

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

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**Delaware Standards and Curricula**  
**Science**  
**Grade 7**

CONTENT STANDARD	DE.1.	Nature and Application of Science and Technology
PERFORMANCE INDICATOR / GLE	1.1.	Enduring Understanding: Scientific inquiry involves asking scientifically-oriented questions, collecting evidence, forming explanations, connecting explanations to scientific knowledge and theory, and communicating and justifying the explanation.
GRADE LEVEL EXPECTATION	1.1.1.	<p>Frame and refine questions that can be investigated scientifically, and generate testable hypotheses.</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>

		<ul style="list-style-type: none"> <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 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 3: Human Blood Group Analysis</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 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 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p><b>GRADE LEVEL EXPECTATION</b></p>	<p>1.1.2.</p>	<p>Design and conduct investigations with controlled variables to test hypotheses.</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> <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</li> </ul>

		<p>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 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>GRADE LEVEL EXPECTATION</b></p>	<p><b>1.1.3.</b></p>	<p>Accurately collect data through the selection and use of tools and techniques appropriate to the investigation. Construct tables, diagrams and graphs, showing relationships between two variables, to display and facilitate analysis of data. Compare and question results with and from other students.</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</li> </ul>

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
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- Forensic Science: Unit 5 Case Activity 4: The Careless Forger
- Forensic Science: Unit 5 Case Activity 5: Case of the Hudson Doggerel

		<ul style="list-style-type: none"> <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><b>GRADE LEVEL EXPECTATION</b></p>	<p><b>1.1.4.</b></p>	<p>Form explanations based on accurate and logical analysis of evidence. Revise the explanation using alternative descriptions, predictions, models and knowledge from other sources as well as results of further 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 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> </ul>

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GRADE LEVEL EXPECTATION	1.1.5.	Communicate scientific procedures, data, and explanations to enable the replication of results. Use computer technology to assist in communicating these results. Critical review is

important in the analysis of these results.

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- Forensic Science: Unit 4 Case Activity 5: The Fraudulent Thread

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<p><b>GRADE LEVEL EXPECTATION</b></p>	<p>1.1.6.</p>	<p>Use mathematics, reading, writing, and technology in conducting scientific inquiries.</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> </ul>

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		<ul style="list-style-type: none"> <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: Simulating DNA Analysis</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
GRADE LEVEL EXPECTATION	1.1.11.	<p>Calculate the density of various solid materials. Use density to predict whether an object will sink or float in water. Given the density of various solids and liquids, create a density column and explain the arrangement in terms of density.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
GRADE LEVEL EXPECTATION	1.1.12.	<p>Use physical properties to distinguish and separate one substance or material from another.</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> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
GRADE LEVEL EXPECTATION	1.1.13.	<p>Distinguish between homogeneous and heterogeneous mixtures. Using their physical properties, design and conduct an investigation to separate the components of a homogeneous or heterogeneous mixture. Recognize that a homogeneous mixture is a solution.</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> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
GRADE LEVEL EXPECTATION	1.1.14.	<p>Prepare solutions of different concentrations recognizing that the properties of the solution (color, density, boiling point) depend on the nature and concentration of the 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>
GRADE LEVEL EXPECTATION	1.1.18.	<p>Show that mass is conserved when adding a solute to a solvent (mass of solvent + mass of solute = total mass of solution).</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>
GRADE LEVEL EXPECTATION	1.1.36.	<p>Make a simple labeled drawing of human reproductive cells. Indicate that the sex cells (sperm and egg) each have half of the chromosomal number (23) as a fertilized egg (46). The</p>

		<p>fertilized egg has the same number of chromosomes as each of the body cells of the new organism. Recognize that different organisms may have different numbers of chromosomes and that the number of chromosomes does not relate to the complexity of the organism.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>GRADE LEVEL EXPECTATION</b>	<b>1.1.38.</b>	<p>Describe the relationship between genes, chromosomes, and DNA in terms of location and relative size.</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>
<b>GRADE LEVEL EXPECTATION</b>	<b>1.1.39.</b>	<p>Use single trait Punnett squares to examine the genotypes of individuals and indicate which individuals will express dominant or recessive traits. Justify the indication by relating that dominant alleles appearing heterozygously or homozygously are expressed or that two recessive alleles (homozygous) are required for an offspring to express a recessive trait phenotypically.</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>
<b>CONTENT STANDARD</b>	<b>DE.1.</b>	<b>Nature and Application of Science and Technology</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>1.2.</b>	<b>Enduring Understanding: The development of technology and advancement in science influence and drive each other forward.</b>

<p>GRADE LEVEL EXPECTATION</p>	<p>1.2.2.</p>	<p>Discuss the social, economic, and/or environmental consequences of the production of new materials to meet human wants and needs.</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> <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> </ul>
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<b>GRADE LEVEL EXPECTATION</b>	<b>1.2.7.</b>	<p>Research and report on selective breeding. Select an organism (e.g., race horses, pedigree dogs, drought resistant plants) and trace its history of development and the traits of the plant or animal that were enhanced by selective breeding.</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>
<b>CONTENT STANDARD</b>	<b>DE.1.</b>	<b>Nature and Application of Science and Technology</b>
<b>PERFORMANCE</b>	<b>1.3.</b>	<b>Enduring Understanding: Understanding past processes and contributions is</b>

INDICATOR / GLE		essential in building scientific knowledge.
GRADE LEVEL EXPECTATION	1.3.1.	<p>Research the sequence of events that led to the formation of the cell theory and correlate these events with technological advancements (e.g., hand lens, microscopes, and staining techniques).</p> <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 4 Case Activity 1: The Artist's Brush</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 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
CONTENT STANDARD	DE.2.	Materials and Their Properties
PERFORMANCE INDICATOR / GLE	2.1.	Enduring Understanding: The structures of materials determine their properties.
GRADE LEVEL EXPECTATION	2.1.5.	<p>Distinguish between physical properties that are dependent upon mass (size, shape) and those physical properties such as boiling point, melting point, solubility, density, conduction of heat and pH of a substance or material that are not altered when the mass of the material is changed.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
GRADE LEVEL EXPECTATION	2.1.6.	<p>Calculate the density of various solid materials. Use density to predict whether an object will sink or float in water. Given the density of various solids and liquids, create a density column and explain the arrangement in terms of density.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp</li> </ul>
GRADE LEVEL EXPECTATION	2.1.7.	<p>Use physical properties to distinguish and separate one substance or material from another.</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> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
CONTENT STANDARD	DE.2.	Materials and Their Properties
PERFORMANCE INDICATOR / GLE	2.2.	Enduring Understanding: The properties of the mixture are based on the properties of its components.
GRADE LEVEL EXPECTATION	2.2.1.	<p>Distinguish between homogeneous and heterogeneous mixtures. Using their physical properties, design and conduct an investigation to separate the components of a homogeneous or heterogeneous mixture. Recognize that a homogeneous mixture is a solution.</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>

		<ul style="list-style-type: none"> <li>Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
GRADE LEVEL EXPECTATION	2.2.2.	<p>Prepare solutions of different concentrations recognizing that the properties of the solution (color, density, boiling point) depend on the nature and concentration of the 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>
CONTENT STANDARD	DE.2.	Materials and Their Properties
PERFORMANCE INDICATOR / GLE	2.3.	Enduring Understanding: When materials interact within a closed system, the total mass of the system remains the same.
GRADE LEVEL EXPECTATION	2.3.1.	<p>Show that mass is conserved when adding a solute to a solvent (mass of solvent + mass of solute = total mass of solution).</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	DE.2.	Materials and Their Properties
PERFORMANCE INDICATOR / GLE	2.4.	Enduring Understanding: People develop new materials as a response to the needs of society and the pursuit of knowledge. This development may have risks and benefits to humans and the environment.
GRADE LEVEL EXPECTATION	2.4.2.	<p>Discuss the social, economic, and/or environmental consequences of the production of new materials to meet human wants and needs.</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> </ul>

- 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 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 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

		<ul style="list-style-type: none"> <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> </ul>
<b>CONTENT STANDARD</b>	<b>DE.6.</b>	<b>Life Processes</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>6.1.</b>	<b>Enduring Understanding: Living systems, from the organismic to the cellular level, demonstrate the complementary nature of structure and function.</b>
<b>GRADE LEVEL EXPECTATION</b>	<b>6.1.3.</b>	<p>Explain that individual cells are able to carry out basic life functions that are similar in organisms; however, explain that in multi-cellular organisms, cells become specialized, interdependent upon one another, and unable to survive independently.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>GRADE LEVEL EXPECTATION</b>	<b>6.1.6.</b>	<p>Research the sequence of events that led to the formation of the cell theory and correlate these events with technological advancements (e.g., hand lens, microscopes, and staining techniques).</p> <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 4 Case Activity 1: The Artist's Brush</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 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
<b>CONTENT STANDARD</b>	<b>DE.7.</b>	<b>Diversity and Continuity of Living Things</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>7.1.</b>	<b>Enduring Understanding: Organisms reproduce, develop, have predictable life cycles, and pass on heritable traits to their offspring.</b>
<b>GRADE LEVEL EXPECTATION</b>	<b>7.1.4.</b>	<p>Make a simple labeled drawing of human reproductive cells. Indicate that the sex cells (sperm and egg) each have half of the chromosomal number (23) as a fertilized egg (46). The fertilized egg has the same number of chromosomes as each of the body cells of the new organism. Recognize that different organisms may have different numbers of chromosomes and that the number of chromosomes does not relate to the complexity of the organism.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>GRADE LEVEL EXPECTATION</b>	<b>7.1.6.</b>	<p>Describe the relationship between genes, chromosomes, and DNA in terms of location and relative size.</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> </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>
GRADE LEVEL EXPECTATION	7.1.7.	<p>Explain how the sex chromosomes inherited from each parent determines the gender of the offspring.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage</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>
GRADE LEVEL EXPECTATION	7.1.8.	<p>Model a random process (e.g., coin toss) that illustrates which alleles can be passed from parent to offspring.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</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 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> </ul>
GRADE LEVEL EXPECTATION	7.1.9.	<p>Use single trait Punnett squares to examine the genotypes of individuals and indicate which individuals will express dominant or recessive traits. Justify the indication by relating that dominant alleles appearing heterozygously or homozygously are expressed or that two recessive alleles (homozygous) are required for an offspring to express a recessive trait phenotypically.</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>

		<ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>CONTENT STANDARD</b>	<b>DE.7.</b>	<b>Diversity and Continuity of Living Things</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>7.3.</b>	Enduring Understanding: The development of technology has allowed us to apply our knowledge of genetics, reproduction, development and evolution to meet human wants and needs.
<b>GRADE LEVEL EXPECTATION</b>	<b>7.3.1.</b>	<p>Research and report on selective breeding. Select an organism (e.g., race horses, pedigree dogs, drought resistant plants) and trace its history of development and the traits of the plant or animal that were enhanced by selective breeding. Recognize that the health profession uses pedigree charts to trace genetic disorders in past generations make predictions for future generations.</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>

**Delaware Standards and Curricula  
Science  
Grade 8**

<b>CONTENT STANDARD</b>	<b>DE.1.</b>	<b>Nature and Application of Science and Technology</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>1.1.</b>	Enduring Understanding: Scientific inquiry involves asking scientifically-oriented questions, collecting evidence, forming explanations, connecting explanations to scientific knowledge and theory, and communicating and justifying the explanation.
<b>GRADE LEVEL EXPECTATION</b>	<b>1.1.1.</b>	<p>Frame and refine questions that can be investigated scientifically, and generate testable hypotheses.</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>

		<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 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 3: Human Blood Group Analysis</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 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 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic Analysis</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
GRADE LEVEL EXPECTATION	1.1.2.	Design and conduct investigations with controlled variables to test hypotheses.

- Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint
- Forensic Science: Unit 1 Case Activity 4: The Confusing Fingerprint
- Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag
- 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 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 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 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

		<ul style="list-style-type: none"> <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>GRADE LEVEL EXPECTATION</b></p>	<p><b>1.1.3.</b></p>	<p>Accurately collect data through the selection and use of tools and techniques appropriate to the investigation. Construct tables, diagrams and graphs, showing relationships between two variables, to display and facilitate analysis of data. Compare and question results with and from other students.</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 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</li> </ul>

		<p>Bloodstain Patterns</p> <ul style="list-style-type: none"> <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><b>GRADE LEVEL EXPECTATION</b></p>	<p><b>1.1.4.</b></p>	<p>Form explanations based on accurate and logical analysis of evidence. Revise the explanation using alternative descriptions, predictions, models and knowledge from other sources as well as results of further 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</li> </ul>

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
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- Forensic Science: Unit 5 Case Activity 2: The Peculiar Letter T
- Forensic Science: Unit 5 Case Activity 3: The Questioned Lottery Ticket

		<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>
<p><b>GRADE LEVEL EXPECTATION</b></p>	<p>1.1.5.</p>	<p>Communicate scientific procedures, data, and explanations to enable the replication of results. Use computer technology to assist in communicating these results. Critical review is important in the analysis of these results.</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> </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 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>
GRADE LEVEL EXPECTATION	1.1.6.	Use mathematics, reading, writing, and technology in conducting scientific inquiries.

- Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint
- 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
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- Forensic Science: Unit 1 Skill Learning Activity 4: Latent Fingerprints on Smooth Surfaces
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- 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

		<p>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>• Teacher Resource CD: Analyzing Writing Inks</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
GRADE LEVEL EXPECTATION	1.1.30.	<p>Trace the flow of the energy carried by the light when the light strikes a material and is reflected from, transmitted through, and/or absorbed by the material. Describe the energy transfers and transformations that take place when light energy is absorbed by a material.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Learning About Paper</li> </ul>
GRADE LEVEL EXPECTATION	1.1.31.	<p>Conduct investigations to show that materials can absorb some frequencies of electromagnetic waves, but reflect others or allow them to transmit through the material.</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Learning About Paper</li> </ul>
GRADE LEVEL EXPECTATION	1.1.32.	<p>Use this selective absorption process to explain how objects obtain their color, how materials like sunscreen can serve to protect us from harmful electromagnetic waves and how selective absorption contributes to the Greenhouse Effect.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> </ul>
GRADE LEVEL EXPECTATION	1.1.34.	<p>Conduct investigations to determine how the physical properties of materials (e.g., size, shape, color, texture, hardness) can account for the effect the materials have on sunlight and the degree of change observed in the materials (for example, dark cloth absorbs more heat than light cloth, clear water transmits more light than murky water, and polished materials</p>

		<p>reflect more light than dull materials).</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Learning About Paper</li> </ul>
<b>CONTENT STANDARD</b>	<b>DE.1.</b>	<b>Nature and Application of Science and Technology</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>1.2.</b>	<b>Enduring Understanding: The development of technology and advancement in science influence and drive each other forward.</b>
<b>GRADE LEVEL EXPECTATION</b>	<b>1.2.5.</b>	<p>Recognize that spin offs are products which have undergone a technology transfer process from research to public use. Research spin-offs from the space program that have affected our everyday lives (i.e., Velcro, smoke detectors, cordless tools).</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> <li>• Forensic Science: Unit 3 Skill Learning Activity 3: Human Blood Group</li> </ul>

		<p>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> </ul>
<b>CONTENT STANDARD</b>	<b>DE.3.</b>	<b>Energy and Its Effects</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>3.3.</b>	Enduring Understanding: Energy readily transforms from one form to another, but these transformations are not always reversible. The details of these transformations depend upon the initial form of the energy and the properties of the materials involved. Energy may transfer into or out of a system and it may change forms, but the total energy cannot change.
<b>GRADE LEVEL EXPECTATION</b>	<b>3.3.6.</b>	Trace the flow of the energy carried by the light when the light strikes a material and is reflected from, transmitted through, and/or absorbed by the material. Describe the energy transfers and transformations that take place when light energy is absorbed by a material. <ul style="list-style-type: none"> <li>• Teacher Resource CD: Learning About Paper</li> </ul>
<b>GRADE LEVEL EXPECTATION</b>	<b>3.3.7.</b>	Conduct investigations to show that materials can absorb some frequencies of electromagnetic waves, but reflect others or allow them to transmit through the material. Use this selective absorption process to explain how objects obtain their color, how materials like sunscreen can serve to protect us from harmful electromagnetic waves, and how selective

		<p>absorption contributes to the Greenhouse Effect.</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>Teacher Resource CD: Learning About Paper</li> </ul>
<b>GRADE LEVEL EXPECTATION</b>	<b>3.3.9.</b>	<p>Conduct investigations to determine how the physical properties of materials (e.g., size, shape, color, texture, hardness) can account for the effect the materials have on sunlight and the degree of change observed in the materials (e.g., dark cloth absorbs more heat than light cloth, clear water transmits more light than murky water, and polished materials reflect more light than dull materials).</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Learning About Paper</li> </ul>

**Delaware Standards and Curricula  
Science  
Grade 9**

<b>CONTENT STANDARD</b>	<b>DE.1.</b>	<b>Nature and Application of Science and Technology</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>1.1.</b>	Enduring Understanding: Scientific inquiry involves asking scientifically-oriented questions, collecting evidence, forming explanations, connecting explanations to scientific knowledge and theory, and communicating and justifying the explanation.
<b>GRADE LEVEL EXPECTATION</b>	<b>1.1.1.</b>	<p>Identify and form questions that generate a specific testable hypothesis that guide the design and breadth of the scientific 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 Look at STR Polymorphisms</li> </ul>

		<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 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 3: Human Blood Group Analysis</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 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 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic 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><b>GRADE LEVEL EXPECTATION</b></p>	<p><b>1.1.2.</b></p>	<p>Design and conduct valid scientific investigations to control all but the testable variable in order to test a specific hypothesis.</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> <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> </ul>

		<ul style="list-style-type: none"> <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 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>GRADE LEVEL EXPECTATION</b></p>	<p><b>1.1.3.</b></p>	<p>Collect accurate and precise data through the selection and use of tools and technologies appropriate to the investigations. Display and organize data through the use of tables, diagrams, graphs, and other organizers that allow analysis and comparison with known information and allow for replication of results.</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>

- 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 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

		<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>
<p><b>GRADE LEVEL EXPECTATION</b></p>	<p><b>1.1.4.</b></p>	<p>Construct logical scientific explanations and present arguments which defend proposed explanations through the use of closely examined 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</li> </ul>

		<p>DNA Profiles</p> <ul style="list-style-type: none"> <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> <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>GRADE LEVEL EXPECTATION</b></p>	<p><b>1.1.5.</b></p>	<p>Communicate and defend the results of scientific investigations using logical arguments and connections with the known body of scientific information.</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>GRADE LEVEL EXPECTATION</p>	<p>1.1.6.</p>	<p>Use mathematics, reading, writing and technology when conducting scientific inquiries.</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> <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</li> </ul>

		<p>Amounts of Blood</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 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: Analyzing Writing Inks</li> <li>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>GRADE LEVEL EXPECTATION</p>	<p>1.1.8.</p>	<p>Classify matter as mixtures (which are either homogeneous or heterogeneous) or pure substances (which are either compounds or elements.)</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>
<p>GRADE LEVEL EXPECTATION</p>	<p>1.1.9.</p>	<p>Classify various common materials as an element, compound or mixture.</p> <ul style="list-style-type: none"> <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> <li>• Teacher Resource CD: Analyzing Writing Inks</li> </ul>
GRADE LEVEL EXPECTATION	1.1.18.	<p>Separate mixtures into their component parts according to their physical properties such as melting point, boiling point, magnetism, solubility and particle size.</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> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
GRADE LEVEL EXPECTATION	1.1.19.	<p>Explain how the properties of the components of the mixture determine the physical separation techniques used.</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> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
GRADE LEVEL EXPECTATION	1.1.21.	<p>Explore how various solutions conduct electricity and rank the liquids from good conductors to poor conductors. Explain the characteristics that allow some solutions to have better electrical conductivity than others.</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>
GRADE LEVEL EXPECTATION	1.1.22.	<p>Measure the pH of a solution using chemical indicators to determine the relative acidity or alkalinity of the solution. Identify the physical properties of acids and bases.</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> </ul>
GRADE LEVEL EXPECTATION	1.1.45.	<p>Investigate how radio waves, microwaves, infrared waves, visible waves and ultraviolet waves behave when they strike different substances. Record how effectively different materials reflect, absorb and transmit different kinds of EM waves. Draw conclusions based on this data and the physical properties of the substances (for example some substances absorb visible waves, but not radio waves). Other materials absorb UV waves, but not visible waves).</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Learning About Paper</li> </ul>
CONTENT STANDARD	DE.2.	<b>Materials and Their Properties</b>
PERFORMANCE INDICATOR / GLE	2.1.	Enduring Understanding: The structures of materials determine their properties.
GRADE LEVEL EXPECTATION	2.1.3.	<p>Classify matter as mixtures (which are either homogeneous or heterogeneous) or pure substances (which are either compounds or elements.)</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>

GRADE LEVEL EXPECTATION	2.1.5.	Classify various common materials as an element, compound or mixture. <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	DE.2.	Materials and Their Properties
PERFORMANCE INDICATOR / GLE	2.2.	Enduring Understanding: The properties of the mixture are based on the properties of its components.
GRADE LEVEL EXPECTATION	2.2.1.	Recognize that mixtures can be separated by physical means into pure substances. <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> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
GRADE LEVEL EXPECTATION	2.2.3.	Separate mixtures into their component parts according to their physical properties such as melting point, boiling point, magnetism, solubility and particle size. Explain how the properties of the components of the mixture determine the physical separation techniques used. <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> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
GRADE LEVEL EXPECTATION	2.2.5.	Explore how various solutions conduct electricity and rank the liquids from good conductors to poor conductors. Explain the characteristics that allow some solutions to have better electrical conductivity than others. <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>
GRADE LEVEL EXPECTATION	2.2.6.	Measure the pH of a solution using chemical indicators to determine the relative acidity or alkalinity of the solution. Identify the physical properties of acids and bases. <ul style="list-style-type: none"> <li>• Forensic Science: Unit 6 Activity 1: Toxicological Analysis</li> </ul>
CONTENT STANDARD	DE.2.	Materials and Their Properties
PERFORMANCE INDICATOR / GLE	2.4.	Enduring Understanding: There are several ways in which elements and/or compounds react to form new substances and each reaction involves energy.
GRADE LEVEL EXPECTATION	2.4.1.	Recognize that chemical changes alter the chemical composition of a substance forming one or more new substances. The new substance may be a solid, liquid, or gas. <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 6: Exposing Latent Fingerprints Using Vapors</li> <li>• Teacher Resource CD: Fingerprinting</li> </ul>

		<ul style="list-style-type: none"> <li>Teacher Resource CD: Learning About Paper</li> <li>Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
<b>CONTENT STANDARD</b>	<b>DE.3.</b>	<b>Energy and Its Effects</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>3.3.</b>	Enduring Understanding: Energy readily transforms from one form to another, but these transformations are not always reversible. The details of these transformations depend upon the initial form of the energy and the properties of the materials involved. Energy may transfer into or out of a system and it may change forms, but the total energy cannot change.
<b>GRADE LEVEL EXPECTATION</b>	<b>3.3.5.</b>	Record how effectively different materials reflect, absorb and transmit different kinds of EM waves. Draw conclusions based on this data and the physical properties of the substances (e.g., some substances absorb visible waves, but not radio waves. Other materials absorb UV waves, but not visible waves). <ul style="list-style-type: none"> <li>Teacher Resource CD: Learning About Paper</li> </ul>

**Delaware Standards and Curricula  
Science  
Grade 10**

<b>CONTENT STANDARD</b>	<b>DE.1.</b>	<b>Nature and Application of Science and Technology</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>1.1.</b>	Enduring Understanding: Scientific inquiry involves asking scientifically-oriented questions, collecting evidence, forming explanations, connecting explanations to scientific knowledge and theory, and communicating and justifying the explanation.
<b>GRADE LEVEL EXPECTATION</b>	<b>1.1.1.</b>	Identify and form questions that generate a specific testable hypothesis that guide the design and breadth of the scientific investigation. <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 -</li> </ul>

		<p>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 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 3: Human Blood Group Analysis</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 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 Skill Learning Activity 4: Analyzing Writing Inks</li> <li>• Forensic Science: Unit 6 Activity 2: Chromatographic 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><b>GRADE LEVEL EXPECTATION</b></p>	<p>1.1.2.</p>	<p>Design and conduct valid scientific investigations to control all but the testable variable in order to test a specific hypothesis.</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> <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</li> </ul>

		<p>STR Polymorphisms</p> <ul style="list-style-type: none"> <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 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>GRADE LEVEL EXPECTATION</b></p>	<p>1.1.3.</p>	<p>Collect accurate and precise data through the selection and use of tools and technologies appropriate to the investigations. Display and organize data through the use of tables, diagrams, graphs, and other organizers that allow analysis and comparison with known</p>

information and allow for replication of results.

- Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint
- 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 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
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- 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
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- 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

		<p>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>• Teacher Resource CD: Fingerprinting</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<p>GRADE LEVEL EXPECTATION</p>	<p>1.1.4.</p>	<p>Construct logical scientific explanations and present arguments which defend proposed explanations through the use of closely examined 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</li> </ul>

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 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 Altered Document Analysis Skills
- Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks
- Forensic Science: Unit 6 Activity 1: Toxicological Analysis

		<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>
GRADE LEVEL EXPECTATION	1.1.5.	<p>Communicate and defend the results of scientific investigations using logical arguments and connections with the known body of scientific information.</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>
GRADE LEVEL EXPECTATION	1.1.6.	<p>Use mathematics, reading, writing and technology when conducting scientific inquiries.</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> </ul>

		<ul style="list-style-type: none"> <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> <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: Simulating DNA Analysis</li> <li>• Teacher Resource CD: Trace Evidence</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
GRADE LEVEL	1.1.7.	Use microscopes to identify similarities and differences among a variety of cells (e.g.,

EXPECTATION		<p>muscle, nerve, epithelial, blood, adipose), and explain how structural variations relate to the function that each of the cells performs.</p> <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 4 Case Activity 1: The Artist's Brush</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 3: Demonstrating Locard's Principle</li> <li>• Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
GRADE LEVEL EXPECTATION	1.1.21.	<p>Investigate the role of enzymes (e.g., protease, amylase and lipase) in the rate of chemical breakdown of a variety of foods.</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>
GRADE LEVEL EXPECTATION	1.1.22.	<p>Investigate how various factors (temperature, pH, enzyme/substrate concentration) affect the rate of enzyme activity.</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>
GRADE LEVEL EXPECTATION	1.1.26.	<p>Describe the relationship between DNA, genes, chromosomes and proteins.</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>

GRADE LEVEL EXPECTATION	1.1.28.	<p>Demonstrate that when DNA replicates, the complementary strands separate and the old strands serve as a template for the new complementary strands.</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>
GRADE LEVEL EXPECTATION	1.1.29.	<p>Recognize that this results in two identical strands of DNA that are exact copies of the original.</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>
GRADE LEVEL EXPECTATION	1.1.31.	<p>Use Punnett squares, including dihybrid crosses, and pedigree charts to determine probabilities and patterns of inheritance (i.e., dominant/recessive, co-dominance, sex-linkage, multi-allele inheritance).</p> <ul style="list-style-type: none"> <li>• Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</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 5: Practicing Genetic</li> </ul>

		<p>Analysis using DNA Profile Frequency Calculations</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>CONTENT STANDARD</b>	<b>DE.1.</b>	<b>Nature and Application of Science and Technology</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>1.2.</b>	<b>Enduring Understanding: The development of technology and advancement in science influence and drive each other forward.</b>
<b>GRADE LEVEL EXPECTATION</b>	<b>1.2.1.</b>	<p>Investigate how the human ability to manipulate genetic material and reproductive processes can be applied to many areas of medicine, biology, and agriculture. Evaluate the risks and benefits of various ethical, social and legal scenarios that arise from this ability.</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>
<b>GRADE LEVEL EXPECTATION</b>	<b>1.2.2.</b>	<p>Discuss examples of how genetic engineering technology can be applied in biology, agriculture and medicine in order to meet human wants and needs.</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>
<b>GRADE LEVEL EXPECTATION</b>	<b>1.2.3.</b>	<p>Explain how developments in technology (e.g. gel electrophoresis) have been used to identify individuals based on DNA as well as to improve the ability to diagnose genetic diseases.</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 -</li> </ul>

		<p>Thomas Howard</p> <ul style="list-style-type: none"> <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 2: The Glowing Light</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> <li>• Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<b>CONTENT STANDARD</b>	<b>DE.5.</b>	<b>Earth's Dynamic Systems</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>5.3.</b>	Enduring Understanding: Technology enables us to better understand Earth's systems. It also allows us to analyze the impact of human activities on Earth's systems and the impact of Earth's systems on human activity.
<b>GRADE LEVEL EXPECTATION</b>	<b>6.1.1.</b>	<p>Enduring Understanding: Living systems, from the organismic to the cellular level, demonstrate the complementary nature of structure and function.</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: Simulating DNA Analysis</li> <li>• Teacher Resource CD: The Case of the Telling Blood Group</li> <li>• Teacher Resource CD: Trace Evidence</li> </ul>

		<ul style="list-style-type: none"> <li>Virtual Laboratory: ABO-Rh Blood Typing</li> </ul>
<b>CONTENT STANDARD</b>	<b>DE.6.</b>	<b>Life Processes</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>5.3.</b>	Enduring Understanding: Technology enables us to better understand Earth's systems. It also allows us to analyze the impact of human activities on Earth's systems and the impact of Earth's systems on human activity.
<b>GRADE LEVEL EXPECTATION</b>	<b>6.1.2.</b>	<p>Use microscopes to identify similarities and differences among a variety of cells (e.g., muscle, nerve, epithelial, blood, adipose), and explain how structural variations relate to the function that each of the cells performs.</p> <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 4 Case Activity 1: The Artist's Brush</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 3: Demonstrating Locard's Principle</li> <li>Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective</li> <li>Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>
<b>GRADE LEVEL EXPECTATION</b>	<b>6.1.4.</b>	<p>Explain how organelles of single-celled organisms function as a system to perform the same basic life processes as are performed in multi-cellular organisms (e.g., acquisition of energy, elimination of waste, reproduction, gas exchange, growth, repair, and protein synthesis).</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>CONTENT STANDARD</b>	<b>DE.6.</b>	<b>Life Processes</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>6.2.</b>	Enduring Understanding: All organisms transfer matter and convert energy from one form to another. Both matter and energy are necessary to build and maintain structures within the organism.
<b>GRADE LEVEL EXPECTATION</b>	<b>6.2.7.</b>	<p>Describe the process by which water is removed from sugar molecules (dehydration synthesis) to form carbohydrates and is added to break them down (hydrolysis).</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>

		<ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>CONTENT STANDARD</b>	<b>DE.6.</b>	<b>Life Processes</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>6.3.</b>	Enduring Understanding: All organisms transfer matter and convert energy from one form to another. Both matter and energy are necessary to build and maintain structures within the organism (cont'd).
<b>GRADE LEVEL EXPECTATION</b>	<b>6.3.3.</b>	<p>Investigate the role of enzymes (e.g., protease, amylase and lipase) in the rate of chemical breakdown of a variety of foods.</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>
<b>GRADE LEVEL EXPECTATION</b>	<b>6.3.4.</b>	<p>Explain how enzymes permit low temperature chemical reactions to occur in cells.</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>
<b>GRADE LEVEL EXPECTATION</b>	<b>6.3.5.</b>	<p>Investigate how various factors (temperature, pH, enzyme/substrate concentration) affect the rate of enzyme activity.</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>
<b>CONTENT STANDARD</b>	<b>DE.6.</b>	<b>Life Processes</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>6.5.</b>	Enduring Understanding: The health of humans and other organisms is affected by their interactions with each other and their environment, and may be altered by human manipulation.
<b>GRADE LEVEL EXPECTATION</b>	<b>6.5.1.</b>	<p>Investigate how scientists use biotechnology to produce more nutritious food, more effective medicine, and new ways to mitigate pollution.</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</li> </ul>

		<p>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> </ul>
<b>CONTENT STANDARD</b>	<b>DE.7.</b>	<b>Diversity and Continuity of Living Things</b>
<b>PERFORMANCE INDICATOR / GLE</b>	<b>7.1.</b>	Enduring Understanding: Organisms reproduce, develop, have predictable life cycles, and pass on heritable traits to their offspring.
<b>GRADE LEVEL EXPECTATION</b>	<b>7.1.1.</b>	<p>Describe the relationship between DNA, genes, chromosomes and proteins.</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>
<b>GRADE LEVEL EXPECTATION</b>	<b>7.1.2.</b>	<p>Explain that a gene is a section of DNA that directs the synthesis of a specific protein associated with a specific trait in an organism.</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
<b>GRADE LEVEL EXPECTATION</b>	<b>7.1.4.</b>	<p>Demonstrate that when DNA replicates, the complementary strands separate and the old strands serve as a template for the new complementary strands. Recognize that this results in two identical strands of DNA that are exact copies of the original.</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>

		<ul style="list-style-type: none"> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
GRADE LEVEL EXPECTATION	7.1.6.	<p>Use Punnett squares, including dihybrid crosses, and pedigree charts to determine probabilities and patterns of inheritance (i.e. dominant/recessive, co-dominance, sex-linkage, multi-allele inheritance).</p> <ul style="list-style-type: none"> <li>Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills</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 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations</li> <li>Teacher Resource CD: Simulating DNA Analysis</li> </ul>
CONTENT STANDARD	DE.7.	Diversity and Continuity of Living Things
PERFORMANCE INDICATOR / GLE	7.3.	Enduring Understanding: The development of technology has allowed us to apply our knowledge of genetics, reproduction, development and evolution to meet human needs and wants.
GRADE LEVEL EXPECTATION	7.3.2.	<p>Investigate how the human ability to manipulate genetic material and reproductive processes can be applied to many areas of medicine, biology, and agriculture. Evaluate the risks and benefits of various ethical, social and legal scenarios that arise from this ability.</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>
GRADE LEVEL EXPECTATION	7.3.3.	<p>Discuss examples of how genetic engineering technology can be applied in biology, agriculture and medicine in order to meet human wants and needs.</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> </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> </ul>
<p>GRADE LEVEL EXPECTATION</p>	<p>7.3.4.</p>	<p>Explain the basic process of bacterial transformation and how it is applied in genetic engineering.</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>
<p>GRADE LEVEL EXPECTATION</p>	<p>7.3.5.</p>	<p>Explain how developments in technology (e.g., gel electrophoresis) have been used to identify individuals based on DNA as well as to improve the ability to diagnose genetic diseases.</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>• Forensic Science: Unit 3 Case Activity 2: The Glowing Light</li> <li>• Forensic Science: Unit 6 Activity 5: Blood Analysis</li> <li>• Teacher Resource CD: Simulating DNA Analysis</li> <li>• Teacher Resource CD: The Case of the Silent Sentinel</li> </ul>

- Virtual Laboratory: ABO-Rh Blood Typing

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