportunity to interact positively with others regardless of race, creed, color, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, religion, disability or socioeconomic status.

N.J.A.C. 6A:7-1.7(b): Section 504, Rehabilitation Act of 1973; N.J.S.A. 10:5; Title IX, Education Amendments of 1972

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**EDUCATIONAL GOALS  
VALUES IN EDUCATION**

The statements represent the beliefs and values regarding our educational system. Education is the key to self-actualization, which is realized through achievement and self-respect. We believe our entire system must not only represent these values, but also demonstrate them in all that we do as a school system.

We believe:

- The needs of the child come first
- Mutual respect and trust are the cornerstones of a learning community
- The learning community consists of students, educators, parents, administrators, educational support personnel, the community and Board of Education members
- A successful learning community communicates honestly and openly in a non-threatening environment
- Members of our learning community have different needs at different times. There is openness to the challenge of meeting those needs in professional and supportive ways
- Assessment of professionals (i.e., educators, administrators and educational support personnel) is a dynamic process that requires review and revision based on evolving research, practices and experiences
- Development of desired capabilities comes in stages and is achieved through hard work, reflection and ongoing growth

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**Introduction**

This is a marking period course offered to seventh and eighth grade students interested in science, technology, engineering, math, and forensic science. The course will explore the areas of gathering evidence, identifying patterns, and evaluating evidence through fictional case studies using real forensic science techniques. Students build collaborative skills working as a team to solve these fictional crimes using relevant evidence and sequencing key events, then communicate their conclusions with valid support and logical reasoning. At the completion of this course, students will gain an increased understanding of science, technology, engineering, and math and how they apply to real-world situations specifically related to forensic science. This course will be guided by the current New Jersey Learning Standards in Computer Science and Design Thinking, Career Readiness, Life Literacies, and Key Skills, Science, Mathematics, and English.

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Curriculum Pacing Chart**

<b>SUGGESTED TIME ALLOTMENT</b>	<b>UNIT NUMBER</b>	<b>CONTENT - UNIT OF STUDY</b>
<b>3 weeks</b>	<b>I</b>	<b>Case Study I: Gathering Evidence</b>
<b>3 weeks</b>	<b>II</b>	<b>Case Study II: Identifying Patterns</b>
<b>3 weeks</b>	<b>III</b>	<b>Case Study III: Evaluating Evidence</b>

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**Unit I: Case Study I: Gathering Evidence**

<b>TRANSFER:</b> Students will be able to independently apply a step by step design process to solve a problem.		
<b>STANDARDS / GOALS:</b>	<b>ENDURING UNDERSTANDINGS</b>	<b>ESSENTIAL QUESTIONS</b>
<p><b>NJ 2020 SLS: Computer Science and Design Thinking</b> 8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem.</p> <p>8.2.8.ITH.1: Explain how the development and use of technology influences economic, political, social, and cultural issues.</p>	Forensic science follows a process to gather relevant and reliable evidence to obtain a better understanding of the truth.	<ul style="list-style-type: none"> <li>• Why is it important to have a method when creating or solving a problem?</li> <li>• How does the design process affect a forensic scientist’s ability to obtain and gather key evidence?</li> </ul>
	The transfer of materials between two interacting objects leaves behind physical evidence of the exchange.	<ul style="list-style-type: none"> <li>• How can forensic scientists determine relevant evidence based on the needs and constraints of the investigation?</li> </ul>
<p><b>NJ 2020 SLS: Career Readiness, Life Literacies, and Key Skills</b> 9.4.8.IML.3: Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping.</p> <p>9.4.8.TL.2: Gather data and digitally represent information to communicate a real-world problem.</p>	<b><u>KNOWLEDGE</u></b> <b>Students will know:</b>	<b><u>SKILLS</u></b> <b>Students will be able to:</b>
	<p>The design process is a series of steps that forensic scientists follow to come up with the best solutions to a problem.</p> <p>Forensic science is driven by the guiding principle that every interaction between two objects leaves behind evidence of that exchange.</p>	<p>Identify the different steps of the design process and explain why they are important.</p> <p>Describe Locard’s Exchange Principle and how it relates to forensic science.</p>

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**Unit I: Case Study I: Gathering Evidence**

<p>9.4.8.TL.3: Select appropriate tools to organize and present information digitally.</p> <p><b>NJ 2020 SLS: Science</b> MS-ETS1-1: Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.</p> <p>MS-ETS1-3: Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.</p> <p><b>NJ 2016 SLS: Literacy in History, Social Studies, &amp; Technical Subjects</b> NJLSA.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.</p>	<p>Evidence can be classified into categories such as physical, individual, and class evidence based on several characteristics.</p> <p>Trace evidence is any physical evidence that is too small to make physical matches but large enough to be analyzed. Some examples include powders, metals, paint and lipstick.</p> <p>Requirements for successful forensic investigations are made up of the criteria for success and the constraints.</p>	<p>Evaluate a crime scene to determine relevant evidence.</p> <p>Justify potentially relevant pieces of evidence to gather at a crime scene.</p> <p>Categorize evidence based on characteristics and a given scenario.</p> <p>Differentiate between types of evidence.</p> <p>Evaluate a given scenario and make a claim to the types of evidence.</p> <p>Analyze trace evidence from a case study and devise a plan to examine it in order to solve a crime.</p> <p>Identify the criteria and constraints of a solution for a problem by considering scientific principles and potential impacts on the environment.</p>
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**Unit I: Case Study I: Gathering Evidence**

<p>RST.6-8.3: Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.</p> <p>RST.6-8.4: Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.</p> <p>WHST.6-8.1: Write arguments focused on discipline-specific content.</p> <p>WHST.6-8.6: Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.</p> <p><b>NJ 2020 SLS: Science – Crosscutting Concepts 6-8</b></p> <ul style="list-style-type: none"> <li>• Cause and effect</li> <li>• Structure and function</li> <li>• Patterns</li> </ul>	<p>Some types of evidence must be further analyzed through scientific testing.</p> <p>Data collected from tested evidence can be organized to show similarities, differences, and relationships.</p> <p>The solution to a crime must be argued with valid supporting evidence and logical reasoning.</p>	<p>Record and interpret observations and measurements for tested evidence.</p> <p>Practice proper laboratory safety by following multi-step procedures precisely.</p> <p>Demonstrate appropriate use of the compound microscope in examining evidence, when applicable.</p> <p>Compose a digital product to organize data collected.</p> <p>Identify similarities and differences among tested evidence samples using data collected.</p> <p>Establish relationships between and among data from tested evidence.</p> <p>Develop a claim deducing the perpetrator of a crime using relevant evidence.</p>
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**Unit I: Case Study I: Gathering Evidence**

<p><b>NJ 2020 SLS: Science – Science and Engineering Practices 6-8</b></p> <ul style="list-style-type: none"> <li>• Asking questions and defining problems</li> <li>• Developing and using models</li> <li>• Planning and carrying out investigations</li> <li>• Analyzing and interpreting data</li> <li>• Constructing explanations and designing solutions</li> <li>• Engaging in Argument from Evidence</li> <li>• Obtaining, Evaluating, and Communicating Information</li> </ul> <p><b>NJ 2020 SLS: Science – Disciplinary Core Ideas 6-8</b></p> <p>ETS1.A: Defining and Delimiting Engineering Problems</p> <p>ETS1.B: Developing Possible Solutions</p> <p><b>NJ 2016 SLS: Mathematical Practices</b></p> <p>MP1: Make sense of problems and persevere in solving them.</p> <p>MP2: Reason abstractly and quantitatively.</p> <p>MP3: Construct viable arguments and critique the reasoning of others.</p> <p>MP5: Use appropriate tools strategically.</p>	<p><b>VOCABULARY:</b> evidence, design process, characteristics, relevant, investigation</p> <p><b>KEY TERMS:</b> Locard’s Exchange Principle, physical evidence, trace evidence, crime scene, forensic science, case study, fingerprints</p>	<p>Justify the evidence supporting a claim with logical reasoning.</p> <p>Create arguments in support of or opposition to the use of specific forensic procedures and types of evidence.</p>
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**Unit I: Case Study I: Gathering Evidence**

**ASSESSMENT EVIDENCE: Students will show their learning by:**

- Reflecting on present and past learning through Do Now and Exit Ticket prompts
- Reporting clear and accurate outcomes when identifying and testing evidence pertaining to the case study
- Preparing a claim about the perpetrator of a crime supported by evidence from the case study
- Constructing a digital product to express the solution to a fictional crime

**KEY LEARNING EVENTS AND INSTRUCTION:**

- Students will distinguish types of evidence and their relevance while solving a fictional crime
- Students will use a compound microscope to examine evidence and make distinctions between samples
- Students will produce digital work to organize data and argue claims related to the fictional crime case study

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**Unit I: Case Study I: Gathering Evidence**

<b>SUGGESTED TIME ALLOTMENT</b>	3 weeks
<b>SUPPLEMENTAL UNIT RESOURCES</b>	<p><u>Required Resources:</u> Computers with internet access <a href="#">“Types of Evidence Found at Crime Scenes”</a> Carolina Forensic Kit Microscope Forceps</p> <p><u>Suggested Resources:</u> “The Case of the Contaminated Creek Kit” <a href="#">“Virtual Exhibit on Forensic Science”</a> <a href="https://sciencespot.net/Pages/classforsci.html">https://sciencespot.net/Pages/classforsci.html</a></p>

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**Unit II: Case Study II: Identifying Patterns**

<b>TRANSFER:</b> Students will be able to independently evaluate a problem in a new and novel situation.		
<b>STANDARDS / GOALS:</b>	<b>ENDURING UNDERSTANDINGS</b>	<b>ESSENTIAL QUESTIONS</b>
<p><b>NJ 2020 SLS: Computer Science and Design Thinking</b> 8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem.</p> <p>8.2.8.ITH.1: Explain how the development and use of technology influences economic, political, social, and cultural issues.</p> <p><b>NJ 2020 SLS: Career Readiness, Life Literacies, and Key Skills</b> 9.4.8.IML.3: Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping.</p> <p>9.4.8.TL.2: Gather data and digitally represent information to communicate a real-world problem.</p>	<p>Observed patterns of forms and events guide organization and classification, and they prompt questions about relationships and the factors that influence them.</p>	<ul style="list-style-type: none"> <li>• What is the importance of patterns in the planning and testing out of hypothesis?</li> </ul>
	<b><u>KNOWLEDGE</u></b> <b>Students will know:</b>	<b><u>SKILLS</u></b> <b>Students will be able to:</b>
	<p>In an investigation, forensic scientists use patterns in the process of planning and testing.</p> <p>Fingerprints are unique individual identifiers that can be classified based on broad and specific patterns.</p>	<p>Describe a pattern and how it relates to forensic science.</p> <p>Create a claim by comparing a piece of evidence to a series of previously known samples.</p> <p>Identify the different types of fingerprints.</p> <p>Explain why individuals have uniquely different fingerprints.</p>

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**Unit II: Case Study II: Identifying Patterns**

<p>9.4.8.TL.3: Select appropriate tools to organize and present information digitally.</p> <p><b>NJ 2020 SLS: Science</b></p> <p>MS-ETS1-1: Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.</p> <p>MS-ETS1-3: Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.</p> <p>MS-LS1-5: Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.</p>	<p>In the absence of DNA testing capability, patterns can be detected to determine the source of certain types of physical evidence, such as hair, fiber, and blood.</p>	<p>Classify fingerprint samples into basic pattern categories.</p> <p>Differentiate between the types of fingerprint evidence.</p> <p>Evaluate the reliability of fingerprints as a means of identification.</p> <p>Analyze a hair or fiber sample for structural patterns using a compound microscope.</p> <p>Compare various samples of hairs or fibers to a source sample to determine a match.</p> <p>Interpret clotting patterns from agglutination test results to establish blood type.</p> <p>Compare various synthetic blood samples to a source sample to determine a match.</p>
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**Unit II: Case Study II: Identifying Patterns**

<p><b>NJ 2016 SLS: Literacy in History, Social Studies, &amp; Technical Subjects</b></p> <p>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.</p> <p>RST.6-8.3: Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.</p> <p>RST.6-8.4: Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.</p> <p>WHST.6-8.1: Write arguments focused on discipline-specific content.</p>	<p>Scientific tools allow forensic scientists to view patterns not visible to the human eye.</p> <p>Some types of evidence must be further analyzed through scientific testing.</p> <p>Requirements for successful forensic investigations are made up of the criteria for success and the constraints.</p>	<p>Identify scientific tools, their use, and parts.</p> <p>Analyze and compare a set of samples and describe characteristics present.</p> <p>Construct a claim based on similarities and differences found in samples.</p> <p>Record and interpret observations and measurements for tested evidence.</p> <p>Practice proper laboratory safety by following multi-step procedures precisely.</p> <p>Demonstrate appropriate use of the compound microscope in examining evidence, when applicable.</p> <p>Identify the criteria and constraints of a solution for a problem by considering scientific principles and potential impacts on the environment.</p>
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**Unit II: Case Study II: Identifying Patterns**

<p>WHST.6-8.6: Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.</p> <p><b>NJ 2020 SLS: Science – Crosscutting Concepts 6-8</b></p> <ul style="list-style-type: none"> <li>• Cause and effect</li> <li>• Structure and function</li> <li>• Patterns</li> </ul> <p><b>NJ 2020 SLS: Science – Science and Engineering Practices 6-8</b></p> <ul style="list-style-type: none"> <li>• Asking questions and defining problems</li> <li>• Developing and using models</li> <li>• Planning and carrying out investigations</li> <li>• Analyzing and interpreting data</li> <li>• Constructing explanations and designing solutions</li> <li>• Engaging in Argument from Evidence</li> <li>• Obtaining, Evaluating, and Communicating Information</li> </ul>	<p>Data collected from tested evidence can be organized to show patterns and relationships.</p> <p>The solution to a crime must be argued with valid supporting evidence and logical reasoning.</p>	<p>Compose a digital product to organize data collected.</p> <p>Identify patterns among tested evidence samples using data collected.</p> <p>Establish relationships between and among data from tested evidence.</p> <p>Develop a claim deducing the perpetrator of a crime using relevant evidence.</p> <p>Justify the evidence supporting a claim with logical reasoning.</p> <p>Create arguments in support of or opposition to the use of specific forensic procedures and types of evidence.</p>
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**Unit II: Case Study II: Identifying Patterns**

<p><b>NJ 2020 SLS: Science – Disciplinary Core Ideas 6-8</b>          ETS1.A: Defining and Delimiting Engineering Problems          ETS1.B: Developing Possible Solutions          LS1.B: Growth and Development of Organisms</p> <p><b>NJ 2016 SLS: Mathematical Practices</b>          MP1: Make sense of problems and persevere in solving them.          MP2: Reason abstractly and quantitatively.          MP3: Construct viable arguments and critique the reasoning of others.          MP5: Use appropriate tools strategically.          MP7: Look for and make use of structure.</p>	<p><b>VOCABULARY:</b> pattern, relationship, hypothesis, sample, planning, testing</p> <p><b>KEY TERMS:</b> Locard’s Exchange Principle, physical evidence, trace evidence, crime scene, forensic science, case study, fingerprints, agglutination</p>	
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<p><b>ASSESSMENT EVIDENCE: Students will show their learning by:</b></p> <ul style="list-style-type: none"> <li>• Reflecting on present and past learning through Do Now and Exit Ticket prompts</li> <li>• Reporting clear and accurate outcomes when identifying patterns and testing evidence pertaining to the case study</li> <li>• Preparing a claim about the perpetrator of a crime supported by evidence from the case study</li> <li>• Constructing a digital product to express the solution to a fictional crime</li> </ul>
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**Unit II: Case Study II: Identifying Patterns**

**KEY LEARNING EVENTS AND INSTRUCTION:**

- Students will identify patterns within and among evidence while solving a fictional crime
- Students will use a compound microscope to examine evidence and make distinctions between samples
- Students will engage in detailed examination of fingerprint, hair/fiber, and blood samples to detect patterns and solve a fictional crime
- Students will produce digital work to organize data and argue claims related to the fictional crime case study

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**Unit II: Case Study II: Identifying Patterns**

<b>SUGGESTED TIME ALLOTMENT</b>	<b>3 weeks</b>
<b>SUPPLEMENTAL UNIT RESOURCES</b>	<p style="text-align: center;"><u>Required Resources:</u> Computers with internet access <a href="#">“Fingerprint Patterns and Characteristics”</a> Forensics Kits Microscopes Forceps Fingerprint ink</p> <p style="text-align: center;"><u>Suggested Resources:</u> “The Case of the Murdered Mayor Kit” “The Case of the Lost Skull Kit” <a href="https://sciencespot.net/Pages/classforsci.html">https://sciencespot.net/Pages/classforsci.html</a></p>

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**Unit III: Case Study III: Evaluating the Evidence**

<b>TRANSFER:</b> Students will be able to independently communicate the results of scientific investigations, using scientific evidence to analyze observations, justify conclusions and/or support the revision of an engineering design.		
<b>STANDARDS / GOALS:</b>	<b>ENDURING UNDERSTANDINGS</b>	<b>ESSENTIAL QUESTIONS</b>
<b>NJ 2020 SLS: Computer Science and Design Thinking</b> 8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem.  8.2.8.ITH.1: Explain how the development and use of technology influences economic, political, social, and cultural issues.	Through investigating and explaining the sequence of events, relationships can be established.	<ul style="list-style-type: none"> <li>• How can forensic scientists test their hypotheses?</li> </ul>
	The strength of the evidence determines the validity of the answer/outcome.	<ul style="list-style-type: none"> <li>• What is the importance of understanding past forensic failures?</li> <li>• How do forensic scientists justify their results?</li> </ul>
<b>NJ 2020 SLS: Career Readiness, Life Literacies, and Key Skills</b> 9.4.8.IML.3: Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping.	<b><u>KNOWLEDGE</u></b> <b>Students will know:</b>	<b><u>SKILLS</u></b> <b>Students will be able to:</b>
	Through the analysis of evidence and construction of a timeline, a forensic scientist can establish relevant connections in the process of testing their hypotheses.	Identify key events and relevant evidence in a case study.

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**Unit III: Case Study III: Evaluating the Evidence**

<p>9.4.8.IML.4: Ask insightful questions to organize different types of data and create meaningful visualizations.</p> <p>9.4.8.IML.12: Use relevant tools to produce, publish, and deliver information supported with evidence for an authentic audience.</p> <p>9.4.8.TL.2: Gather data and digitally represent information to communicate a real-world problem.</p> <p>9.4.8.TL.3: Select appropriate tools to organize and present information digitally.</p> <p><b>NJ 2020 SLS: Science</b></p> <p>MS-ETS1-1: Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.</p>	<p>Evidence may not be conclusive because temporal, financial, and technological constraints can impede the ability to reach logical conclusions with certainty.</p> <p>Forensic scientists communicate their results to help justify a claim.</p> <p>Some types of evidence must be further analyzed through scientific testing.</p>	<p>Organize events and evidence in a case study based on their sequence and significance to establish relevant relationships and connections.</p> <p>Support a claim using relevant evidence and logical reasoning.</p> <p>Evaluate a claim based on the validity and constraints presented in evidence.</p> <p>Summarize relevant evidence and logical conclusions to others along with constraints and weaknesses in their claim.</p> <p>Record and interpret observations and measurements for tested evidence.</p> <p>Practice proper laboratory safety by following multi-step procedures precisely.</p>
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**Unit III: Case Study III: Evaluating the Evidence**

<p>MS-ETS1-3: Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.</p> <p><b>NJ 2016 SLS: Literacy in History, Social Studies, &amp; Technical Subjects</b></p> <p>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.</p> <p>RST.6-8.3: Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.</p> <p>RST.6-8.4: Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.</p>	<p>Requirements for successful forensic investigations are made up of the criteria for success and the constraints.</p> <p>Data collected from tested evidence can be organized to show similarities, differences, and relationships.</p> <p>The solution to a crime must be argued with valid supporting evidence and logical reasoning.</p>	<p>Demonstrate appropriate use of the compound microscope in examining evidence, when applicable.</p> <p>Identify the criteria and constraints of a solution for a problem by considering scientific principles and potential impacts on the environment.</p> <p>Compose a digital product to organize data collected.</p> <p>Identify similarities and differences among tested evidence samples using data collected.</p> <p>Establish relationships between and among data from tested evidence.</p> <p>Develop a claim deducing the perpetrator of a crime using relevant evidence.</p> <p>Justify the evidence supporting a claim with logical reasoning.</p>
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**Unit III: Case Study III: Evaluating the Evidence**

<p>WHST.6-8.1: Write arguments focused on discipline-specific content.</p> <p>WHST.6-8.4: Produce clear and coherent writing in which the development, organization, voice, and style are appropriate to task, purpose, and audience.</p> <p>WHST.6-8.6: Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.</p> <p><b>NJ 2020 SLS: Science – Crosscutting Concepts 6-8</b></p> <ul style="list-style-type: none"> <li>• Cause and effect</li> <li>• Structure and function</li> <li>• Patterns</li> </ul> <p><b>NJ 2020 SLS: Science – Science and Engineering Practices 6-8</b></p> <ul style="list-style-type: none"> <li>• Asking questions and defining problems</li> <li>• Developing and using models</li> </ul>	<p><b>VOCABULARY:</b> sequence, events, timeline, validity, constraint, conclusion, claim, connection</p> <p><b>KEY TERMS:</b> Locard’s Exchange Principle, physical evidence, trace evidence, crime scene, forensic science, case study, fingerprints</p>	<p>Create arguments in support of or opposition to the use of specific forensic procedures and types of evidence.</p> <p>Synthesize a claim, supporting evidence, and logical reasoning into a cohesive presentation with a digital product.</p>
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**Unit III: Case Study III: Evaluating the Evidence**

<ul style="list-style-type: none"><li>• Planning and carrying out investigations</li><li>• Analyzing and interpreting data</li><li>• Constructing explanations and designing solutions</li><li>• Engaging in Argument from Evidence</li><li>• Obtaining, Evaluating, and Communicating Information</li></ul> <p><b>NJ 2020 SLS: Science – Disciplinary Core Ideas 6-8</b></p> <p>ETS1.A: Defining and Delimiting Engineering Problems ETS1.B: Developing Possible Solutions</p> <p><b>NJ 2016 SLS: Mathematical Practices</b></p> <p>MP1: Make sense of problems and persevere in solving them. MP2: Reason abstractly and quantitatively. MP3: Construct viable arguments and critique the reasoning of others. MP5: Use appropriate tools strategically.</p>		
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**Unit III: Case Study III: Evaluating the Evidence**

**ASSESSMENT EVIDENCE: Students will show their learning by:**

- Reflecting on present and past learning through Do Now and Exit Ticket prompts
- Reporting clear and accurate outcomes when testing and evaluating evidence pertaining to the case study
- Preparing a claim about the sequence of events and perpetrator of a crime supported by evidence from the case study
- Constructing a digital product to express the solution to a fictional crime

**KEY LEARNING EVENTS AND INSTRUCTION:**

- Students will conduct a detailed examination of a crime scene to determine relevant evidence to be collected and tests to be performed in order to solve a fictional crime
- Students will utilize relevant evidence from a crime scene to hypothesize a logical sequence of events while solving a fictional crime
- Students will create a digital presentation detailing their claim, evidence, and reasoning for their solution to a fictional crime

**Randolph Township Schools  
Randolph Middle School  
Forensic Science Curriculum**

**Unit III: Case Study III: Evaluating the Evidence**

<b>SUGGESTED TIME ALLOTMENT</b>	<b>3 weeks</b>
<b>SUPPLEMENTAL UNIT RESOURCES</b>	<p style="text-align: center;"><u>Required Resources:</u> Computers with internet access Carolina Forensic Kit Microscopes Magnifying glass Forceps</p> <p style="text-align: center;"><u>Suggested Resources:</u> “Felix Mystery” Microsoft PowerPoint Padlet</p>