

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

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California Content Standards
Science
Grade 7

CONTENT STANDARD	CA.1.	Life Science: Cell Biology: All living organisms are composed of cells, from just one to many trillions, whose details usually are visible only through a microscope. As a basis for understanding this concept:
PERFORMANCE STANDARD	1.a.	Students know cells function similarly in all living organisms. <ul style="list-style-type: none"> • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	CA.2.	Life Science: Genetics: A typical cell of any organism contains genetic instructions that specify its traits. Those traits may be modified by environmental influences. As a basis for understanding this concept:
PERFORMANCE STANDARD	2.c.	Students know an inherited trait can be determined by one or more genes. <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage • Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard • Forensic Science: Unit 2 Case Activity 3: The Telling Tissue • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile • Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
PERFORMANCE STANDARD	2.d.	Students know plant and animal cells contain many thousands of different genes and typically have two copies of every gene. The two copies (or alleles) of the gene may or may not be identical, and one may be dominant in determining the phenotype while the other is recessive. <ul style="list-style-type: none"> • Teacher Resource CD: Simulating DNA Analysis
PERFORMANCE STANDARD	2.e.	Students know DNA (deoxyribonucleic acid) is the genetic material of living organisms and is located in the chromosomes of each cell. <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage • Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw -

		<p>Thomas Howard</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 3: The Telling Tissue • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile • Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	CA.3.	Life Science: Evolution: Biological evolution accounts for the diversity of species developed through gradual processes over many generations. As a basis for understanding this concept:
PERFORMANCE STANDARD	3.a.	<p>Students know both genetic variation and environmental factors are causes of evolution and diversity of organisms.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
CONTENT STANDARD	CA.5.	Life Science: Structure and Function in Living Systems: The anatomy and physiology of plants and animals illustrate the complementary nature of structure and function. As a basis for understanding this concept:
PERFORMANCE STANDARD	5.a.	<p>Students know plants and animals have levels of organization for structure and function, including cells, tissues, organs, organ systems, and the whole organism.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 3: The Telling Tissue
PERFORMANCE STANDARD	5.b.	<p>Students know organ systems function because of the contributions of individual organs, tissues, and cells. The failure of any part can affect the entire system.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 3: The Telling Tissue • Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • 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

		<ul style="list-style-type: none"> • Forensic Science: Unit 6 Activity 5: Blood Analysis • Teacher Resource CD: Fingerprinting • Teacher Resource CD: The Case of the Telling Blood Group • Teacher Resource CD: Trace Evidence • Virtual Laboratory: ABO-Rh Blood Typing
CONTENT STANDARD	CA.6.	Life Science: Physical Principles in Living Systems (Physical Science): Physical principles underlie biological structures and functions. As a basis for understanding this concept:
PERFORMANCE STANDARD	6.a.	Students know visible light is a small band within a very broad electromagnetic spectrum. <ul style="list-style-type: none"> • Teacher Resource CD: Learning About Paper
PERFORMANCE STANDARD	6.c.	Students know light travels in straight lines if the medium it travels through does not change. <ul style="list-style-type: none"> • Teacher Resource CD: Learning About Paper
PERFORMANCE STANDARD	6.e.	Students know that white light is a mixture of many wavelengths (colors) and that retinal cells react differently to different wavelengths. <ul style="list-style-type: none"> • Forensic Science: Unit 4 Skill Learning Activity 4: Learning to be a Layer Detective
PERFORMANCE STANDARD	6.f.	Students know light can be reflected, refracted, transmitted, and absorbed by matter. <ul style="list-style-type: none"> • Teacher Resource CD: Learning About Paper
PERFORMANCE STANDARD	6.g.	Students know the angle of reflection of a light beam is equal to the angle of incidence. <ul style="list-style-type: none"> • Teacher Resource CD: Learning About Paper
CONTENT STANDARD	CA.7.	Life Science: Investigation and Experimentation: Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
PERFORMANCE STANDARD	7.a.	Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data. <ul style="list-style-type: none"> • 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
- 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

		<ul style="list-style-type: none"> • 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 • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Teacher Resource CD: The Case of the Silent Sentinel • Virtual Laboratory: ABO-Rh Blood Typing
<p>PERFORMANCE STANDARD</p>	<p>7.c.</p>	<p>Communicate the logical connection among hypotheses, science concepts, tests conducted, data collected, and conclusions drawn from the scientific evidence.</p> <ul style="list-style-type: none"> • 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 • 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

		<ul style="list-style-type: none"> • 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 • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence • Virtual Laboratory: ABO-Rh Blood Typing
<p>PERFORMANCE STANDARD</p>	<p>7.d.</p>	<p>Construct scale models, maps, and appropriately labeled diagrams to communicate scientific knowledge (e.g., motion of Earth's plates and cell structure).</p> <ul style="list-style-type: none"> • 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

		<ul style="list-style-type: none"> • 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 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • Forensic Science: Unit 4 Case Activity 1: The Artist's Brush • Forensic Science: Unit 4 Skill Learning Activity 2: Making an Impression Cast
<p>PERFORMANCE STANDARD</p>	<p>7.e.</p>	<p>Communicate the steps and results from an investigation in written reports and oral presentations.</p> <ul style="list-style-type: none"> • 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 • 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

		<p>DNA Profiles</p> <ul style="list-style-type: none"> • 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 • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
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California Content Standards
Science
Grade 8

CONTENT STANDARD	CA.1. Physical Science: Motion: The velocity of an object is the rate of change of its position. As a basis for understanding this concept:
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PERFORMANCE STANDARD	1.f.	Students know how to interpret graphs of position versus time and graphs of speed versus time for motion in a single direction. <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
CONTENT STANDARD	CA.5.	Physical Science: Reactions: Chemical reactions are processes in which atoms are rearranged into different combinations of molecules. As a basis for understanding this concept:
PERFORMANCE STANDARD	5.a.	Students know reactant atoms and molecules interact to form products with different chemical properties. <ul style="list-style-type: none"> Forensic Science: Unit 1 Case Activity 5: The Black Plastic Bag 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 Teacher Resource CD: Fingerprinting Teacher Resource CD: Learning About Paper Teacher Resource CD: The Case of the Silent Sentinel
CONTENT STANDARD	CA.7.	Physical Science: Periodic Table: The organization of the periodic table is based on the properties of the elements and reflects the structure of atoms. As a basis for understanding this concept:
PERFORMANCE STANDARD	7.c.	Students know substances can be classified by their properties, including their melting temperature, density, hardness, and thermal and electrical conductivity. <ul style="list-style-type: none"> Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
CONTENT STANDARD	CA.8.	Physical Science: Density and Buoyancy: All objects experience a buoyant force when immersed in a fluid. As a basis for understanding this concept:
PERFORMANCE STANDARD	8.a.	Students know density is mass per unit volume. <ul style="list-style-type: none"> Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
PERFORMANCE STANDARD	8.b.	Students know how to calculate the density of substances (regular and irregular solids and liquids) from measurements of mass and volume. <ul style="list-style-type: none"> Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
CONTENT STANDARD	CA.9.	Physical Science: Investigation and Experimentation: Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
PERFORMANCE STANDARD	9.b.	Evaluate the accuracy and reproducibility of data. <ul style="list-style-type: none"> Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint 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

		<ul style="list-style-type: none"> Forensic Science: Unit 3 Case Activity 5: The Telling Trap Door
PERFORMANCE STANDARD	9.d.	<p>Recognize the slope of the linear graph as the constant in the relationship $y = kx$ and apply this principle in interpreting graphs constructed from data.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
PERFORMANCE STANDARD	9.e.	<p>Construct appropriate graphs from data and develop quantitative statements about the relationships between variables.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis
PERFORMANCE STANDARD	9.f.	<p>Apply simple mathematic relationships to determine a missing quantity in a mathematic expression, given the two remaining terms (including speed = distance/time, density = mass/volume, force = pressure x area, volume = area x height).</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks Forensic Science: Unit 6 Activity 2: Chromatographic Analysis
PERFORMANCE STANDARD	9.g.	<p>Distinguish between linear and nonlinear relationships on a graph of data.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis

**California Content Standards
Science
Grade 9**

CONTENT STANDARD	CA.6.	Chemistry: Solutions: Solutions are homogenous mixtures of two or more substances. As a basis for understanding this concept:
PERFORMANCE STANDARD	6.a.	<p>Students know the definitions of solute and solvent.</p> <ul style="list-style-type: none"> Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks Forensic Science: Unit 6 Activity 2: Chromatographic Analysis Teacher Resource CD: Analyzing Writing Inks
PERFORMANCE STANDARD	6.b.	<p>Students know how to describe the dissolving process at the molecular level by using the concept of random molecular motion.</p> <ul style="list-style-type: none"> Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks Forensic Science: Unit 6 Activity 2: Chromatographic Analysis Teacher Resource CD: Analyzing Writing Inks
PERFORMANCE STANDARD	6.c.	Students know temperature, pressure, and surface area affect the dissolving process.

		<ul style="list-style-type: none"> • Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks • Forensic Science: Unit 6 Activity 2: Chromatographic Analysis • Teacher Resource CD: Analyzing Writing Inks
PERFORMANCE STANDARD	6.f.	<p>Students know how molecules in a solution are separated or purified by the methods of chromatography and distillation.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks • Forensic Science: Unit 6 Activity 2: Chromatographic Analysis • Teacher Resource CD: Analyzing Writing Inks • Teacher Resource CD: The Case of the Silent Sentinel
CONTENT STANDARD	CA.1.	Biology/Life Sciences: Cell Biology: The fundamental life processes of plants and animals depend on a variety of chemical reactions that occur in specialized areas of the organism's cells. As a basis for understanding this concept:
PERFORMANCE STANDARD	1.b.	<p>Students know enzymes are proteins that catalyze biochemical reactions without altering the reaction equilibrium and the activities of enzymes depend on the temperature, ionic conditions, and the pH of the surroundings.</p> <ul style="list-style-type: none"> • 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 • Teacher Resource CD: The Case of the Telling Blood Group
PERFORMANCE STANDARD	1.e.	<p>Students know the role of the endoplasmic reticulum and Golgi apparatus in the secretion of proteins.</p> <ul style="list-style-type: none"> • Teacher Resource CD: Simulating DNA Analysis
PERFORMANCE STANDARD	1.g.	<p>Students know the role of the mitochondria in making stored chemical-bond energy available to cells by completing the breakdown of glucose to carbon dioxide.</p> <ul style="list-style-type: none"> • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	CA.2.	Biology/Life Sciences: Genetics: Mutation and sexual reproduction lead to genetic variation in a population. As a basis for understanding this concept:
PERFORMANCE STANDARD	2.f.	<p>Students know the role of chromosomes in determining an individual's sex.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles • Teacher Resource CD: Simulating DNA Analysis
PERFORMANCE STANDARD	2.g.	<p>Students know how to predict possible combinations of alleles in a zygote from the genetic makeup of the parents.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills • 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

		<ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	CA.3.	Biology/Life Sciences: Genetics: A multicellular organism develops from a single zygote, and its phenotype depends on its genotype, which is established at fertilization. As a basis for understanding this concept:
PERFORMANCE STANDARD	3.a.	<p>Students know how to predict the probable outcome of phenotypes in a genetic cross from the genotypes of the parents and mode of inheritance (autosomal or X-linked, dominant or recessive).</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage • Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard • Forensic Science: Unit 2 Case Activity 3: The Telling Tissue • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile • Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	CA.4.	Biology/Life Sciences: Genetics: Genes are a set of instructions encoded in the DNA sequence of each organism that specify the sequence of amino acids in proteins characteristic of that organism. As a basis for understanding this concept:
PERFORMANCE STANDARD	4.d.	<p>Students know specialization of cells in multicellular organisms is usually due to different patterns of gene expression rather than to differences of the genes themselves.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
CONTENT STANDARD	CA.5.	Biology/Life Sciences: Genetics: The genetic composition of cells can be altered by incorporation of exogenous DNA into the cells. As a basis for understanding this concept:
PERFORMANCE STANDARD	5.a.	<p>Students know the general structures and functions of DNA, RNA, and protein.</p> <ul style="list-style-type: none"> • 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

		<ul style="list-style-type: none"> • 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 • Teacher Resource CD: Simulating DNA Analysis
PERFORMANCE STANDARD	5.c.	<p>Students know how genetic engineering (biotechnology) is used to produce novel biomedical and agricultural products.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage • Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard • Forensic Science: Unit 2 Case Activity 3: The Telling Tissue • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile • Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
PERFORMANCE STANDARD	5.d.	<p>Students know how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, ligation, and transformation) is used to construct recombinant DNA molecules.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage • Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard • Forensic Science: Unit 2 Case Activity 3: The Telling Tissue • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile • Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
CONTENT STANDARD	CA.7.	Biology/Life Sciences: Evolution: The frequency of an allele in a gene pool of a population depends on many factors and may be stable or unstable over time. As

		a basis for understanding this concept:
PERFORMANCE STANDARD	7.b.	Students know why alleles that are lethal in a homozygous individual may be carried in a heterozygote and thus maintained in a gene pool. <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
PERFORMANCE STANDARD	7.c.	Students know new mutations are constantly being generated in a gene pool. <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
CONTENT STANDARD	CA.9.	Biology/Life Sciences: Physiology: As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable (homeostatic) despite changes in the outside environment. As a basis for understanding this concept:
PERFORMANCE STANDARD	9.a.	Students know how the complementary activity of major body systems provides cells with oxygen and nutrients and removes toxic waste products such as carbon dioxide. <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis 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 6 Activity 5: Blood Analysis Teacher Resource CD: The Case of the Telling Blood Group Virtual Laboratory: ABO-Rh Blood Typing
CONTENT STANDARD	CA.10.	Biology/Life Sciences: Physiology: Organisms have a variety of mechanisms to combat disease. As a basis for understanding the human immune response:
PERFORMANCE STANDARD	10.a.	Students know the role of the skin in providing nonspecific defenses against infection. <ul style="list-style-type: none"> Forensic Science: Unit 2 Case Activity 3: The Telling Tissue Teacher Resource CD: Fingerprinting Teacher Resource CD: Trace Evidence
PERFORMANCE STANDARD	10.b.	Students know the role of antibodies in the body's response to infection. <ul style="list-style-type: none"> Forensic Science: Unit 3 Case Activity 3: The False Positive

		<ul style="list-style-type: none"> Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood Forensic Science: Unit 6 Activity 5: Blood Analysis Teacher Resource CD: The Case of the Telling Blood Group Virtual Laboratory: ABO-Rh Blood Typing
PERFORMANCE STANDARD	10.f.	<p>Students know the roles of phagocytes, B-lymphocytes, and T-lymphocytes in the immune system.</p> <ul style="list-style-type: none"> Teacher Resource CD: The Case of the Telling Blood Group
CONTENT STANDARD	CA.1.	<p>Investigation and Experimentation: Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other four strands, students should develop their own questions and perform investigations. Students will:</p>
PERFORMANCE STANDARD	1.a.	<p>Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.</p> <ul style="list-style-type: none"> 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 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

		<ul style="list-style-type: none"> • 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 • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
PERFORMANCE STANDARD	1.b.	<p>Identify and communicate sources of unavoidable experimental error.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
PERFORMANCE	1.c.	Identify possible reasons for inconsistent results, such as sources of error or

STANDARD		<p>uncontrolled conditions.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
PERFORMANCE STANDARD	1.d.	<p>Formulate explanations by using logic and evidence.</p> <ul style="list-style-type: none"> 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 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

		<p>Patterns</p> <ul style="list-style-type: none"> • 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 • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
PERFORMANCE STANDARD	1.e.	<p>Solve scientific problems by using quadratic equations and simple trigonometric, exponential, and logarithmic functions.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns • Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp • Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks • Forensic Science: Unit 6 Activity 2: Chromatographic Analysis
PERFORMANCE STANDARD	1.f.	<p>Distinguish between hypothesis and theory as scientific terms.</p> <ul style="list-style-type: none"> • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence
PERFORMANCE STANDARD	1.g.	<p>Recognize the usefulness and limitations of models and theories as scientific representations of reality.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 1 Case Activity 1: The Solitary Fingerprint • Forensic Science: Unit 1 Case Activity 2: The Forged Fingerprint

		<ul style="list-style-type: none"> • 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
<p>PERFORMANCE STANDARD</p>	<p>1.j.</p>	<p>Recognize the issues of statistical variability and the need for controlled tests.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills • 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 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Teacher Resource CD: Simulating DNA Analysis
<p>PERFORMANCE STANDARD</p>	<p>1.k.</p>	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> • 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

- 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
- Forensic Science: Unit 6 Activity 3: Fingerprint Analysis

		<ul style="list-style-type: none"> • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Teacher Resource CD: Fingerprinting • Virtual Laboratory: ABO-Rh Blood Typing
<p>PERFORMANCE STANDARD</p>	<p>1.1.</p>	<p>Analyze situations and solve problems that require combining and applying concepts from more than one area of science.</p> <ul style="list-style-type: none"> • 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 • 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

		<ul style="list-style-type: none"> • 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 • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Teacher Resource CD: Analyzing Writing Inks • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Learning About Paper • Teacher Resource CD: Simulating DNA Analysis • Teacher Resource CD: The Case of the Silent Sentinel • Teacher Resource CD: The Case of the Telling Blood Group • Teacher Resource CD: Trace Evidence • Virtual Laboratory: ABO-Rh Blood Typing
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**California Content Standards
Science
Grade 10**

CONTENT STANDARD	CA.6.	Chemistry: Solutions: Solutions are homogenous mixtures of two or more substances. As a basis for understanding this concept:
PERFORMANCE STANDARD	6.a.	<p>Students know the definitions of solute and solvent.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks • Forensic Science: Unit 6 Activity 2: Chromatographic Analysis • Teacher Resource CD: Analyzing Writing Inks

PERFORMANCE STANDARD	6.c.	<p>Students know temperature, pressure, and surface area affect the dissolving process.</p> <ul style="list-style-type: none"> Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks Forensic Science: Unit 6 Activity 2: Chromatographic Analysis Teacher Resource CD: Analyzing Writing Inks
PERFORMANCE STANDARD	6.f.	<p>Students know how molecules in a solution are separated or purified by the methods of chromatography and distillation.</p> <ul style="list-style-type: none"> Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks Forensic Science: Unit 6 Activity 2: Chromatographic Analysis Teacher Resource CD: Analyzing Writing Inks Teacher Resource CD: The Case of the Silent Sentinel
CONTENT STANDARD	CA.1.	<p>Biology/Life Sciences: Cell Biology: The fundamental life processes of plants and animals depend on a variety of chemical reactions that occur in specialized areas of the organism's cells. As a basis for understanding this concept:</p>
PERFORMANCE STANDARD	1.b.	<p>Students know enzymes are proteins that catalyze biochemical reactions without altering the reaction equilibrium and the activities of enzymes depend on the temperature, ionic conditions, and the pH of the surroundings.</p> <ul style="list-style-type: none"> 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 Teacher Resource CD: The Case of the Telling Blood Group
PERFORMANCE STANDARD	1.e.	<p>Students know the role of the endoplasmic reticulum and Golgi apparatus in the secretion of proteins.</p> <ul style="list-style-type: none"> Teacher Resource CD: Simulating DNA Analysis
PERFORMANCE STANDARD	1.g.	<p>Students know the role of the mitochondria in making stored chemical-bond energy available to cells by completing the breakdown of glucose to carbon dioxide.</p> <ul style="list-style-type: none"> Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	CA.2.	<p>Biology/Life Sciences: Genetics: Mutation and sexual reproduction lead to genetic variation in a population. As a basis for understanding this concept:</p>
PERFORMANCE STANDARD	2.f.	<p>Students know the role of chromosomes in determining an individual's sex.</p> <ul style="list-style-type: none"> Teacher Resource CD: Simulating DNA Analysis
PERFORMANCE STANDARD	2.g.	<p>Students know how to predict possible combinations of alleles in a zygote from the genetic makeup of the parents.</p> <ul style="list-style-type: none"> Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills 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

		<ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	CA.3.	Biology/Life Sciences: Genetics: A multicellular organism develops from a single zygote, and its phenotype depends on its genotype, which is established at fertilization. As a basis for understanding this concept:
PERFORMANCE STANDARD	3.a.	<p>Students know how to predict the probable outcome of phenotypes in a genetic cross from the genotypes of the parents and mode of inheritance (autosomal or X-linked, dominant or recessive).</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard Forensic Science: Unit 2 Case Activity 3: The Telling Tissue Forensic Science: Unit 2 Case Activity 4: The Second Examination Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles Teacher Resource CD: Simulating DNA Analysis
PERFORMANCE STANDARD	3.d.	<p>Students know how to use data on frequency of recombination at meiosis to estimate genetic distances between loci and to interpret genetic maps of chromosomes.</p> <ul style="list-style-type: none"> Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	CA.4.	Biology/Life Sciences: Genetics: Genes are a set of instructions encoded in the DNA sequence of each organism that specify the sequence of amino acids in proteins characteristic of that organism. As a basis for understanding this concept:
PERFORMANCE STANDARD	4.d.	<p>Students know specialization of cells in multicellular organisms is usually due to different patterns of gene expression rather than to differences of the genes themselves.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
CONTENT STANDARD	CA.5.	Biology/Life Sciences: Genetics: The genetic composition of cells can be altered by incorporation of exogenous DNA into the cells. As a basis for understanding this concept:
PERFORMANCE STANDARD	5.a.	<p>Students know the general structures and functions of DNA, RNA, and protein.</p> <ul style="list-style-type: none"> 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

		<ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile • Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles • Teacher Resource CD: Simulating DNA Analysis
<p>PERFORMANCE STANDARD</p>	<p>5.c.</p>	<p>Students know how genetic engineering (biotechnology) is used to produce novel biomedical and agricultural products.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage • Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard • Forensic Science: Unit 2 Case Activity 3: The Telling Tissue • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile • Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
<p>PERFORMANCE STANDARD</p>	<p>5.d.</p>	<p>Students know how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, ligation, and transformation) is used to construct recombinant DNA molecules.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 2 Case Activity 1: The Questioned Parentage • Forensic Science: Unit 2 Case Activity 2: The Uncommon Outlaw - Thomas Howard • Forensic Science: Unit 2 Case Activity 3: The Telling Tissue • Forensic Science: Unit 2 Case Activity 4: The Second Examination • Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile • Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 3: The Bloody Cloth - DNA Profile Analysis • Forensic Science: Unit 2 Skill Learning Activity 4: A Closer Look at STR Polymorphisms • Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations

		<ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 6: Genetic Analysis of DNA Profiles
CONTENT STANDARD	CA.7.	Biology/Life Sciences: Evolution: The frequency of an allele in a gene pool of a population depends on many factors and may be stable or unstable over time. As a basis for understanding this concept:
PERFORMANCE STANDARD	7.b.	<p>Students know why alleles that are lethal in a homozygous individual may be carried in a heterozygote and thus maintained in a gene pool.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
PERFORMANCE STANDARD	7.c.	<p>Students know new mutations are constantly being generated in a gene pool.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 1: Modeling a DNA Profile
CONTENT STANDARD	CA.9.	Biology/Life Sciences: Physiology: As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable (homeostatic) despite changes in the outside environment. As a basis for understanding this concept:
PERFORMANCE STANDARD	9.a.	<p>Students know how the complementary activity of major body systems provides cells with oxygen and nutrients and removes toxic waste products such as carbon dioxide.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 2: The Discarded Cigarette - RFLP Profile Analysis 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 6 Activity 5: Blood Analysis Teacher Resource CD: The Case of the Telling Blood Group Virtual Laboratory: ABO-Rh Blood Typing
CONTENT STANDARD	CA.10.	Biology/Life Sciences: Physiology: Organisms have a variety of mechanisms to combat disease. As a basis for understanding the human immune response:
PERFORMANCE STANDARD	10.a.	<p>Students know the role of the skin in providing nonspecific defenses against infection.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Case Activity 3: The Telling Tissue Teacher Resource CD: Fingerprinting

		<ul style="list-style-type: none"> Teacher Resource CD: Trace Evidence
PERFORMANCE STANDARD	10.b.	<p>Students know the role of antibodies in the body's response to infection.</p> <ul style="list-style-type: none"> Forensic Science: Unit 3 Case Activity 3: The False Positive Forensic Science: Unit 3 Skill Learning Activity 2: Applying the Precipitin Test for the Presence of Human Blood Forensic Science: Unit 6 Activity 5: Blood Analysis Teacher Resource CD: The Case of the Telling Blood Group Virtual Laboratory: ABO-Rh Blood Typing
PERFORMANCE STANDARD	10.f.	<p>Students know the roles of phagocytes, B-lymphocytes, and T-lymphocytes in the immune system.</p> <ul style="list-style-type: none"> Teacher Resource CD: The Case of the Telling Blood Group
CONTENT STANDARD	CA.1.	<p>Investigation and Experimentation: Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other four strands, students should develop their own questions and perform investigations. Students will:</p>
PERFORMANCE STANDARD	1.a.	<p>Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.</p> <ul style="list-style-type: none"> 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 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

		<ul style="list-style-type: none"> • 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 • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
PERFORMANCE STANDARD	1.b.	Identify and communicate sources of unavoidable experimental error.

		<ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
PERFORMANCE STANDARD	1.c.	<p>Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.</p> <ul style="list-style-type: none"> Forensic Science: Unit 2 Skill Learning Activity 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations
PERFORMANCE STANDARD	1.d.	<p>Formulate explanations by using logic and evidence.</p> <ul style="list-style-type: none"> 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 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

		<p>Analysis</p> <ul style="list-style-type: none"> 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 Forensic Science: Unit 6 Activity 3: Fingerprint Analysis Forensic Science: Unit 6 Activity 4: Document Analysis Forensic Science: Unit 6 Activity 5: Blood Analysis Virtual Laboratory: ABO-Rh Blood Typing
PERFORMANCE STANDARD	1.e.	<p>Solve scientific problems by using quadratic equations and simple trigonometric, exponential, and logarithmic functions.</p> <ul style="list-style-type: none"> Forensic Science: Unit 3 Skill Learning Activity 5: Analyzing Bloodstain Patterns Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks Forensic Science: Unit 6 Activity 2: Chromatographic Analysis
PERFORMANCE STANDARD	1.f.	<p>Distinguish between hypothesis and theory as scientific terms.</p> <ul style="list-style-type: none"> Teacher Resource CD: Fingerprinting Teacher Resource CD: Trace Evidence
PERFORMANCE	1.g.	<p>Recognize the usefulness and limitations of models and theories as scientific</p>

STANDARD		<p>representations of reality.</p> <ul style="list-style-type: none"> • 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
PERFORMANCE STANDARD	1.j.	<p>Recognize the issues of statistical variability and the need for controlled tests.</p> <ul style="list-style-type: none"> • Forensic Science: Unit 1 Skill Learning Activity 3: Practicing Fingerprint Identification Skills • 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 5: Practicing Genetic Analysis using DNA Profile Frequency Calculations • Teacher Resource CD: Simulating DNA Analysis
PERFORMANCE STANDARD	1.k.	<p>Recognize the cumulative nature of scientific evidence.</p> <ul style="list-style-type: none"> • 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
- 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

		<ul style="list-style-type: none"> • Forensic Science: Unit 5 Skill Learning Activity 4: Analyzing Writing Inks • Forensic Science: Unit 6 Activity 1: Toxicological Analysis • Forensic Science: Unit 6 Activity 2: Chromatographic Analysis • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Teacher Resource CD: Trace Evidence • Virtual Laboratory: ABO-Rh Blood Typing
<p>PERFORMANCE STANDARD</p>	<p>1.1.</p>	<p>Analyze situations and solve problems that require combining and applying concepts from more than one area of science.</p> <ul style="list-style-type: none"> • 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 • 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

		<ul style="list-style-type: none"> • 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 • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Teacher Resource CD: Analyzing Writing Inks • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Learning About Paper • Teacher Resource CD: Simulating DNA Analysis • Teacher Resource CD: The Case of the Silent Sentinel • Teacher Resource CD: The Case of the Telling Blood Group • Teacher Resource CD: Trace Evidence • Virtual Laboratory: ABO-Rh Blood Typing
<p>PERFORMANCE STANDARD</p>	<p>1.m.</p>	<p>Investigate a science-based societal issue by researching the literature, analyzing data, and communicating the findings. Examples of issues include irradiation of food, cloning of animals by somatic cell nuclear transfer, choice of energy sources, and land and water use decisions in California.</p> <ul style="list-style-type: none"> • 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 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
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- 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

		<ul style="list-style-type: none"> • Forensic Science: Unit 6 Activity 1: Toxicological Analysis • Forensic Science: Unit 6 Activity 2: Chromatographic Analysis • Forensic Science: Unit 6 Activity 3: Fingerprint Analysis • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence • Virtual Laboratory: ABO-Rh Blood Typing
PERFORMANCE STANDARD	1.n.	<p>Know that when an observation does not agree with an accepted scientific theory, the observation is sometimes mistaken or fraudulent (e.g., the Piltdown Man fossil or unidentified flying objects) and that the theory is sometimes wrong (e.g., the Ptolemaic model of the movement of the Sun, Moon, and planets).</p> <ul style="list-style-type: none"> • Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection • Teacher Resource CD: Trace Evidence

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