Acid to Alkaline
Grades 4-8

Standards at a Glance	
Next Generation Sunshine State Standards for Science	SC.4.L.16.2, SC.5.L.17.1, SC.4.N.1.1, SC.4.N.1.4, SC.4.N.1.5 SC.4.N.1.6, SC.4.N.1.7, SC.4.N.1.8, SC.5.N.1.1, SC.5.N.1.6 SC.5.N.2.1, SC.5.N.2.2, SC.6.N.1.1, SC.6.N.1.4, SC.6.N.1.5 SC.7.N.1.1, SC.7.N.1.3, SC.7.N.1.4, SC.7.N.1.5, SC.7.N.1.6 SC.8.N.1.1, SC.8.N.1.6, SC.8.N.2.2, SC.8.N.3.1, SC.4.P.8.1, SC.8.P.8.4, SC.8.P.8.8, SC.8.P.8.9
Computer Science – Florida Standards for Science	SC.35.CS-CC.1.1, SC.35.CS-CC.1.3, SC.35.CS-CP.1.3, SC.35.CS-CP.1.4, SC.68.CS-CP.2.1, SC.68.CS-CP.3.1, SC.68.CS-CP.3.3, SC.35.CS-CS.2.1, SC.68.CS-CS.2.1, SC.68.CS-CS.2.2
English Language Arts –Florida's B.E.S.T. Standards	ELA.4.C.1.3, ELA.4.C.2.1, ELA.5.C.1.3, ELA.5.C.2.1, ELA.6.C.2.1, ELA.6.C.1.3, ELA.7.C.1.3, ELA.7.C.2.1, ELA.8.C.1.3, ELA.8.C.2.1, ELA.4.V.1.1, ELA.5.V.1.1, ELA.6.V.1.1, ELA.7.V.1.1, ELA.8.V.1.1
Mathematics – Florida's B.E.S.T. Standards	MA.4.DP.1.3
Next Generation Sunshine State Standards – Social Studies	N/A

Standards Highlighted	
Next Generation Sunshine State Standards for Science	
Life Science	
SC.4.L.16.2	Explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment.
SC.5.L.17.1	Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.
Nature of Science	
SC.4.N.1.1	Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
SC.4.N.1.4	Attempt reasonable answers to scientific questions and cite evidence in support.
SC.4.N.1.5	Compare the methods and results of investigations done by other classmates.

SC.4.N.1.6	Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.
SC.4.N.1.7	Recognize and explain that scientists base their explanations on evidence.
SC.4.N.1.8	Recognize that science involves creativity in designing experiments
SC.5.N.1.1	Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.5.N.1.6	Recognize and explain the difference between personal opinion/interpretation and verified observation.
SC.5.N.2.1	Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.
SC.5.N.2.2	Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others.
SC.6.N.1.1	Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.6.N.1.4	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.
SC.6.N.1.5	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.7.N.1.1	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.7.N.1.3	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.4	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.
SC.7.N.1.5	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.

SC.7.N.1.6	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.8.N.1.1	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
SC.8.N.1.6	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
SC.8.N.2.2	Discuss what characterizes science and its methods.
SC.8.N.3.1	Select models useful in relating the results of their own investigations.
Physical Science	
SC.4.P.8.1	Measure and compare objects and materials based on their physical properties including mass, shape, volume, color, hardness, texture, odor, taste, and attraction to magnets.
SC.8.P.8.4	Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.
SC.8.P.8.8	Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.
SC.8.P.8.9	Distinguish among mixtures (including solutions) and pure substances.
Computer Science	
Communication and Collaboration	
SC.35.CS-CC.1.1	Identify technology tools for individual and collaborative data collection, writing, communication, and publishing activities.
SC.35.CS-CC.1.3	Identify ways that technology can foster teamwork, and collaboration can support problem solving and innovation.
Computer Practices and Programing	
SC.35.CS-CP.1.3	Identify, research, and collect a data set on a topic, issue, problem, or question using age-appropriate technologies.
SC.35.CS-CP.1.4	Collect, organize, graph, and analyze data to answer a question using a database or spreadsheet.
SC.68.CS-CP.2.1	Develop problem solutions using visual representations of problem states, structures and data.
SC.68.CS-CP.3.1	Select appropriate tools and technology resources to accomplish a variety of tasks and solve problems.

SC.68.CS-CP.3.3	Create an artifact (independently and collaboratively) that answers a research question and communicates results and conclusions.
Communication Systems and Computing	
SC.35.CS-CS.2.1	Solve age-appropriate problems using information organized using digital graphic organizers (e.g., concept maps and Venn-diagrams).
SC.68.CS-CS.2.1	Create, modify, and use a database (e.g., define field formats, adding new records, manipulate data) to analyze data and propose solutions for a task/problem, individually and collaboratively.
SC.68.CS-CS.2.2	Solve real-life issues in science and engineering (i.e., generalize a solution to open-ended problems) using computational thinking skills.
English Language Arts –Florida's B.E.S.T. Standards	
Communication	
ELA.4.C.1.3	Write to make a claim supporting a perspective with logical reasons, using evidence from multiple sources, elaboration, and an organizational structure with transitions.
ELA.4.C.2.1	Present information orally, in a logical sequence, using nonverbal cues, appropriate volume, and clear pronunciation.
ELA.5.C.1.3	Write to make a claim supporting a perspective with logical reasons, relevant evidence from sources, elaboration, and an organizational structure with varied transitions.
ELA.5.C.2.1 ELA.6.C.2.1	Present information orally, in a logical sequence, using nonverbal cues, appropriate volume, clear pronunciation, and appropriate pacing.
ELA.6.C.1.3	Write and support a claim using logical reasoning, relevant evidence from sources, elaboration, and a logical organizational structure with varied transitions.
ELA.7.C.1.3	Write and support a claim using logical reasoning, relevant evidence from sources, elaboration, a logical organizational structure with varied transitions, and acknowledging at least one counterclaim.
ELA.7.C.2.1	Present information orally, in a logical sequence, emphasizing key points that support the central idea.
ELA.8.C.1.3	Write to argue a position, supporting at least one claim and rebutting at least one counterclaim with logical reasoning, credible evidence from sources, elaboration, and using a logical organizational structure.
ELA.8.C.2.1	Present information orally, in a logical sequence, supporting the central idea with credible evidence.
Vocabulary	
ELA.4.V.1.1 ELA.5.V.1.1	Use grade-level academic vocabulary appropriately in speaking and writing.
ELA.6.V.1.1 ELA.7.V.1.1	Integrate academic vocabulary appropriate to grade level in speaking and writing.
ELA.8.V.1.1	Integrate academic vocabulary appropriate to grade level in speaking and writing.

Mathematics – Florida's B.E.S.T. Standards	
Data Analysis and Probability	
MA.4.DP.1.3	Solve real-world problems involving numerical data.