Flagler County Grade 8/ Comprehensive Science 3
2025-2026 Scope and Sequence based on McGraw Hill

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

McGraw Hill	Benchmark/ Standards
Quarter 1: August 11, 2025- October 10, 2025	
Chapter 0- Nature of Science **Chapter 5- Properties and Changes of Matter**	**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.1.2** Design and conduct a study using repeated trials and replication. **SC.8.N.1.3** Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim. **SC.8.N.1.4** Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data. **SC.8.N.1.5** Analyze the methods used to develop a scientific explanation as seen in different fields of science. **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.2.1** Distinguish between scientific and pseudoscientific ideas. **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. **SC.8.N.3.2** Explain why theories may be modified but are rarely discarded. **SC.8.P.8.1** Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases. **SC.8.P.8.2** Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass. **SC.8.P.8.3**

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	Explore and describe the densities of various materials through measurement of their masses and volumes. **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.
Quarter 2: October 14, 2025-December 19, 2025	
Chapter 6- Matter and Molecular Structure **Chapter 7- The Periodic Table** **Chapter 8- Elements and Chemical Bonds** **Chapter 9- Mixtures, Solubility, and Acid/Base Solutions** **Chapter 10- Chemical Reactions** **Chapter 11- Energy Production and Response in Plants**	**SC.8.P.8.5** Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter. **SC.8.P.8.6** Recognize that elements are grouped in the periodic table according to similarities of their properties. **SC.8.P.8.7** Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of subatomic particles (electrons surrounding a nucleus containing protons and neutrons). **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. **SC.8.P.9.1** Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes. **SC.8.P.9.2** Differentiate between physical changes and chemical changes. **SC.8.P.9.3** Investigate and describe how temperature influences chemical changes. **SC.8.L.18.1** Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen. **SC.8.L.18.2** Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide. **SC.8.L.18.3** Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.

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Chapter 12- Matter and Energy in Ecosystems	**SC.8.L.18.4** Cite evidence that living systems follow the Laws of Conservation of Mass and Energy. Also Embed SC.8.N.1.1 SC.8.N.1.2 SC.8.N.1.3 SC.8.N.1.4 SC.8.N.1.5 SC.8.N.1.6 SC.8.N.2.1 SC.8.N.2.2
Quarter 3: January 7, 2026- March 12, 2026	
Chapter 1- Exploring the Universe **Chapter 2- The Sun-Earth-Moon Systems** **Chapter 3- The Solar System** **Chapter 4- Stars and Galaxies**	**SC.8.E.5.1** Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance. **SC.8.E.5.2** Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars. **SC.8.E.5.3** Distinguish the hierarchical relationships between planets and other astronomical bodies relative to the solar system, galaxy, and universe, including distance, size, and composition. **SC.8.E.5.4** Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions **SC.8.E.5.5** Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness). **SC.8.E.5.6** Create models of solar properties including: rotation, structure of the Sun, convection, sunspots, solar flares, and prominences. **SC.8.E.5.7** Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions. **SC.8.E.5.8** Compare various historical models of the Solar System, including geocentric and heliocentric.

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	SC.8.E.5.9 Explain the impact of objects in space on each other including: the Sun on the Earth including seasons and gravitational attraction, the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body. **SC.8.E.5.11** Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs. Also Embed SC.8.N.1.1 SC.8.N.1.2 SC.8.N.1.3 SC.8.N.1.4 SC.8.N.1.5 SC.8.N.1.6 SC.8.N.2.1 SC.8.N.2.2
Quarter 4: March 23, 2026- May 28, 2026	
Chapter 0- Nature of Science **Chapter 1- Exploring the Universe**	**SC.8.E.5.10** Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information. **SC.8.E.5.12** Summarize the effects of space exploration on the economy and culture of Florida. **SC.8.N.4.1** Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels. **SC.8.N.4.2** Explain how political, social, and economic concerns can affect science, and vice versa. ***Review for SSA***

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