

**Inquiry Investigations™**  
**Forensic Science MODULE - 1013062**  
**Grades: 7-10**

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**Washington D.C. Learning Standards**  
**Science**  
**Grade 7**

<b>CONTENT STANDARD</b>	<b>DC.7.1. Scientific Thinking and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:</b>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<p><b>7.1.4.</b> Recognize testable hypotheses in investigations that pertain to the content under study, and write instructions others can follow in carrying out the investigation.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer</li> </ul>

		<p>Look at STR Polymorphisms</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> </ul>
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PERFORMANCE STANDARD/ESSENTIAL SKILL	7.1.6.	<p>Incorporate circle charts, bar and line graphs, diagrams, scatter plots, and symbols into writing, such as lab or research reports, to serve as visual displays of evidence for claims and/or conclusions.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.1.7.	<p>Recognize whether evidence is consistent with a proposed explanation, and know that different explanations can be given for the same evidence and that partial evidence may be exploited for reasons other than truth seeking.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.1.8.	<p>Question claims based on vague attributes or on authority, such as 'Leading doctors say...,' or on statements made by celebrities or others outside the area of their particular expertise.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
CONTENT STANDARD	DC.7.4.	<p>Cell Biology: Broad Concept: All living things are composed of cells, from just one to many quadrillions, whose details usually are visible only through a microscope. As a basis for understanding this concept, students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.4.1.	<p>Investigate and explain that all living things are composed of one or more cells; cells are organisms' basic units of structure and function; and cells come only from existing cells (Theodor Schwann's and Matthias Schleiden's cell theory).</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.4.2.	<p>Describe that the way in which cells function is similar in all living organisms.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>

PERFORMANCE STANDARD/ESSENTIAL SKILL	7.4.5.	<p>Know intracellular bodies with specific functions are called organelles. Describe that important among them are mitochondria which liberate energy for the work that cells do, and chloroplasts which capture sunlight energy for photosynthesis.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.4.7.	<p>Observe and explain that about two-thirds of the mass of a typical cell is accounted for by water, and that water gives cells many of their properties.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
CONTENT STANDARD	DC.7.5.	<p>Genetics: Broad Concept: Every organism requires information in the form of a set of instructions that specifies its traits. Those traits may be modified by environmental influences. As a basis for understanding this concept, students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.5.1.	<p>Describe that heredity is the passage of information for developing and maintaining the organism's body from one generation to another, that genes are the basic units of heredity, and they are made of DNA, consisting of very long molecules located in the chromosomes of each cell.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.5.4.	<p>Recognize and describe that new varieties of cultivated plants, such as corn and apples, and domestic animals, such as dogs and horses, have resulted from selective breeding, over multiple generations, for particular traits.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a</li> </ul>

		<p>DNA Profile</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.5.5.	<p>Explain how the use of genetic-engineering techniques can speed the process of creating new varieties and introduce characteristics not easily available by selective breeding and can make possible more precise modifications involving the manipulation of just one or a few genes.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> </ul>
CONTENT STANDARD	DC.7.6.	<p>Biological Evolution: Broad Concept: Biological evolution accounts for the diversity of species developed through gradual processes over many generations. As a basis for understanding this concept, students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.6.1.	<p>Describe that biological variation (phenotype variation) is the raw material on which natural selection operates.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> </ul>
CONTENT STANDARD	DC.7.7.	<p>Human Body: Broad Concept: Human beings have body systems for obtaining and providing energy, defense, reproduction, and the coordination of body functions. As a basis for understanding this concept, students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	7.7.1.	<p>Describe the specific functions and roles of each major human body system, including digestive, respiratory, excretory, reproductive, circulatory, nervous, endocrine, musculoskeletal, and immune system.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: The Case of the Telling Blood Group</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>7.7.2.</p>	<p>Explain that human beings have many similarities and differences, and the similarities make it possible for human beings to donate blood and organs to one another.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: The Case of the Telling Blood Group</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>

Washington D.C. Learning Standards  
 Science  
 Grade 8

CONTENT STANDARD	DC.8.1. Scientific Thinking and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:
PERFORMANCE STANDARD/ESSENTIAL SKILL	<p>8.1.1. Describe how scientific knowledge is subject to modification and refinement as new information challenges prevailing theories.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>8.1.2.</p>	<p>Test hypotheses that pertain to the content under study.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> </ul>

		<ul style="list-style-type: none"> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>8.1.3.</p>	<p>Describe how if more than one variable changes at the same time in an experiment, the outcome of the experiment may not be attributable to a change in any single variable.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing</li> </ul>

		<p>Handwriting Analysis Skills</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>8.1.4.</p>	<p>Explain why accuracy and openness in record keeping and replication are essential for maintaining an investigator's credibility with other scientists and society.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>8.1.5.</p>	<p>Write clear step-by-step instructions (procedural summaries) for conducting investigations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing</li> </ul>
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		<p>Paper Analysis Skills</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>8.1.6.</p>	<p>Participate in group discussions on scientific topics by restating or summarizing accurately what others have said, asking for clarification or elaboration, and expressing alternative positions.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic</li> </ul>

Analysis of DNA Profiles

- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
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- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
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- Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks
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- Forensic Science: Unit 6 Activity 2: Chromatographic Analysis
- Forensic Science: Unit 6 Activity 3: Fingerprint Analysis
- Forensic Science: Unit 6 Activity 4: Document Analysis
- Forensic Science: Unit 6 Activity 5: Blood Analysis

		<ul style="list-style-type: none"> <li>Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.1.7.	<p>Use tables, charts, and graphs in making arguments and claims in presentations about lab work.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.1.8.	<p>Read analog and digital meters on instruments used to make direct measurements of length, volume, weight, elapsed time, rates, or temperatures, and choose appropriate units. Explain how to interpolate on analog scales.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.1.9.	<p>Explain why arguments may be invalid if based on very small samples of data, biased samples, or experiments in which there was no control sample.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.1.10.	<p>Identify and criticize the reasoning in arguments in which fact and opinion are intermingled or the conclusions do not follow logically from the evidence given, an analogy is not apt, no mention is made of whether the control group is very much like the experimental group, or all members of a group are implied to have nearly identical characteristics that differ from those of other groups.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.1.12.	<p>Apply simple mathematical models to problems (e.g., formulas such as <math>F = ma</math>).</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
CONTENT STANDARD	DC.8.3.	<p>Reactions: Broad Concept: Chemical reactions are processes in which atoms are rearranged into different combinations of molecules. As a</p>

		basis for understanding this concept, students:
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.3.1.	Discover and explain how elements and compounds (reactants) react with each other to form products with different properties. <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.3.6.	Recognize that solutions can be acidic, basic, or neutral depending on the concentration of hydrogen ions in the solution. Understand that because this concentration can vary over a very large range, the logarithmic (each increase of one in the pH scale is an increase of 10 times in concentration) pH scale is used to describe how acidic or basic a solution is. <ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Teacher Resource CD: Analyzing Writing Inks</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.3.7.	Recognize that indicators of chemical changes include temperature change, the production of a gas, the production of a precipitate, or a color change. <ul style="list-style-type: none"> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> </ul>
CONTENT STANDARD	DC.8.4.	Density and Buoyancy: Broad Concept: All objects experience a buoyant force when immersed in a fluid. As a basis for understanding this concept, students:
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.4.2.	Know density is mass per unit volume. <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.4.3.	Investigate and explain that equal volumes of different substances usually have different masses and, therefore, different densities. <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	8.4.5.	Determine the density of substances (regular and irregular solids, and liquids) from direct measurements of mass and volume, or of volume by water displacement. <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>

Washington D.C. Learning Standards  
Science  
Grade 9

CONTENT STANDARD	DC.ES.1.	Earth Science: Scientific Investigation and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:
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<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>ES.1.1.</p>	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the</li> </ul>
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		<p>Precipitin Test for the Presence of Human Blood</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>ES.1.3.</p>	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> </ul>

		<ul style="list-style-type: none"> <li>Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.4.	<p>Recognize the use and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.7.	<p>Use hypotheses to choose what data to pay attention to and what additional data to seek, and to guide the interpretation of the data.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Fingerprinting</li> <li>Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.8.	<p>Identify and communicate the sources of error (random and systematic error) inherent in an experiment.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.9.	<p>Identify discrepant results and identify possible sources of error or uncontrolled conditions.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
<p><b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b></p>	<p><b>ES.1.10.</b></p>	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> </ul>

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- Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel
- Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills
- Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills
- Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills
- Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks
- Forensic Science: Unit 6 Activity 1: Toxicological Analysis
- Forensic Science: Unit 6 Activity 2: Chromatographic Analysis
- Forensic Science: Unit 6 Activity 3: Fingerprint Analysis
- Forensic Science: Unit 6 Activity 4: Document Analysis
- Forensic Science: Unit 6 Activity 5: Blood Analysis
- Virtual Laboratory: ABO-Rh Blood Typing

PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.13.	<p>Apply mathematical relationships involving proportionalities, linear relations, quadratic equations, simple trigonometric relationships, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
CONTENT STANDARD	DC.B.1.	<p>Biology: Scientific Investigation and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.1.	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody</li> </ul>

Cloth - DNA Profile Analysis

- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread
- Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection
- Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast
- Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle
- Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective
- Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns
- Forensic Science: Unit 5 Case Activity 1: The Curious Line
- Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T
- Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket
- Forensic Science: Unit 5 Case Activity 4: The Careless Forger
- Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel
- Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills
- Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills
- Forensic Science: Unit 5 Skill Learning Activity 3: Practicing

		<p>Altered Document Analysis Skills</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.3.	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.4.	<p>Recognize the use and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.5.	<p>Distinguish between a conjecture (guess), a hypothesis, and a theory as these terms are used in science.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.6.	<p>Plan and conduct scientific investigations to explore new phenomena, to check on previous results, to verify or falsify the prediction of a theory, and to use a crucial experiment to discriminate between competing theories.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary</li> </ul>

		<p>Fingerprint</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.7.	<p>and what additional data to seek, and to guide the interpretation of the data.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.8.	<p>Identify and communicate the sources of error (random and systematic) inherent in an experiment.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.9.	<p>Identify discrepant results and possible sources of error or uncontrolled conditions.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.10.	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> </ul>

- Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint
- Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details
- Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills
- Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces
- Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper
- Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors
- Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage
- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent

		<p>Thread</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>B.1.11.</p>	<p>Formulate and revise explanations using logic and evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>

- Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage
- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread
- Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection
- Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast
- Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle
- Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective
- Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns
- Forensic Science: Unit 5 Case Activity 1: The Curious Line

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>B.1.12.</p>	<p>Analyze situations and solve problems that require combining concepts from more than one topic area of science and applying these concepts.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> </ul>
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		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Analyzing Writing Inks</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Learning About Paper</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> <li>• Teacher Resource CD: The Case of the Telling Blood Group</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>B.1.13.</p>	<p>Apply mathematical relationships involving linear and quadratic equations, simple trigonometric relationships, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>B.1.14.</p>	<p>Observe natural phenomena and analyze their location, sequence, or time intervals (e.g., relative ages of rocks and succession of species in an ecosystem).</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> </ul>

- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
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- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread
- Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection
- Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast
- Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle
- Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective
- Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns
- Forensic Science: Unit 5 Case Activity 1: The Curious Line
- Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T
- Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket
- Forensic Science: Unit 5 Case Activity 4: The Careless Forger

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
CONTENT STANDARD	DC.B.2.	Biology: Chemistry of Living Things: Broad Concept: Living things are made of atoms bonded together to form molecules, some of the most important of which are large and contain carbon (i.e., 'organic' compounds). As a basis for understanding this concept, students:
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.2.6.	<p>Observe and explain the role of enzymatic catalysis in biochemical processes.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Teacher Resource CD: The Case of the Telling Blood Group</li> </ul>
CONTENT STANDARD	DC.B.3.	Biology: Cell Biology: Broad Concept: All living things are composed of cells. All the fundamental life processes of a cell are either chemical reactions or molecular interactions. As a basis for understanding this concept, students:
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.3.2.	<p>Understand the function of cellular organelles and how the organelles work together in cellular activities (e.g., enzyme secretion from the pancreas).</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.3.3.	<p>Observe and describe that within the cell are specialized parts for the transport of materials, energy capture and release, waste disposal, and motion of the whole cell or of its parts.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.3.7.	<p>Describe that the work of the cell is carried out by structures made up of many different types of large (macro) molecules that it assembles, such as proteins, carbohydrates, lipids, and nucleic acids.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.3.9.	<p>Explain that a complex network of proteins provides organization and</p>

SKILL		shape to cells. <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
CONTENT STANDARD	DC.B.4.	<b>Biology: Genetics: Broad Concept: Genes are a set of instructions encoded in the DNA sequence of each organism that specify the sequence of amino acids in proteins characteristic of that organism. As a basis for understanding this concept, students:</b>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.4.2.	Describe how the discovery of the structure of DNA by James D. Watson, Francis Crick made it possible to interpret the genetic code on the basis of a nucleotide sequence. Know the important contribution of Rosalind Franklin's data to this discovery, i.e., the careful X-ray crystallography on DNA that provided Watson and Crick the clue they needed to build the correct structure. <ul style="list-style-type: none"> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.4.3.	Explain how hereditary information is passed from parents to offspring in the form of 'genes' which are long stretches of DNA consisting of sequences of nucleotides. Explain that in eukaryotes, the genes are contained in chromosomes, which are bodies made up of DNA and various proteins. <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.4.4.	Know every species has its own characteristic DNA sequence. <ul style="list-style-type: none"> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.4.8.	<p>Explain the mechanisms of genetic mutations and chromosomal recombinations, and when and how they are passed on to offspring.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.4.11.	<p>Explain that genetic variation can occur from such processes as crossing over, jumping genes, and deletion and duplication of genes.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
CONTENT STANDARD	DC.B.7.	<p>Biology: Mammalian Body: Broad Concept: As a result of the coordinated structures and functions of organ systems, the internal environment of the mammalian body remains relatively stable (homeostatic), despite changes in the outside environment. As a basis for understanding this concept, students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.7.1.	<p>Explain the major systems of the mammalian body (digestive, respiratory, reproductive, circulatory, excretory, nervous, endocrine, integumentary, immune, skeletal, and muscular) and how they interact with each other.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
CONTENT STANDARD	DC.C.1.	<p>Chemistry: Scientific Investigation and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.1.1.	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying</li> </ul>

Fingerprint Ridge Details

- Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills
- Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces
- Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper
- Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors
- Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage
- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread
- Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>C.1.3.</p>	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>

- Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage
- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
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- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
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- Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection
- Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast
- Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle
- Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective
- Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns
- Forensic Science: Unit 5 Case Activity 1: The Curious Line

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>C.1.4.</p>	<p>Recognize the use and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>C.1.7.</p>	<p>Use hypotheses to choose what data to pay attention to and what additional data to seek, and to guide the interpretation of the data.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>

PERFORMANCE STANDARD/ESSENTIAL SKILL	C.1.8.	<p>Identify and communicate the sources of error inherent in an experiment.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.1.9.	<p>Identify discrepant results and possible sources of error or uncontrolled conditions.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.1.10.	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned</li> </ul>

Parentage

- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
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- Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter

		<p>T</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.1.13.	<p>Apply mathematical relationships involving linear and quadratic equations, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
CONTENT STANDARD	DC.C.2.	<p>Chemistry: Properties of Matter: Broad Concept: Physical and chemical properties can be used to classify and describe matter. As a basis for understanding this concept, students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.2.1.	<p>Investigate and classify properties of matter, including density, melting point, boiling point, and solubility.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.2.2.	<p>Determine the definitions of and use properties such as mass, volume, temperature, density, melting point, boiling point, conductivity, solubility, and color to differentiate between types of matter.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
CONTENT STANDARD	DC.C.11.	<p>Chemistry: Solutions: Broad Concept: Solutions are mixtures of two or more substances that are homogeneous on the molecular level. As a basis for understanding this concept, students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.11.1.	<p>Define solute and solvent.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing</li> </ul>

		<p>Writing Inks</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>Teacher Resource CD: Analyzing Writing Inks</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.11.2.	<p>Predict and describe how the temperature, concentration, pressure and surface area of solids affect the dissolving process.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>Teacher Resource CD: Analyzing Writing Inks</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.11.4.	<p>Calculate the concentration units of solutions such as molarity, percent by mass or volume, parts per million (ppm), or parts per billion (ppb).</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>Teacher Resource CD: Analyzing Writing Inks</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.11.6.	<p>Calculate the theoretical freezing-point depression and boiling-point elevation of an ideal solution as a function of solute concentration.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>Teacher Resource CD: Analyzing Writing Inks</li> </ul>
CONTENT STANDARD	DC.P.1.	<p>Physics: Scientific Investigation and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.1.	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>Forensic Science: Unit 1 Skill Learning Activity 4: Latent</li> </ul>

		<p>Fingerprints on Smooth Surfaces</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> </ul>
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		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>P.1.3.</p>	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>P.1.4.</p>	<p>Recognize the use and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent</li> </ul>

		<p>Fingerprints on Paper</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.7.	<p>Use hypotheses to choose what data to pay attention to and what additional data to seek and to guide the interpretation of the data.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Fingerprinting</li> <li>Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.8.	<p>Identify and communicate the sources of error inherent in an experiment.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.9.	<p>Identify discrepant results and identify possible sources of error or uncontrolled conditions.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.10.	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> </ul>

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- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread
- Forensic Science: Unit 4 Skill Learning Activity 1: Making a

		<p>Hair and Fiber Collection</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.13.	<p>Apply mathematical relationships involving linear and quadratic equations, simple trigonometric relationships, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
CONTENT STANDARD	DC.P.4.	<p>Physics: Mechanics of Fluids: Broad Concept: All objects experience a buoyant force when immersed in a fluid. As a basis for understanding this concept, students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.4.3.	<p>Identify that the pressure in an incompressible fluid (e.g., water) is a function of density; depth; and gravitational acceleration.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
CONTENT STANDARD	DC.P.6.	<p>Physics: Waves: Broad Concept: Waves carry energy from place to place without the transfer of matter. As a basis for understanding this concept, students:</p>

PERFORMANCE STANDARD/ESSENTIAL SKILL	P.6.10.	<p>Predict and explain how light travels through a transparent medium at a speed, <math>v</math>, less than <math>c</math>. The index of refraction of the medium is defined to be <math>n = c/v</math>.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Learning About Paper</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.6.11.	<p>Explain that when a light ray passes from air into a transparent substance, such as glass, having index of refraction <math>n</math>, it is refracted through an angle given by Snell's law, <math>n \sin A = n \sin B</math>, where <math>A</math> is the angle of incidence of the ray and <math>B</math> is the angle of refraction.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Learning About Paper</li> </ul>
CONTENT STANDARD	DC.E.1.	<p>Environmental Science: Scientific Investigation and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.1.	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody</li> </ul>

		<p>Cloth - DNA Profile Analysis</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing</li> </ul>
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		<p>Altered Document Analysis Skills</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.3.	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.4.	<p>Recognize the use and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.5.	<p>Distinguish between a conjecture (guess), a hypothesis, and a theory as these terms are used in science.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.6.	<p>Plan and conduct scientific investigations to explore new phenomena, to check on previous results, to verify or falsify the prediction of a theory, and to use a crucial experiment to discriminate between competing theories.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary</li> </ul>

		<p>Fingerprint</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.7.	<p>Use hypotheses to choose what data to pay attention to and what additional data to seek, and to guide the interpretation of the data.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.8.	<p>Identify and communicate the sources of error (random and systematic) inherent in an experiment.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.9.	<p>Identify discrepant results and possible sources of error or uncontrolled conditions.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.10.	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> </ul>

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- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent

		<p>Thread</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.11.</p>	<p>Formulate and revise explanations using logic and evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>

- Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage
- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread
- Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection
- Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast
- Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle
- Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective
- Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns
- Forensic Science: Unit 5 Case Activity 1: The Curious Line

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.12.</p>	<p>Analyze situations and solve problems that require combining concepts from more than one topic area of science and applying these concepts.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> </ul>
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<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.13.</p>	<p>Apply mathematical relationships involving linear and quadratic equations, simple trigonometric relationships, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.14.</p>	<p>Observe natural phenomena and analyze their location, sequence, or time intervals (e.g., relative ages of rocks and succession of species in an ecosystem).</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> </ul>

- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
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- Forensic Science: Unit 3 Case Activity 3: The False Positive
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- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread
- Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection
- Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast
- Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle
- Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective
- Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns
- Forensic Science: Unit 5 Case Activity 1: The Curious Line
- Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T
- Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket
- Forensic Science: Unit 5 Case Activity 4: The Careless Forger

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
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**Washington D.C. Learning Standards  
Science  
Grade 10**

<b>CONTENT STANDARD</b>	<b>DC.ES.1.</b>	<b>Earth Science: Scientific Investigation and Inquiry: Broad Concept:</b> Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>ES.1.1.</b>	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon</li> </ul>

Outlaw - Thomas Howard

- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread
- Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection
- Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast
- Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle
- Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective
- Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns
- Forensic Science: Unit 5 Case Activity 1: The Curious Line
- Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T
- Forensic Science: Unit 5 Case Activity 3: The Questioned

		<p>Lottery Ticket</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.3.	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.4.	<p>Recognize the use and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.7.	<p>Use hypotheses to choose what data to pay attention to and what additional data to seek, and to guide the interpretation of the data.</p>

		<ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.8.	<p>Identify and communicate the sources of error (random and systematic error) inherent in an experiment.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.9.	<p>Identify discrepant results and identify possible sources of error or uncontrolled conditions.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.10.	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> </ul>

- Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper
- Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors
- Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage
- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread
- Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection
- Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast
- Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle
- Forensic Science: Unit 4 Skill Learning Activity 4: Learning to

		<p>be a Layer Detective</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	ES.1.13.	<p>Apply mathematical relationships involving proportionalities, linear relations, quadratic equations, simple trigonometric relationships, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
CONTENT STANDARD	DC.B.1.	<p>Biology: Scientific Investigation and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.1.	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> </ul>

- Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint
- Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag
- Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint
- Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details
- Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills
- Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces
- Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper
- Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors
- Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage
- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating

		<p>Headlamp</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>B.1.3.</p>	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>B.1.4.</p>	<p>Recognize the use and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.5.	<p>Distinguish between a conjecture (guess), a hypothesis, and a theory as these terms are used in science.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.6.	<p>Plan and conduct scientific investigations to explore new phenomena, to check on previous results, to verify or falsify the prediction of a theory, and to use a crucial experiment to discriminate between competing theories.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.7.	<p>and what additional data to seek, and to guide the interpretation of the data.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.8.	<p>Identify and communicate the sources of error (random and systematic) inherent in an experiment.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.9.	<p>Identify discrepant results and possible sources of error or uncontrolled</p>

SKILL		<p>conditions.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.1.10.	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing</li> </ul>

		<p>Genetic Analysis using DNA Profile Frequency Calculations</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> </ul>
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		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>B.1.11.</p>	<p>Formulate and revise explanations using logic and evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p><b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b></p>	<p><b>B.1.12.</b></p>	<p>Analyze situations and solve problems that require combining concepts from more than one topic area of science and applying these concepts.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> </ul>

- Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint
- Forensic Science: Unit 1 Case Activity 3: The Paper Mark
- Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint
- Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag
- Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details
- Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills
- Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces
- Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper
- Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors
- Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage
- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
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- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Analyzing Writing Inks</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Learning About Paper</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> <li>• Teacher Resource CD: The Case of the Telling Blood Group</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>B.1.13.</p>	<p>Apply mathematical relationships involving linear and quadratic equations, simple trigonometric relationships, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> </ul>

		<ul style="list-style-type: none"> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>B.1.14.</p>	<p>Observe natural phenomena and analyze their location, sequence, or time intervals (e.g., relative ages of rocks and succession of species in an ecosystem).</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>Forensic Science: Unit 3 Skill Learning Activity 3: Human</li> </ul>

		<p>Blood Group Analysis</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<b>CONTENT STANDARD</b>	DC.B.2.	Biology: Chemistry of Living Things: Broad Concept: Living things are made of atoms bonded together to form molecules, some of the most important of which are large and contain carbon (i.e., 'organic' compounds). As a basis for understanding this concept, students:
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	B.2.6.	<p>Observe and explain the role of enzymatic catalysis in biochemical processes.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> </ul>

		<ul style="list-style-type: none"> <li>Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>Teacher Resource CD: The Case of the Telling Blood Group</li> </ul>
<b>CONTENT STANDARD</b>	<b>DC.B.3.</b>	<b>Biology: Cell Biology: Broad Concept: All living things are composed of cells. All the fundamental life processes of a cell are either chemical reactions or molecular interactions. As a basis for understanding this concept, students:</b>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>B.3.2.</b>	<p>Understand the function of cellular organelles and how the organelles work together in cellular activities (e.g., enzyme secretion from the pancreas).</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>B.3.3.</b>	<p>Observe and describe that within the cell are specialized parts for the transport of materials, energy capture and release, waste disposal, and motion of the whole cell or of its parts.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>B.3.7.</b>	<p>Describe that the work of the cell is carried out by structures made up of many different types of large (macro) molecules that it assembles, such as proteins, carbohydrates, lipids, and nucleic acids.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>B.3.9.</b>	<p>Explain that a complex network of proteins provides organization and shape to cells.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>CONTENT STANDARD</b>	<b>DC.B.4.</b>	<b>Biology: Genetics: Broad Concept: Genes are a set of instructions encoded in the DNA sequence of each organism that specify the sequence of amino acids in proteins characteristic of that organism. As a basis for understanding this concept, students:</b>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>B.4.2.</b>	<p>Describe how the discovery of the structure of DNA by James D. Watson, Francis Crick made it possible to interpret the genetic code on the basis of a nucleotide sequence. Know the important contribution of Rosalind Franklin's data to this discovery, i.e., the careful X-ray crystallography on DNA that provided Watson and Crick the clue they needed to build the correct structure.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.4.3.	<p>Explain how hereditary information is passed from parents to offspring in the form of 'genes' which are long stretches of DNA consisting of sequences of nucleotides. Explain that in eukaryotes, the genes are contained in chromosomes, which are bodies made up of DNA and various proteins.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.4.4.	<p>Know every species has its own characteristic DNA sequence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.4.8.	<p>Explain the mechanisms of genetic mutations and chromosomal recombinations, and when and how they are passed on to offspring.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.4.11.	<p>Explain that genetic variation can occur from such processes as crossing over, jumping genes, and deletion and duplication of genes.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
CONTENT STANDARD	DC.B.7.	<p>Biology: Mammalian Body: Broad Concept: As a result of the coordinated structures and functions of organ systems, the internal environment of the mammalian body remains relatively stable (homeostatic), despite changes in the outside environment. As a basis for understanding this concept, students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	B.7.1.	<p>Explain the major systems of the mammalian body (digestive, respiratory, reproductive, circulatory, excretory, nervous, endocrine, integumentary,</p>

SKILL		<p>immune, skeletal, and muscular) and how they interact with each other.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
CONTENT STANDARD	DC.C.1.	<p>Chemistry: Scientific Investigation and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:</p>
PERFORMANCE STANDARD/ESSENTIAL SKILL	C.1.1.	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> </ul>

- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
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- Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks
- Forensic Science: Unit 6 Activity 1: Toxicological Analysis
- Forensic Science: Unit 6 Activity 2: Chromatographic Analysis
- Forensic Science: Unit 6 Activity 3: Fingerprint Analysis
- Forensic Science: Unit 6 Activity 4: Document Analysis

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>C.1.3.</p>	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> </ul>

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<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>C.1.4.</b>	Recognize the use and limitations of models and theories as scientific representations of reality. <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary</li> </ul>

		<p>Fingerprint</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>C.1.7.</p>	<p>Use hypotheses to choose what data to pay attention to and what additional data to seek, and to guide the interpretation of the data.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>C.1.8.</p>	<p>Identify and communicate the sources of error inherent in an experiment.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>C.1.9.</p>	<p>Identify discrepant results and possible sources of error or uncontrolled conditions.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>

<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>C.1.10.</p>	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> </ul>
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		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p><b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b></p>	<p><b>C.1.13.</b></p>	<p>Apply mathematical relationships involving linear and quadratic equations, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing</li> </ul>

		<p>Writing Inks</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
<b>CONTENT STANDARD</b>	<b>DC.C.2.</b>	<b>Chemistry: Properties of Matter: Broad Concept: Physical and chemical properties can be used to classify and describe matter. As a basis for understanding this concept, students:</b>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>C.2.1.</b>	<p>Investigate and classify properties of matter, including density, melting point, boiling point, and solubility.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>C.2.2.</b>	<p>Determine the definitions of and use properties such as mass, volume, temperature, density, melting point, boiling point, conductivity, solubility, and color to differentiate between types of matter.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
<b>CONTENT STANDARD</b>	<b>DC.C.11.</b>	<b>Chemistry: Solutions: Broad Concept: Solutions are mixtures of two or more substances that are homogeneous on the molecular level. As a basis for understanding this concept, students:</b>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>C.11.1.</b>	<p>Define solute and solvent.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>Teacher Resource CD: Analyzing Writing Inks</li> </ul>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>C.11.2.</b>	<p>Predict and describe how the temperature, concentration, pressure and surface area of solids affect the dissolving process.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>Teacher Resource CD: Analyzing Writing Inks</li> </ul>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>C.11.4.</b>	<p>Calculate the concentration units of solutions such as molarity, percent by mass or volume, parts per million (ppm), or parts per billion (ppb).</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>Teacher Resource CD: Analyzing Writing Inks</li> </ul>
<b>PERFORMANCE STANDARD/ESSENTIAL SKILL</b>	<b>C.11.6.</b>	<p>Calculate the theoretical freezing-point depression and boiling-point elevation of an ideal solution as a function of solute concentration.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>Teacher Resource CD: Analyzing Writing Inks</li> </ul>

CONTENT STANDARD	DC.P.1.	Physics: Scientific Investigation and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.1.	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> </ul>

- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
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- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
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- Forensic Science: Unit 6 Activity 2: Chromatographic Analysis
- Forensic Science: Unit 6 Activity 3: Fingerprint Analysis
- Forensic Science: Unit 6 Activity 4: Document Analysis
- Forensic Science: Unit 6 Activity 5: Blood Analysis
- Teacher Resource CD: Fingerprinting
- Teacher Resource CD: Trace Evidence
- Virtual Laboratory: ABO-Rh Blood Typing

PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.3.	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.4.	<p>Recognize the use and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.7.	<p>Use hypotheses to choose what data to pay attention to and what additional data to seek and to guide the interpretation of the data.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Fingerprinting</li> <li>Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.8.	<p>Identify and communicate the sources of error inherent in an experiment.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.9.	<p>Identify discrepant results and identify possible sources of error or uncontrolled conditions.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary</li> </ul>

		<p>Fingerprint</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>P.1.10.</p>	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> </ul>

- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
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- Forensic Science: Unit 6 Activity 2: Chromatographic Analysis
- Forensic Science: Unit 6 Activity 3: Fingerprint Analysis
- Forensic Science: Unit 6 Activity 4: Document Analysis

		<ul style="list-style-type: none"> <li>Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.1.13.	<p>Apply mathematical relationships involving linear and quadratic equations, simple trigonometric relationships, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
CONTENT STANDARD	DC.P.4.	Physics: Mechanics of Fluids: Broad Concept: All objects experience a buoyant force when immersed in a fluid. As a basis for understanding this concept, students:
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.4.3.	<p>Identify that the pressure in an incompressible fluid (e.g., water) is a function of density; depth; and gravitational acceleration.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
CONTENT STANDARD	DC.P.6.	Physics: Waves: Broad Concept: Waves carry energy from place to place without the transfer of matter. As a basis for understanding this concept, students:
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.6.10.	<p>Predict and explain how light travels through a transparent medium at a speed, <math>v</math>, less than <math>c</math>. The index of refraction of the medium is defined to be <math>n = c/v</math>.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Learning About Paper</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	P.6.11.	<p>Explain that when a light ray passes from air into a transparent substance, such as glass, having index of refraction <math>n</math>, it is refracted through an angle given by Snell's law, <math>n \sin A = n \sin B</math>, where <math>A</math> is the angle of incidence of the ray and <math>B</math> is the angle of refraction.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Learning About Paper</li> </ul>
CONTENT STANDARD	DC.E.1.	Environmental Science: Scientific Investigation and Inquiry: Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.1.	<p>Know the elements of scientific methodology (identification of a problem, hypothesis formulation and prediction, performance of experimental tests, analysis of data, falsification, developing conclusions, reporting results) and be able to use a sequence of those elements to solve a problem or test a hypothesis. Also understand the limitations of any single scientific method (sequence of elements) in solving problems.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> </ul>

- Forensic Science: Unit 1 Case Activity 3: The Paper Mark
- Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint
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- Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint
- Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details
- Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills
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- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.3.</p>	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.4.</p>	<p>Recognize the use and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing</li> </ul>

		<p>Fingerprint</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.5.	<p>Distinguish between a conjecture (guess), a hypothesis, and a theory as these terms are used in science.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.6.	<p>Plan and conduct scientific investigations to explore new phenomena, to check on previous results, to verify or falsify the prediction of a theory, and to use a crucial experiment to discriminate between competing theories.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.7.	<p>Use hypotheses to choose what data to pay attention to and what additional data to seek, and to guide the interpretation of the data.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.8.	<p>Identify and communicate the sources of error (random and systematic) inherent in an experiment.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE	E.1.9.	<p>Identify discrepant results and possible sources of error or uncontrolled</p>

STANDARD/ESSENTIAL SKILL		<p>conditions.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>
PERFORMANCE STANDARD/ESSENTIAL SKILL	E.1.10.	<p>Select and use appropriate tools and technology to perform tests, collect data, analyze relationships, and display data. (The focus is on manual graphing, interpreting graphs, and mastery of metric measurements and units, with supplementary use of computers and electronic data gathering when appropriate.)</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing</li> </ul>

		<p>Genetic Analysis using DNA Profile Frequency Calculations</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> </ul>
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		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.11.</p>	<p>Formulate and revise explanations using logic and evidence.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>• Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>• Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>• Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>• Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>• Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>• Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>• Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>• Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>• Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> </ul>

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood</li> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 1: The Artist's Brush</li> <li>• Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.12.</p>	<p>Analyze situations and solve problems that require combining concepts from more than one topic area of science and applying these concepts.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> </ul>

- Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint
- Forensic Science: Unit 1 Case Activity 3: The Paper Mark
- Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint
- Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag
- Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details
- Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills
- Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces
- Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper
- Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors
- Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage
- Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard
- Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
- Forensic Science: Unit 2 Case Activity 4: The Second Examination
- Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
- Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis
- Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms
- Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
- Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
- Forensic Science: Unit 3 Case Activity 1: The Stain in Question
- Forensic Science: Unit 3 Case Activity 2: The Glowing Light
- Forensic Science: Unit 3 Case Activity 3: The False Positive
- Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group
- Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
- Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood
- Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood
- Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group Analysis
- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment

		<ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve</li> <li>• Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 5: Learning About Fabrics and Weave Patterns</li> <li>• Forensic Science: Unit 5 Case Activity 1: The Curious Line</li> <li>• Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T</li> <li>• Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket</li> <li>• Forensic Science: Unit 5 Case Activity 4: The Careless Forger</li> <li>• Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 3: Fingerprint Analysis</li> <li>• Forensic Science: Unit 6 Activity 4: Document Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Analyzing Writing Inks</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Learning About Paper</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> <li>• Teacher Resource CD: The Case of the Telling Blood Group</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.13.</p>	<p>Apply mathematical relationships involving linear and quadratic equations, simple trigonometric relationships, exponential growth and decay laws, and logarithmic relationships to scientific situations.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns</li> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> <li>• Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks</li> </ul>

		<ul style="list-style-type: none"> <li>Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> </ul>
<p>PERFORMANCE STANDARD/ESSENTIAL SKILL</p>	<p>E.1.14.</p>	<p>Observe natural phenomena and analyze their location, sequence, or time intervals (e.g., relative ages of rocks and succession of species in an ecosystem).</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 3: The Paper Mark</li> <li>Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint</li> <li>Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag</li> <li>Forensic Science: Unit 1 Skill Learning Activity 2: Identifying Fingerprint Ridge Details</li> <li>Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</li> <li>Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces</li> <li>Forensic Science: Unit 1 Skill Learning Activity 5: Latent Fingerprints on Paper</li> <li>Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors</li> <li>Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</li> <li>Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard</li> <li>Forensic Science: Unit 2 Case Activity 3: The Telling Tissue</li> <li>Forensic Science: Unit 2 Case Activity 4: The Second Examination</li> <li>Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile</li> <li>Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis</li> <li>Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis</li> <li>Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms</li> <li>Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles</li> <li>Forensic Science: Unit 3 Case Activity 1: The Stain in Question</li> <li>Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>Forensic Science: Unit 3 Case Activity 3: The False Positive</li> <li>Forensic Science: Unit 3 Case Activity 4: The Telling Blood Group</li> <li>Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door</li> <li>Forensic Science: Unit 3 Skill Learning Activity 1: Applying the Kastle-Meyer Test for the Presence of Blood</li> <li>Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood</li> <li>Forensic Science: Unit 3 Skill Learning Activity 3: Human</li> </ul>

Blood Group Analysis

- Forensic Science: Unit 3 Skill Learning Activity 4: Detecting Trace Amounts of Blood
- Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns
- Forensic Science: Unit 4 Case Activity 1: The Artist's Brush
- Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment
- Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
- Forensic Science: Unit 4 Case Activity 4: The Torn Sleeve
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- Forensic Science: Unit 5 Skill Learning Activity 1: Practicing Paper Analysis Skills
- Forensic Science: Unit 5 Skill Learning Activity 2: Practicing Handwriting Analysis Skills
- Forensic Science: Unit 5 Skill Learning Activity 3: Practicing Altered Document Analysis Skills
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- Forensic Science: Unit 6 Activity 2: Chromatographic Analysis
- Forensic Science: Unit 6 Activity 3: Fingerprint Analysis
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