

SCIENCE YEAR AT A GLANCE - 5th Grade

Unit 1: Scientific Practices Estimated Time To Complete: 30 Sessions Estimated Window: September-October	Unit 2: Ecosystems and the Energy Within Estimated Time To Complete: 25 Sessions Estimated Window: October-November	Unit 3: Earth's Systems Estimated Time To Complete: 25 Sessions Estimated Window: December-January	Unit 4: Structure and Properties of Matter Estimated Time To Complete: 26 Sessions Estimated Window: February - March
<p>Essential Standard(s): 5_SC_1: Students will understand and use scientific and engineering practices to conduct investigations and solve problems</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> · 5_SC_1_A- Design a solution based on a need or want that includes specific criteria for success and places limitations on materials, time, or cost. (S) 3-5-EST1-1/2/3 · 5_SC_1_B- Develop and compare multiple solutions to a problem based on how well each is likely to meet the criteria and constraints of a problem. (S) 3-5-EST1-1/2/3 · 5_SC_1_C- Plan and carry out “fair” tests in which variables are controlled and test is evaluated to identify parts of a model that can be improved. (S) 3-5-EST1-1/2/3 	<p>Essential Standard(s): 5_SC_2: Understand the interdependence among organisms and the transfer of energy.</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> · 5_SC_2_A- Identify and describe different ecosystems that support the life of plants and animals (K) NG5-LS1-1 · 5_SC_2_B- Classify Populations of organisms as producers, consumers, or decomposers by their role in an ecosystem. (R) LS5-ST4/2/A/a · 5_SC_2_C- Differentiate between the types of consumers (R) LS5-ST4/2/A/b · 5_SC_2_D- Categorize organisms as predator or prey in a given ecosystem. (R) LS5-ST4/2/A/c · 5_SC_2_E- Explain that energy in animal’s food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. (R) NG5-PS3-1 · 5_SC_2_F- Recognize that plants get the materials they need for growth mainly from air and water (K) NG5-LS1-1 · 5_SC_2_G- Describe the interdependent relationships in ecosystems (K) NG5-LS2-1A 	<p>Essential Standard(s): 5_SC_3: Students will analyze the interactions of various Earth systems and understand the impact of human activity.</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> · 5_SC_3_A- Identify the geosphere, hydrosphere, biosphere, and atmosphere as Earth’s major system. (K) 5-ESS2-1 · 5_SC_3_B- Identify cause and effect relationships between the geosphere, hydrosphere, biosphere, and atmosphere. (R) 5-ESS2-1 · 5_SC_3_C- Analyze the distribution of water on Earth (R) 5-ESS2-2 · 5_SC_3_D- Describe and illustrate the path of water as it cycles through the hydrosphere, atmosphere, and geosphere (K/P) 5-ESS2-1 · 5_SC_3_E- Determine weather patterns through the interaction of winds and clouds with landforms (R) 5-ESS2-1 · 5_SC_3_F- Explain how major bodies of water are important natural resources or human activity. (Food, recreation, irrigation, and transportation) (K) 5-ESS3-1 · 5_SC_3_G- Research and analyze the beneficial and harmful impacts of human activity on Earth’s resources and environments (R) 5-ESS3-1 	<p>Essential Standard(s): 5_SC_4: Students will understand the structure, properties, changes, and interactions of matter.</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> · 5_SC_4_A- Understand that matter is made of particles too small be seen (K) 5-PS1-1 · 5_SC_4_B- Make observations to identify materials based on physical and chemical properties. (R) 5-PS1-3 · 5_SC_4_C- Identify ways to separate the components of mixtures/solutions by their properties. (K) 5-PS1-3 · 5_SC_4_D- Provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved (R) 5-PS1-2 · 5_SC_4_E- Differentiate between a chemical change and a physical change. (R) 5-PS1-4
Unit 5: Stars and the Solar System	Unit 6: Immune System		

Estimated Time To Complete: 25 Sessions Estimated Window: March-April	Estimated Time To Complete: 5 Sessions Estimated Window: May		
<p>Essential Standard(s):5_SC_5 Students will understand the major components and patterns observed in the universe.</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> • 5_SC_5_A Identify that the gravitational force exerted by Earth on objects is directed down. (K) 5-PS2-1 • 5_SC_5_B Observe the observed pattern of daily changes in length and direction of shadows as the Earth rotates. (S,K) 5-ESS1-2 • 5_SC_5_C Observe a model and describe the patterns of day and night as the Earth rotates and orbits around the Sun. (S, K) 5-ESS1-2 • 5_SC_5_D Describe the observed pattern of moon phases as the Moon rotates around the Earth (K) 5-ESS1-2 • 5_SC_5_E Understand that stars, constellations, and planets in the night sky change position in consistent patterns as the Earth rotates and orbits the Sun. © 5-ESS1-2 • 5_SC_5_F Understand the apparent brightness of the Sun and stars is due to their relative distances from Earth. (K) 5-ESS1-1 	<p>Essential Standard(s):5_SC_6 Students will define and explain the function of the human immune system.</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> • 5_SC_6_A Describe the basic function of the immune system. (K) • 5_SC_6_B Describe and compare ways the human body prevents and fights disease. (K) • 5_SC_6_C Distinguish between a communicable and non-communicable disease. (K) 		