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

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Tennessee Curriculum Standards
Science
Grade 7

CONTENT STANDARD	**TN.1.0.**	**Life Science: Cell Structure and Function: The student will investigate the structure and function of plant and animal cells.**
LEARNING EXPECTATION	**7.1.1.**	Recognize the differences among cells, tissues, organs, and systems.
BENCHMARK	**7.1.1.a.**	Design and construct a hierarchy among cells, tissues, organs, and systems. • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	**TN.1.0.**	**Life Science: Cell Structure and Function: The student will investigate the structure and function of plant and animal cells.**
LEARNING EXPECTATION	**7.1.2.**	Differentiate between structures and functions of plant and animal cells.
BENCHMARK	**7.1.2.a.**	Examine major plant and animal cell organelles and identify their functions. • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	**TN.1.0.**	**Life Science: Cell Structure and Function: The student will investigate the structure and function of plant and animal cells.**
LEARNING EXPECTATION	**7.1.4.**	Know that materials move into and out of cells.
BENCHMARK	**7.1.4.a.**	Predict how plant cells will behave in different solutions. • Teacher Resource CD: Simulating DNA Analysis
BENCHMARK	**7.1.4.b.**	Design models to illustrate how materials move between cells and their environment. • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	**TN.4.0.**	**Life Science: Heredity and Reproduction: The student will understand the basic principles of inheritance.**
LEARNING EXPECTATION	**7.4.1.**	Recognize the difference between sexual and asexual reproduction.
BENCHMARK	**7.4.1.b.**	Recognize that genetic information is passed from parent to offspring during reproduction. • 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	**TN.12.0.**	**Physical Science: Structure and Properties of Matter: The student will investigate the characteristic properties of matter.**
LEARNING EXPECTATION	**7.12.1.**	Distinguish among elements, compounds and mixtures.
BENCHMARK	**7.12.1.a.**	Differentiate among elements, compounds, and mixtures. • 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
CONTENT STANDARD	**TN.12.0.**	**Physical Science: Structure and Properties of Matter: The student will investigate the characteristic properties of matter.**
LEARNING EXPECTATION	**7.12.2.**	Identify and measure the simple properties of common substances.
BENCHMARK	**7.12.2.b.**	Identify the mass, volume, density, boiling point, melting point, and solubility of a given substance. • Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp
BENCHMARK	**7.12.2.c.**	Measure and/or calculate the mass, volume, density, and temperature of a given substance. • Forensic Science: Unit 4 Case Activity 3: The Incriminating Headlamp

Tennessee Curriculum Standards
Science
Grade 8

CONTENT STANDARD	**TN.1.0.**	**Life Science: Cell Structure and Function: The student will investigate the structure and function of plant and animal cells.** • **Teacher Resource CD: Simulating DNA Analysis**
CONTENT STANDARD	**TN.4.0.**	**Life Science: Heredity and Reproduction: The student will understand the basic principles of inheritance.**
LEARNING EXPECTATION	**8.4.2.**	Examine differences between dominant and recessive traits.
BENCHMARK	**8.4.2.a.**	Use the results of a test cross to distinguish between dominant and recessive traits.

		• 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
BENCHMARK	**8.4.2.b.**	Construct and interpret Punnett Squares to determine the genotype and phenotype of offspring. • 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	**TN.4.0.**	**Life Science: Heredity and Reproduction: The student will understand the basic principles of inheritance.**
LEARNING EXPECTATION	**8.4.3.**	Investigate the relationship among DNA, genes, chromosomes, and the genetic code of life.
BENCHMARK	**8.4.3.a.**	Create a model of the DNA molecule. • 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
BENCHMARK	**8.4.3.b.**	Draw or construct a model representing the relationship among DNA, genes, and chromosomes. • 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	**TN.9.0.**	**Earth and Space Science: Earth Features: The student will understand that the earth has many geological features that are constantly changing.**
LEARNING EXPECTATION	**8.9.1.**	Understand the characteristics of the earth's layers and the location of major plates.
BENCHMARK	**8.9.1.a.**	Differentiate among earth layers according to their physical properties. • Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment • Teacher Resource CD: Trace Evidence
CONTENT STANDARD	**TN.13.0.**	**Physical Science: Interactions of Matter: The student will investigate the interactions of matter.**
LEARNING EXPECTATION	**8.13.1.**	Understand the difference between acids and bases and how indicators are used.
BENCHMARK	**8.13.1.a.**	Determine whether a substance is an acid or base using an indicator. • Forensic Science: Unit 6 Activity 1: Toxicological Analysis
CONTENT STANDARD	**TN.13.0.**	**Physical Science: Interactions of Matter: The student will investigate the interactions of matter.**
LEARNING EXPECTATION	**8.13.3.**	Understand what a chemical equation represents.

BENCHMARK	8.13.3.a.	Identify the reactants and/or products in a chemical reaction. • 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
BENCHMARK	8.13.3.c.	Describe how temperature and pH affect the rate of a reaction. • 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

Tennessee Curriculum Standards
Science
Grade 9

CONTENT STANDARD	TN.1.0.	**Life Science: Cells: Standard: The student will investigate the structures and functions of the cell membrane, cellular organelles, and component biomolecules related to the major cell processes.**
LEARNING EXPECTATION	LS.1.1.	Compare and contrast the chemistry of biomolecules and investigate their roles in cell structure and metabolism. • Teacher Resource CD: Simulating DNA Analysis
LEARNING EXPECTATION	LS.1.2.	Explore and compare the organelles of different cell types. • Teacher Resource CD: Simulating DNA Analysis
LEARNING EXPECTATION	LS.1.4.	Analyze the various cell processes. • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	TN.4.0.	**Life Science: Reproduction and Inheritance: The student will investigate how patterns of inheritance are linked to reproduction and infer that hereditary information contained in DNA is transmitted from parent to offspring.**
LEARNING EXPECTATION	LS.4.3.	Distinguish between dominant and recessive traits. • 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
LEARNING EXPECTATION	**LS.4.4.**	Distinguish between purebred and hybrid traits. • 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
LEARNING EXPECTATION	**LS.4.5.**	Explore various modes of inheritance (i.e. co-dominance, incomplete dominance, multiple alleles, sex-linked, and polygenic traits) using the principles of Mendelian inheritance. • 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
LEARNING EXPECTATION	**LS.4.6.**	Relate genetic mutations with changes in DNA. • 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	**TN.1.0.**	**Biology I: Cells: The student will investigate the structures and functions of the cell membrane, cellular organelles, and component biomolecules related to the major cell processes.**
LEARNING EXPECTATION	**BI.1.1.**	Compare and contrast the chemistry of biomolecules and investigate their roles in cell structure and metabolism. • Teacher Resource CD: Simulating DNA Analysis
LEARNING EXPECTATION	**BI.1.2.**	Explore and compare the organelles of different cell types. • Teacher Resource CD: Simulating DNA Analysis
LEARNING EXPECTATION	**BI.1.4.**	Analyze the various cell processes. • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	**TN.4.0.**	**Biology I: Genetics and Biotechnology: The student will investigate the concepts of genetics and heredity, different methods of reproduction, patterns of inheritance, and genetic disorders; as well as, explore and evaluate DNA technologies from both a scientific and ethical perspective.**
LEARNING EXPECTATION	**BI.4.1.**	Investigate the structure and molecular composition of DNA and RNA. • 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
LEARNING EXPECTATION	**BI.4.4.**	Apply the principles of Menedelian inheritance to make predictions for offspring. • 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
LEARNING EXPECTATION	**BI.4.5.**	Examine modes of inheritance involving sex linkage, co-dominance, incomplete dominance, multiple alleles, and polygenic traits. • 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
LEARNING EXPECTATION	**BI.4.8.**	Investigate the scientific and ethical ramifications of genetic engineering, recombinant DNA, selective breeding, hybridization, cell and tissue culture, transgenic animals, and DNA fingerprinting. • 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	**TN.6.0.**	**Biology I: Biological Evolution: The student will investigate the process of natural selection and examine the evidence for biological evolution.**
LEARNING EXPECTATION	**BI.6.4.**	Apply current knowledge of DNA and comparative anatomy to provide evidence for biological evolution. • 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	**TN.3.0.**	**Biology II: Genetics: The student will examine the structure and function of DNA.**
LEARNING EXPECTATION	**BII.3.1.**	Examine modes of inheritance involving linked genes and epistasis. • 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
LEARNING EXPECTATION	**BII.3.2.**	Investigate the effects of the environment on DNA. • 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
LEARNING EXPECTATION	**BII.3.3.**	Investigate chromosome mapping, crossing over, and the formation of new gene combinations. • 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
LEARNING EXPECTATION	**BII.3.4.**	Examine the process of regulating gene expression. • 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
LEARNING EXPECTATION	**BII.3.5.**	Explore the genomic organization and inheritance of DNA in prokaryotes, eukaryotes, cellular organelles, and humans. • 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
LEARNING EXPECTATION	**BII.3.6.**	Investigate the applications of recombinant DNA technology, including cloning. • 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	**TN.5.0.**	**Biology II: Microbiology: The student will investigate diversity, impact, and uses of microorganisms as well as diseases caused by microorganisms.**
LEARNING EXPECTATION	**BII.5.3.**	Investigate the role of microbes in genetic engineering and examine ways microbes are used in society. • 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	**TN.4.0.**	**Anatomy and Physiology: Transportation: The student will investigate the structure and function of the cardiovascular system with an emphasis on the blood, heart, and the lymphatic system and attention to the immune response.**
LEARNING EXPECTATION	**AP.4.1.**	Identify the molecular and cellular components of the blood. • 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 Silent Sentinel • Teacher Resource CD: The Case of the Telling Blood Group • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**AP.4.2.**	Describe the functions of the blood within the human body. • 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 Silent Sentinel • Teacher Resource CD: The Case of the Telling Blood Group • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**AP.4.4.**	Elucidate the biochemical and physiological nature of the heart's functions. • 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
LEARNING EXPECTATION	**AP.4.6.**	Describe the physiological basis of circulation and blood pressure. • 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
LEARNING EXPECTATION	**AP.4.7.**	Demonstrate the role of the cardiovascular system in maintaining homeostasis. • 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	**TN.3.0.**	**Chemistry I: Interactions of Matter: The student will examine the interactions of matter.**
LEARNING EXPECTATION	**CI.3.2.**	Analyze chemical reactions. • 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

CONTENT STANDARD	**TN.4.0.**	**Chemistry I: Solutions and Acids/Bases: The student will investigate the characteristics of solutions with particular attention to acids and bases.**
LEARNING EXPECTATION	**CI.4.1.**	Investigate the characteristics of solutions. • 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
CONTENT STANDARD	**TN.2.0.**	**Chemistry II: States of Matter: The student will investigate interactions of matter using the kinetic molecular theory to explain solid, liquid, gas, and solution phenomena.**
LEARNING EXPECTATION	**CII.2.4.**	Extend their understanding of solutions that was introduced in Chemistry I. • 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
CONTENT STANDARD	**TN.3.0.**	**Chemistry II: Reactions: The student will investigate types of reactions, stoichiometry, equilibrium phenomena, kinetics, and thermodynamics of chemical reactions.**
LEARNING EXPECTATION	**CII.3.1.**	Investigate various chemical reactions associated with acids and bases, precipitation, and oxidation and reduction. • 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
LEARNING EXPECTATION	**CII.3.3.**	Explore the concept of physical and chemical equilibrium. • 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
LEARNING EXPECTATION	**CII.3.4.**	Investigate chemical kinetics and the rate of reaction concept. • 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
LEARNING EXPECTATION	**CII.3.5.**	Explore the concept of thermodynamics. • 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

CONTENT STANDARD	**TN.2.0.**	**Geology: Matter and Minerals: The student will explore matter and how it relates to the formation of minerals.**
LEARNING EXPECTATION	**G.2.1.**	Investigate the atom as the basic building block of all matter. • Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment • Teacher Resource CD: Trace Evidence
CONTENT STANDARD	**TN.4.0.**	**Physical Science: Energy: The student will compare and contrast various forms of energy.**
LEARNING EXPECTATION	**PS.4.2.**	Explore and explain the nature of sound and light energy. • Teacher Resource CD: Learning About Paper
CONTENT STANDARD	**TN.4.0.**	**Physics: Light and Optics: The student will examine the properties of light and optics.**
LEARNING EXPECTATION	**P.4.3.**	Analyze the optics of mirrors. • Teacher Resource CD: Learning About Paper
LEARNING EXPECTATION	**P.4.4.**	Explore the optics of lenses. • Teacher Resource CD: Learning About Paper
LEARNING EXPECTATION	**P.4.5.**	Investigate the phenomenon of color. • Teacher Resource CD: Learning About Paper
CONTENT STANDARD	**TN.1.0.**	**Scientific Research: Ethical Practices: The student will demonstrate ethical practices.**
LEARNING EXPECTATION	**SR.1.1.**	Critically examine data to determine its significance. • Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection • Teacher Resource CD: Trace Evidence
LEARNING EXPECTATION	**SR.1.2.**	Repeat trials to enhance the reliability of data. • Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection • Teacher Resource CD: Trace Evidence
LEARNING EXPECTATION	**SR.1.5.**	Follow safety procedures in the classroom, laboratory, and home environments. • 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 5: Latent Fingerprints on Paper • Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent

		Fingerprints Using Vapors
CONTENT STANDARD	**TN.2.0.**	**Scientific Research: Critical Thinking Skills: The student will identify and clarify problems using critical thinking skills.**
LEARNING EXPECTATION	**SR.2.1.**	Use scientific instruments for extending the human senses in observation. • 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 • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.2.2.**	Recognize limits to scientific investigations. • 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 • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.2.3.**	Use technological tools and mathematical models to analyze problems or questions. • 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 • 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: Simulating DNA Analysis • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.2.5.**	Analyze and study classical problems. • Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint
CONTENT STANDARD	**TN.3.0.**	**Scientific Research: Scientific Inquiry: The student will design and implement a strategy for solving a scientific problem or a strategy for answering a scientific question.**
LEARNING EXPECTATION	**SR.3.1.**	Practice appropriate safety procedures. • 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 5: Latent Fingerprints on Paper • Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors
LEARNING EXPECTATION	**SR.3.2.**	Formulate a working hypothesis to guide research. • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence
LEARNING EXPECTATION	**SR.3.3.**	Develop experimental procedures to test hypothesis. • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence
LEARNING EXPECTATION	**SR.3.4.**	Collect data using a variety of scientific tools. • 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 • 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
CONTENT STANDARD	**TN.4.0.**	**Scientific Research: Analyzing and Evaluating Data: The student will develop abilities to analyze and evaluate data.**
LEARNING EXPECTATION	**SR.4.1.**	Use statistical analysis to analyze and interpret data accurately. • 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
LEARNING EXPECTATION	**SR.4.2.**	Evaluate data based in terms of accuracy and precision. • 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 • 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 1: Modeling a DNA Profile • 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 • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.4.3.**	Make conclusions based on data analysis and evaluations. • 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 • 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 1: Modeling a DNA Profile • 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 • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence • Virtual Laboratory: ABO-Rh Blood Typing
CONTENT STANDARD	**TN.5.0.**	**Scientific Research: Communicating Scientific Results: The student will publish, present, and communicate results of a scientific investigation.**
LEARNING EXPECTATION	**SR.5.1.**	Present scientific reports in a clear, accurate, and appropriate manner to a variety of audiences. • 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 • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.5.2.**	Communicate findings in order to extend the research base. • 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 • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing

Tennessee Curriculum Standards
Science
Grade 10

CONTENT STANDARD	**TN.1.0.**	**Life Science: Cells: Standard: The student will investigate the structures and functions of the cell membrane, cellular organelles, and component biomolecules related to the major cell processes.**
LEARNING	**LS.1.1.**	Compare and contrast the chemistry of biomolecules and investigate their roles in

EXPECTATION		cell structure and metabolism. • Teacher Resource CD: Simulating DNA Analysis
LEARNING EXPECTATION	**LS.1.2.**	Explore and compare the organelles of different cell types. • Teacher Resource CD: Simulating DNA Analysis
LEARNING EXPECTATION	**LS.1.4.**	Analyze the various cell processes. • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	**TN.4.0.**	**Life Science: Reproduction and Inheritance: The student will investigate how patterns of inheritance are linked to reproduction and infer that hereditary information contained in DNA is transmitted from parent to offspring.**
LEARNING EXPECTATION	**LS.4.3.**	Distinguish between dominant and recessive traits. • 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
LEARNING EXPECTATION	**LS.4.4.**	Distinguish between purebred and hybrid traits. • 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
LEARNING EXPECTATION	**LS.4.5.**	Explore various modes of inheritance (i.e. co-dominance, incomplete dominance, multiple alleles, sex-linked, and polygenic traits) using the principles of Mendelian inheritance. • 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
LEARNING EXPECTATION	**LS.4.6.**	Relate genetic mutations with changes in DNA. • 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	**TN.1.0.**	**Biology I: Cells: The student will investigate the structures and functions of the cell membrane, cellular organelles, and component biomolecules related to the major cell processes.**
LEARNING EXPECTATION	**BI.1.1.**	Compare and contrast the chemistry of biomolecules and investigate their roles in cell structure and metabolism. • Teacher Resource CD: Simulating DNA Analysis

LEARNING EXPECTATION	**BI.1.2.**	Explore and compare the organelles of different cell types. • Teacher Resource CD: Simulating DNA Analysis
LEARNING EXPECTATION	**BI.1.4.**	Analyze the various cell processes. • Teacher Resource CD: Simulating DNA Analysis
CONTENT STANDARD	**TN.4.0.**	**Biology I: Genetics and Biotechnology: The student will investigate the concepts of genetics and heredity, different methods of reproduction, patterns of inheritance, and genetic disorders; as well as, explore and evaluate DNA technologies from both a scientific and ethical perspective.**
LEARNING EXPECTATION	**BI.4.1.**	Investigate the structure and molecular composition of DNA and RNA. • 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
LEARNING EXPECTATION	**BI.4.4.**	Apply the principles of Menedelian inheritance to make predictions for offspring. • 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
LEARNING	**BI.4.5.**	Examine modes of inheritance involving sex linkage, co-dominance, incomplete

EXPECTATION		dominance, multiple alleles, and polygenic traits. • 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
LEARNING EXPECTATION	**BI.4.8.**	Investigate the scientific and ethical ramifications of genetic engineering, recombinant DNA, selective breeding, hybridization, cell and tissue culture, transgenic animals, and DNA fingerprinting. • 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	**TN.6.0.**	**Biology I: Biological Evolution: The student will investigate the process of natural selection and examine the evidence for biological evolution.**
LEARNING EXPECTATION	**BI.6.4.**	Apply current knowledge of DNA and comparative anatomy to provide evidence for biological evolution. • 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	**TN.3.0.**	**Biology II: Genetics: The student will examine the structure and function of DNA.**
LEARNING EXPECTATION	**BII.3.1.**	Examine modes of inheritance involving linked genes and epistasis. • 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
LEARNING EXPECTATION	**BII.3.2.**	Investigate the effects of the environment on DNA. • 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

LEARNING EXPECTATION	**BII.3.3.**	Investigate chromosome mapping, crossing over, and the formation of new gene combinations. • 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
LEARNING EXPECTATION	**BII.3.4.**	Examine the process of regulating gene expression. • 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
LEARNING EXPECTATION	**BII.3.5.**	Explore the genomic organization and inheritance of DNA in prokaryotes, eukaryotes, cellular organelles, and humans. • 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
LEARNING EXPECTATION	**BII.3.6.**	Investigate the applications of recombinant DNA technology, including cloning. • 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	**TN.5.0.**	**Biology II: Microbiology: The student will investigate diversity, impact, and uses of microorganisms as well as diseases caused by microorganisms.**
LEARNING EXPECTATION	**BII.5.3.**	Investigate the role of microbes in genetic engineering and examine ways microbes are used in society. • 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	**TN.4.0.**	**Anatomy and Physiology: Transportation: The student will investigate the**

STANDARD		structure and function of the cardiovascular system with an emphasis on the blood, heart, and the lymphatic system and attention to the immune response.
LEARNING EXPECTATION	AP.4.1.	Identify the molecular and cellular components of the blood. • 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 Silent Sentinel • Teacher Resource CD: The Case of the Telling Blood Group • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	AP.4.2.	Describe the functions of the blood within the human body. • 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 Silent Sentinel • Teacher Resource CD: The Case of the Telling Blood Group • Virtual Laboratory: ABO-Rh Blood Typing

LEARNING EXPECTATION	**AP.4.4.**	Elucidate the biochemical and physiological nature of the heart's functions. • 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
LEARNING EXPECTATION	**AP.4.6.**	Describe the physiological basis of circulation and blood pressure. • 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
LEARNING EXPECTATION	**AP.4.7.**	Demonstrate the role of the cardiovascular system in maintaining homeostasis. • 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	**TN.3.0.**	**Chemistry I: Interactions of Matter: The student will examine the interactions of matter.**
LEARNING EXPECTATION	**CI.3.2.**	Analyze chemical reactions. • 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
CONTENT STANDARD	**TN.4.0.**	**Chemistry I: Solutions and Acids/Bases: The student will investigate the characteristics of solutions with particular attention to acids and bases.**
LEARNING EXPECTATION	**CI.4.1.**	Investigate the characteristics of solutions. • 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
CONTENT STANDARD	**TN.2.0.**	**Chemistry II: States of Matter: The student will investigate interactions of matter using the kinetic molecular theory to explain solid, liquid, gas, and solution phenomena.**
LEARNING EXPECTATION	**CII.2.4.**	Extend their understanding of solutions that was introduced in Chemistry I. • 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
CONTENT STANDARD	**TN.3.0.**	**Chemistry II: Reactions: The student will investigate types of reactions, stoichiometry, equilibrium phenomena, kinetics, and thermodynamics of chemical reactions.**
LEARNING EXPECTATION	**CII.3.1.**	Investigate various chemical reactions associated with acids and bases, precipitation, and oxidation and reduction.

		• 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
LEARNING EXPECTATION	**CII.3.3.**	Explore the concept of physical and chemical equilibrium. • 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
LEARNING EXPECTATION	**CII.3.4.**	Investigate chemical kinetics and the rate of reaction concept. • 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
LEARNING EXPECTATION	**CII.3.5.**	Explore the concept of thermodynamics. • 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
CONTENT STANDARD	**TN.2.0.**	**Geology: Matter and Minerals: The student will explore matter and how it relates to the formation of minerals.**
LEARNING EXPECTATION	**G.2.1.**	Investigate the atom as the basic building block of all matter. • Forensic Science: Unit 4 Case Activity 2: The Unusual Fragment • Teacher Resource CD: Trace Evidence
CONTENT STANDARD	**TN.4.0.**	**Physical Science: Energy: The student will compare and contrast various forms of energy.**
LEARNING EXPECTATION	**PS.4.2.**	Explore and explain the nature of sound and light energy. • Teacher Resource CD: Learning About Paper
CONTENT STANDARD	**TN.4.0.**	**Physics: Light and Optics: The student will examine the properties of light and optics.**
LEARNING EXPECTATION	**P.4.3.**	Analyze the optics of mirrors. • Teacher Resource CD: Learning About Paper
LEARNING EXPECTATION	**P.4.4.**	Explore the optics of lenses.

		• Teacher Resource CD: Learning About Paper
LEARNING EXPECTATION	**P.4.5.**	Investigate the phenomenon of color. • Teacher Resource CD: Learning About Paper
CONTENT STANDARD	**TN.1.0.**	**Scientific Research: Ethical Practices: The student will demonstrate ethical practices.**
LEARNING EXPECTATION	**SR.1.1.**	Critically examine data to determine its significance. • Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection • Teacher Resource CD: Trace Evidence
LEARNING EXPECTATION	**SR.1.2.**	Repeat trials to enhance the reliability of data. • Forensic Science: Unit 4 Skill Learning Activity 1: Making a Hair and Fiber Collection • Teacher Resource CD: Trace Evidence
LEARNING EXPECTATION	**SR.1.5.**	Follow safety procedures in the classroom, laboratory, and home environments. • 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 5: Latent Fingerprints on Paper • Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors
CONTENT STANDARD	**TN.2.0.**	**Scientific Research: Critical Thinking Skills: The student will identify and clarify problems using critical thinking skills.**
LEARNING EXPECTATION	**SR.2.1.**	Use scientific instruments for extending the human senses in observation. • 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 • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.2.2.**	Recognize limits to scientific investigations. • 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 • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.2.3.**	Use technological tools and mathematical models to analyze problems or questions. • 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 • 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: Simulating DNA Analysis • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.2.5.**	Analyze and study classical problems. • Forensic Science: Unit 1 Skill Learning Activity 1: Taking a Direct Fingerprint
CONTENT STANDARD	**TN.3.0.**	**Scientific Research: Scientific Inquiry: The student will design and implement a strategy for solving a scientific problem or a strategy for answering a scientific question.**
LEARNING EXPECTATION	**SR.3.1.**	Practice appropriate safety procedures. • 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 5: Latent Fingerprints on Paper • Forensic Science: Unit 1 Skill Learning Activity 6: Exposing Latent Fingerprints Using Vapors
LEARNING EXPECTATION	**SR.3.2.**	Formulate a working hypothesis to guide research. • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence
LEARNING EXPECTATION	**SR.3.3.**	Develop experimental procedures to test hypothesis. • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence
LEARNING EXPECTATION	**SR.3.4.**	Collect data using a variety of scientific tools. • 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 • 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
CONTENT STANDARD	**TN.4.0.**	**Scientific Research: Analyzing and Evaluating Data: The student will develop abilities to analyze and evaluate data.**
LEARNING EXPECTATION	**SR.4.1.**	Use statistical analysis to analyze and interpret data accurately. • 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
LEARNING EXPECTATION	**SR.4.2.**	Evaluate data based in terms of accuracy and precision. • 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 • 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 1: Modeling a DNA Profile • 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 • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence

		• Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.4.3.**	Make conclusions based on data analysis and evaluations. • 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 • 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 1: Modeling a DNA Profile • 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 • Teacher Resource CD: Fingerprinting • Teacher Resource CD: Trace Evidence • Virtual Laboratory: ABO-Rh Blood Typing
CONTENT STANDARD	**TN.5.0.**	**Scientific Research: Communicating Scientific Results: The student will publish, present, and communicate results of a scientific investigation.**
LEARNING EXPECTATION	**SR.5.1.**	Present scientific reports in a clear, accurate, and appropriate manner to a variety of audiences. • 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 • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing
LEARNING EXPECTATION	**SR.5.2.**	Communicate findings in order to extend the research base. • 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 • Forensic Science: Unit 6 Activity 4: Document Analysis • Forensic Science: Unit 6 Activity 5: Blood Analysis • Virtual Laboratory: ABO-Rh Blood Typing