

SCIENCE YEAR AT A GLANCE - 4th Grade

Unit 1: Scientific Practices Estimated Time To Complete: 20 Sessions Estimated Window: August 19 – October 15	Unit 2: Earth's Systems Estimated Time To Complete: 20 Sessions Estimated Window: October 19 – December 18	Unit 3: Energy Estimated Time To Complete: 15 Sessions Estimated Window: January 5 – February 26	Unit 4: Waves Estimated Time To Complete: 10 Sessions Estimated Window: February 29 – April 4
<p>Essential Standard(s): 4_SC_1 The student 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"> ● 4_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-ETS1-1) ● 4_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 the problem. (R) (3-5-ETS1-2) ● 4_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-ETS1-3) 	<p>Essential Standard(s): 4_SC_2 The student will investigate and analyze Earth's physical changes.</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> ● 4_SC_2_A Analyze evidence from patterns in rock formations and fossils to support an explanation for changes in a landscape over time. (R) (4-ESS1-1) ● 4_SC_2_B Make observations to provide evidence of the effects of weathering and erosion. (S) (4-ESS2-1) ● 4_SC_2_C Design solutions to reduce the impacts of natural Earth processes on humans. (P) (4-ESS3-2) ● 4_SC_2_D Analyze data from maps to describe patterns of Earth's features. (R) (4-ESS2-2) ● 4_SC_2_E Design solutions for reducing the impacts of geological hazards. (P) (4-ESS3-2) 	<p>Essential Standard(s): 4_SC_3 The student will investigate and explain force in motion and the transfer of energy.</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> ● 4_SC_3_A Use evidence to compare the speed of an object to the energy of that object. (R) (4PS3-1) ● 4_SC_3_B Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat and electrical currents. (S) (4PS3-2) ● 4_SC_3_C Predict outcomes about the changes in energy that occur when objects collide. (R) (PS3-2) ● 4_SC_3_D Explain how energy is transported and stored for use in daily life. (K) (4-PS3-4) ● 4_SC_3_E Design, test and refine a device that converts energy from one form to another. (P) (4-PS3-4) ● 4_SC_3_F Describe how energy and fuels are derived from natural resources and how their uses affect the environment. (K) (4-ESS3-1) 	<p>Essential Standard(s): 4_SC_4 The student will analyze the characteristics of waves.</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> ● 4_SC_4_A Describe wave patterns using amplitude and wavelength. (K) (4-PS4-1) ● 4_SC_4_B Compare multiple solutions that use patterns to transfer information. (R) (4-PS4-3)
Unit 5: Plant and Animal Structures Estimated Time To Complete: 15 Sessions Estimated Window: April 4 - May 20			
<p>Essential Standard(s): 4_SC_5 The student will identify plant and animal structures and functions necessary for survival.</p> <p>Learning Targets:</p> <ul style="list-style-type: none"> ● 4_SC_5_A Describe how structures help animals survive in their environment. (K) (4-LS1-1) ● 4_SC_5_B Use a model to describe how animals receive, process, and respond to information from their senses. (P) (4-PS4-2) (4-LS1-2) ● 4_SC_5_C Describe how structures help plants survive in their environment. (K) (4-LS1-1) 			

