Flagler County Forensic Science I
2025-2026 Scope and Sequence

Year at a glance: Please note that the map is based on a 180-day schedule.

Quarter 1: August 11, 2025- October 10, 2025	
Topics	Benchmark/ Standards
Forensic Science and Observation Crime Scene Investigation and Evidence Collection Evidence Collection and Classification Hair Analysis and Fiber Analysis Fingerprints	SC.912.N.1.1: Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: Pose questions about the natural world, (Articulate the purpose of the investigation and identify the relevant scientific concepts). Conduct systematic observations, (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). Examine books and other sources of information to see what is already known, Review what is known in light of empirical evidence, (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). Plan investigations, (Design and evaluate a scientific investigation). Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs), (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage).Pose answers, explanations, or descriptions of events, Generate explanations that explicate or describe natural phenomena (inferences), Use appropriate evidence and reasoning to justify these explanations to others, Communicate results of scientific investigations, and Evaluate the merits of the explanations produced by others. SC.912.N.1.2: Describe and explain what characterizes science and its methods. SC.912.N.1.3: Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented. SC.912.N.1.4: Identify sources of information and assess their reliability according to the strict standards of scientific investigation. SC.912.N.1.6: Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied. SC.912.N.2.1: Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).

	SC.912.N.3.1: Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer. SC.912.N.3.2: Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science. SC.912.N.3.5: Describe the function of models in science, and identify the wide range of models used in science. SC.912.E.5.8: Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools. SC.912.L.14.4: Compare and contrast structure and function of various types of microscopes. SC.912.L.14.51: Describe the function of the vertebrate integumentary system. SC.912.L.16.11: Discuss the technologies associated with forensic medicine and DNA identification, including restriction fragment length polymorphism (RFLP) analysis. SC.912.L.16.12: Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning). SC.912.P.8.11: Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH. SC.912.P.8.12: Describe the properties of the carbon atom that make the diversity of carbon compounds possible. SC.912.P.10.18: Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications. SC.912.P.12.9: Recognize that time, length, and energy depend on the frame of reference.
Quarter 2: October 14, 2025-December 19, 2025	
Topics	Benchmark/ Standards
DNA Profiling Electrophoresis Lab Blood and Blood Spatter Forensic Toxicology	SC.912.L.14.1: Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science. SC.912.L.14.2: Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport). SC.912.L.14.34: Describe the composition and physiology of blood, including that of the plasma and the formed elements. SC.912.L.14.35: Describe the steps in hemostasis, including the mechanism of coagulation. Include the basis for blood typing and transfusion reactions. SC.912.L.14.6: Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health. SC.912.L.15.15: Describe how mutation and genetic recombination increase genetic variation.

	SC.912.L.16.2: Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles. SC.912.L.16.9: Explain how and why the genetic code is universal and is common to almost all organisms. SC.912.L.16.10: Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues. SC.912.L.16.12: Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning). SC.912.L.17.1: Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution. SC.912.L.18.1: Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules. SC.912.N.4.1: Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making. SC.912.N.4.2: Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental. SC.912.P.8.1: Differentiate among the four states of matter. SC.912.P.12.2: Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time. SC.912.P.12.7: Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
Quarter 3: January 7, 2026- March 12, 2026	
Topics	Benchmark/ Standards
Handwriting Analysis, Forgery, and Counterfeiting Forensic Entomology Death: Manner, Mechanism, Cause Forensic Anthropology	SC.912.L.14.1: Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science. SC.912.L.14.11: Classify and state the defining characteristics of epithelial tissue, connective tissue, muscle tissue, and nervous tissue. SC.912.L.14.12: Describe the anatomy and histology of bone tissue. SC.912.N.1.6: Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied. SC.912.N.2.4: Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability. SC.912.P.8.7: Interpret formula representations of molecules and compounds in terms of composition and structure.

	SC.912.P.8.11: Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH. SC.912.P.12.12: Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
Quarter 4: March 23, 2026- May 28, 2026	
Topics	Benchmark/ Standards
Casts and Impressions Glass Evidence Firearms and Ballistics	SC.912.N.1.6: Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied. SC.912.P.8.2: Differentiate between physical and chemical properties and physical and chemical changes of matter. SC.912.P.10.1: Differentiate among the various forms of energy and recognize that they can be transformed from one form to others. SC.912.P.10.20: Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another. SC.912.P.10.21: Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver. SC.912.P.12.1: Distinguish between scalar and vector quantities and assess which should be used to describe an event. SC.912.P.12.3: Interpret and apply Newton's three laws of motion. SC.912.P.12.5: Apply the law of conservation of linear momentum to interactions, such as collisions between objects.