

4th Grade Science Curriculum Map

Standards	Content	Skills/Practices	Materials/ Resources	Assessments (All) Daily/Weekly/ Benchmarks	Timeline (Months/Weeks /Days)
4-LS1-1	<p>Bundle 1 Scope 1: Plant and Animal Parts</p> <p>Construct an argument that plants and animals have internal and external structures that function and support survival, growth, behavior, and reproduction.</p>	<p>System and System Models: A system can be described in terms of its components and their interactions</p> <p>Science and Engineering Practices: Engaging in Argument from Evidence - Construct an argument with evidence, data, and/or a model.</p>	<p>Teacher-Made Workbooks that include: -Linking Literacy articles -Lab activities -Content Connections Video Response Questions</p> <p>STEMscopes website</p> <p>Supplemental Materials: -BrainPOP Adaptations -Bill Nye:Deserts; Flowers -Super Teacher Worksheets: Human Body Systems -Animal Adaptation Invention activity</p>	<p>Lab activities and responses</p> <p>Content Connections Video responses</p> <p>End of Scope Test</p> <p>Vocabulary Quiz</p>	2 weeks (daily 30 min. Class periods)
4-LS1-2	<p>Bundle 1 Scope 2: Sense Receptors</p> <p>Describe that animals receive different types of information through their senses, process</p>	<p>System and System Models: A system can be described in terms of its components and their interactions.</p>	<p>Teacher-Made Workbooks that include: -Linking Literacy articles -Lab activities -Content Connections Video Response Questions</p>	<p>Lab activities and responses</p> <p>Content Connections Video responses</p> <p>End of Scope Test</p>	2 Weeks (daily 30 min. Class periods)

	the information in the brain, and respond to the information in different ways in order to survive.	Science and Engineering Practices: Developing and Using Models - Use a model to test interactions concerning the functioning of a natural system.	STEMscopes website Supplemental Materials: -BrainPOP Senses Video -Bill Nye Smell video and questions	Vocabulary Quiz	
4-ESS1-1	Bundle 2 Scope 1: Rock Patterns Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	Cross Cutting Concepts: Patterns Patterns can be used as evidence to support an explanation. Science and Engineering Practices: Constructing Explanations and Designing Solutions - Identify the evidence that supports particular points in an explanation.	Teacher-Made Workbooks that include: -Linking Literacy articles -Lab activities -Content Connections Video Response Questions STEMscopes website Supplemental Materials: -BrainPOP earth science videos -Bill Nye Fossils video -Gummy Fossils lab activity -Layers of the Earth Activity	Lab activities and responses Content Connections Video responses End of Scope Test Vocabulary Quiz	2 Weeks (daily 30 min. Class periods)
4-ESS2-1	Bundle 2 Scope 2: Changing Land Earth Materials and Systems - Rainfall helps to shape the	Cross Cutting Concepts: Cause and Effect - Cause and effect relationships are	Teacher-Made Workbooks that include: -Linking Literacy articles -Lab activities -Content Connections Video Response	Lab activities and responses Content Connections Video responses	2 Weeks (daily 30 min. class periods)

	<p>land and affects the types of living things found in a region. Water, ice, wind, living organisms and gravity break rock soils and sediments into smaller particles and move them around.</p>	<p>routinely identified, tested and used to explain change.</p> <p>Science and Engineering Practices:</p> <p>Planning and Carrying Out Investigations- Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon.</p>	<p>Questions</p> <p>STEMscopes website</p> <p>Supplemental Materials: -BrainPOP earth science videos -Bill Nye Erosion Video</p>	<p>End of Scope Test</p> <p>Vocabulary Quiz</p>	
4-ESS2-2	<p>Bundle 2 Scope 3: Plate Tectonics</p> <p>Plate tectonics and large scale system interactions The locations of mountain ranges, deep ocean trenches, ocean floor structures, earthquakes and volcanoes occur in patterns. Most earthquakes and volcanoes occur in bands that are often along the boundaries</p>	<p>Cross Cutting Concepts:</p> <p>Patterns- Patterns can be used as evidence to support an explanation.</p> <p>Science and Engineering Practices:</p> <p>Analyzing and Interpreting Data- Analyze and interpret data to make sense of phenomena using logical reasoning.</p>	<p>Teacher-Made Workbooks that include: -Linking Literacy articles -Lab activities -Content Connections Video Response Questions</p> <p>STEMscopes website</p> <p>Supplemental Materials: -BrainPOP earth science videos -Bill Nye Earth's Crust Video -Layers of the Earth Activity</p>	<p>Lab activities and responses</p> <p>Content Connections Video responses</p> <p>End of Scope Test</p> <p>Vocabulary Quiz</p>	2 Weeks (daily 30 min. Class periods)

	<p>between oceans and continents. Major mountain chains form inside continents or near their edges. Maps can help locate the different land and water features areas of Earth.</p>		<p>-Mystery Science Activity: Could a Volcano Pop Up Where You Live? -Famous Volcano Research</p>		
4-ESS3-1	<p>Bundle 2 Scope 4: Renewable and Nonrenewable Resources</p> <p>Natural Resources- Energy and fuels that humans use are derived from natural resources and their use affects the environment in multiple ways. Some resources are renewable over time and some are not.</p>	<p>Cross Cutting Concepts:</p> <p>Cause and Effect- Cause and effect relationships are routinely identified, tested, and used to explain change.</p> <p>Science and Engineering Practices:</p> <p>Obtaining, evaluating and communicating information- Obtain and combine information from books and other reliable media to explain phenomena.</p>	<p>Teacher-Made Workbooks that include:</p> <ul style="list-style-type: none"> -Linking Literacy articles -Lab activities -Content Connections Video Response Questions <p>STEMscopes website</p> <p>Supplemental Materials:</p> <ul style="list-style-type: none"> -BrainPOP Jr. Natural Resources and Reduce, Reuse and Recycle -Bill Nye Energy Video -Macaroni Mining Activity -Mystery Science: Where does Energy Come From? 	<p>Lab activities and responses</p> <p>Content Connections Video responses</p> <p>End of Scope Test</p> <p>Vocabulary Quiz</p>	<p>2 Weeks (daily 30 min. Class periods)</p>

4-ESS3-2	<p>Bundle 2 Scope 5: Natural Processes</p> <p>Natural Hazards- A variety of hazards result from natural processes (e.g. earthquakes, tsunamis, volcanic eruptions). Humans cannot eliminate the hazards but can take the steps to reduce their impacts.</p> <p>Designing Solutions to Engineering Problems- Testing a solution involves investigating how well it performs under a range of likely conditions.</p>	<p>Cross Cutting Concepts:</p> <p>Cause and Effect- Cause and effect relationships are routinely identified and used to explain change.</p> <p>Science and Engineering:</p> <p>Constructing Explanations and Designing Solutions- Generate and compare multiple solutions to a problem based on how well they meet criteria and constraints of the design solution.</p>	<p>Teacher-Made Workbooks that include:</p> <ul style="list-style-type: none"> -Linking Literacy articles -Lab activities -Content Connections <p>Video Response Questions</p> <p>STEMscopes website</p>	<p>Lab activities and responses</p> <p>Content Connections</p> <p>Video responses</p> <p>End of Scope Test</p> <p>Vocabulary Quiz</p>	<p>2 weeks (daily 30 min. Class periods)</p>
----------	---	---	---	---	--

<p>4-PS3-2 4-PS3-4</p>	<p>Bundle 3 Scope 1: Energy Transfer and Electric Currents- Definitions of Energy -Energy can be moved from place to place by moving objects or through sound, light or electric currents.</p>	<p>Cross Cutting Concepts:</p> <p>Energy and Matter: Flows, Cycles and Conservation - Energy can be transferred in various ways and between objects.</p> <p>Science and Engineering Practices-</p> <p>Planning and Carrying Out Investigations: Make observations to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution.</p> <p>Constructing Explanations and Designing Solutions-Apply scientific ideas to solve design problems.</p>	<p>Teacher-made workbooks that include: Linking Literacy articles, Lab activities, Content Connections Video Response Questions</p> <p>Stemscopes Website</p>	<p>Lab activities and responses</p> <p>Content Connections Video responses</p> <p>End of Scope Test</p> <p>Vocabulary Quiz</p>	<p>2 weeks (daily 30 min. Class periods)</p>
----------------------------	---	---	---	--	--

<p>4-PS3-2 4-PS3-3</p>	<p>Bundle 3 Scope 2: Transfer of Energy in Collision Energy is present whenever there are moving objects, sounds, light or heat. When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions, some energy is typically also transferred to the surrounding air; as a result, the air gets heated and sound is produced.</p> <p>Definitions of Energy: Energy can be moved from place to place by moving objects or through sound, light, or electric currents.</p> <p>Relationship between Energy and Forces: When objects collide, the contact</p>	<p>Cross Cutting Concepts:</p> <p>Energy and Matter: Flows, Cycles and Conservation Energy can be transferred in various ways and between objects.</p> <p>Science and Engineering Practices:</p> <p>Asking Questions and Defining Problems- Ask questions that can be investigated and predict reasonable outcomes based on patterns such as cause and effect relationships.</p> <p>Planning and Carrying Out Investigations- Make observations to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution.</p>		<p>Lab activities and responses</p> <p>Content Connections Video responses</p> <p>End of Scope Test</p> <p>Vocabulary Quiz</p>	<p>2 weeks (daily 30 min. Class periods)</p>
----------------------------	--	---	--	--	--

	forces energy to be transferred so as to change the object's motions.				
4-PS3-1	<p>Bundle 3 Scope 3: Energy and Speed The faster a given object is moving, the more energy it possesses.</p>	<p>Cross Cutting Concepts:</p> <p>Energy and Matter: Flows, Cycles and Conservation- Energy can be transferred in various ways and between objects.</p> <p>Constructing Explanations and Designing Solutions: Use evidence (e.g. measurements, observations, patterns) to construct an explanation.</p>	Teacher-made workbooks that include: Linking literacy articles, Lab activities, Content Connections video questions responses, Stemsopes website.	<p>Lab activities and responses</p> <p>Content Connections Video responses</p> <p>End of Scope Test</p> <p>Vocabulary Quiz</p>	2 weeks (daily 30 min. Class periods)
4-PS3-4	<p>Bundle 3 Scope 4: Using Stored Energy Energy in Chemical Processes and Everyday Life- the expression “produce energy” typically refers to the conversion of stored</p>	<p>Cross Cutting Concepts - Energy and Matter: Flows, Cycles and Conservation. Energy can be transferred in various ways and between objects.</p> <p>Science and</p>	Teacher-made workbooks that include: Linking Literacy articles, lab activities, Content Connections video questions, Stemscope website.	<p>Lab activities and responses</p> <p>Content Connections Video responses</p> <p>End of Scope Test</p> <p>Vocabulary Quiz</p>	2 weeks (daily 30 min. Class periods)

	energy into a desired form for practical use.	Engineering Practices: Apply scientific ideas to solve design problems.			
4-PS4-1	<p>Bundle 4 Scope 1: Motion of Waves- Wave Properties: Waves, which are regular patterns of motion, can be made in water by disturbing the surface. When waves move across the surface of deep water, the water goes up and down in place; it does not move in the direction of the wave except when the water meets the beach.</p>	<p>Cross Cutting Concepts: Patterns- Similarities and differences in patterns can be used to sort and classify natural phenomena.</p> <p>Science and Engineering Practices- Developing and Using Models: Develop a model using an analogy, example or abstract representation to describe a scientific principle.</p>	<p>Teacher-made workbooks that include: Linking Literacy articles; Lab activities; Content Connections video Questions; Stemscope website.</p>	<p>Lab activities and responses Content Connections Video responses End of Scope Test Vocabulary Quiz</p>	<p>2 weeks (daily 30 min. Class periods)</p>

4-PS4-1	<p>Bundle 4 Scope 2: Wavelength and Amplitude Waves of the same type can differ in amplitude (height of the wave) and wavelength (spacing between the wave peaks).</p>	<p>Cross Cutting Concepts:</p> <p>Patterns Similarities and differences in patterns can be used to sort and classify natural phenomena.</p> <p>Science and Engineering Practices:</p> <p>Developing and Using Models- Develop a model using an analogy, example, or abstract representation to describe a scientific principle.</p>	Teacher-made workbooks that include: Linking literacy articles, Lab activities, Content Connections video questions responses, Stemsopes website.	Lab activities and responses Content Connections Video responses End of Scope Test Vocabulary Quiz	2 weeks (daily 30 min. Class periods)
4-PS4-2	<p>Bundle 4 Scope 3: Light Reflection Electromagnetic Radiation: An object can be seen when light reflected from its surface enters the eyes.</p>	<p>Cross Cutting Concepts:</p> <p>Cause and Effect- Cause and effect relationships are routinely identified.</p> <p>Science and Engineering Practices:</p> <p>Developing and Using</p>	Teacher-made workbooks that include: Linking literacy articles, Lab activities, Content Connections video questions responses, Stemsopes website.	Lab activities and responses Content Connections Video responses End of Scope Test Vocabulary Quiz	2 weeks (daily 30 min. Class periods)

		<p>Models- Develop a model to describe phenomena.</p>			
4-PS4-3	<p>Bundle 4 Scope 4: Information Technology Information Technologies and Instrumentation-Digitized information can be transmitted over long distances without significant degradation. High-tech devices, such as computers or cell phones, can receive and decode information-convert it from digitized form to voice-and vice versa.</p> <p>Optimizing the Design Solution -Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints.</p>	<p>Cross Cutting Concepts- Patterns: Similarities and differences in patterns can be used to sort and classify designed products.</p> <p>Science and Engineering Practices - Constructing Explanations and Designing Solutions: Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design solution.</p>	<p>Teacher-made workbooks that include: Linking literacy articles, Lab activities, Content Connections video questions responses, Stemscopes website.</p>	<p>Lab activities and responses</p> <p>Content Connections Video responses</p> <p>End of Scope Test</p> <p>Vocabulary Quiz</p>	<p>2 weeks (daily 30 min. Class periods)</p>