

Fifth Grade Science Curriculum Map 2022

Topic	Standard Code & Indicator	Sample Learning Activities	Assessment	Additional Standards
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<p>August-September</p> <p>Science Safety & Engineering Design</p>	<p>3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <p>3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <p>3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p>	<p>Use scientific principles and models to frame and synthesize scientific arguments and pose theories</p> <p>Gather, evaluate, and represent evidence using scientific tools, technologies, and computational strategies</p> <p>Monitor one’s own thinking as understandings of scientific concepts are refined</p> <p>Revise predictions or explanations on the basis of discovering new evidence, learning new information, or using models</p> <p>Generate new and productive questions to evaluate and refine core explanations</p> <p>Engage in multiple forms of discussion in order to process, make sense of, and learn from others’ ideas, observations, and experiences</p> <p>Generate and compare multiple possible solutions to a problem</p> <p>Plan and carry out tests to identify aspects of a model that can be improved.</p> <p>Instructional Resources: Discovery Education Science Techbook NGSS Edition</p> <p>Student Technology:</p>	<p>Formative Assessments: Quizzes Homework/Classwork Teacher Observation Discussion Exit tickets</p> <p>Summative Assessments: Unit Test Completed Engineering Design Challenges</p> <p>Benchmark Assessment: BOY Benchmark</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard: SL5.1 Engage in conversations with peers “arguing” points from evidence, agree/disagree with others ideas and perspective</p> <p>Technology Standard: 8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.</p>
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<p>October - November</p> <p>States of Matter Properties of Matter Chemical Reactions Conservation of Mass</p>	<p>5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.</p> <p>5-PS1-2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.</p> <p>5-PS1-3 Make observations and measurements to identify materials based on their properties.</p> <p>5-PS1-4 Conduct an investigation to determine whether mixing two or more substances results in new substances.</p> <p>3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved</p>	<p>Create a diagram showing the position and movement of particles in a solid, liquid, and gas</p> <p>Conduct Alka Seltzer Lab</p> <p>Use a digital scale to find the mass of various objects; use a ruler or meter stick to measure various objects; use a graduated cylinder to find the volume of various objects'</p> <p>Make observations about the physical appearance of various objects</p> <p>Make observations when baking soda and vinegar are combined</p> <p>Create a graph to represent observations in Alka Seltzer Lab</p> <p>Instructional Resources: Discovery Education Science Techbook NGSS Edition</p> <p>Student Technology: Chromebooks Google Classroom BrainPop Matter Sorter DE What's the Matter Interactive Quizlet/Quizlet Live</p> <p>Teacher Technology: Discovery Education Science Techbook NGSS Edition ActivePanel</p>	<p>Formative Assessments: Quizzes Homework/Classwork Teacher Observation Whole/Small Group Discussion Quizlet Completed Station Work Exit tickets Class Poll</p> <p>Summative Assessments: Unit Test Matter Project</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard : W 5.9 Students use information from their textbook or other source, ie video, investigation, to support a claim about a scientific concept</p> <p>Technology Standard: 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.</p>
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<p>December - January</p> <p>Earth's Systems The interaction of the geosphere, biosphere, hydrosphere and atmosphere</p> <p>Earth's resources and human impact</p>	<p>5-ESS2-1 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</p> <p>5-ESS2-2 Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.</p> <p>5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p> <p>3-5-ETS1-1 Define a simple design problem reflecting a need or want that includes specified criteria for success and constraints on materials, time, or cost</p> <p>3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem</p> <p>3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved</p>	<p>Analyze how the four spheres are pictured in a photograph</p> <p>Develop a model to describe Earth's four major spheres</p> <p>View and discuss a video on how the Earth's four spheres interact</p> <p>Identify the three types of plate boundaries on a world map</p> <p>Create a map of Pangaea</p> <p>Construct a diagram to describe the rock cycle</p> <p>Instructional Resources: Discovery Education Science Techbook NGSS Edition</p> <p>Student Technology: Chromebooks Google Classroom Quizlet/Quizlet Live</p> <p>Teacher Technology: ActivePanel ActiView YouTube Videos Earth's Spheres video Crash Course Kids Earth's Spheres Part 1 Part 2 Human Impact Website</p>	<p>Formative Assessments: Quizzes Homework/Classwork Teacher Observation Discussion Quizlet Completed Station Work Exit tickets Class Poll</p> <p>Summative Assessments: Unit Test Project</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard: W 5.7 Conduct a short research project to investigate examples of human impacts on the environment</p> <p>Technology Standard: 8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.</p>
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<p>March - April</p> <p>Space Systems: Stars and the Solar System</p> <p>Motion and Stability: Forces and Interactions</p>	<p>5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down.</p> <p>5-ESS1-1 Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distance from Earth.</p> <p>5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.</p>	<p>Investigate why objects fall toward Earth</p> <p>Identify various constellations in the night sky</p> <p>Create a model to show the distance to the sun from Earth</p> <p>Take a virtual tour of the solar system</p> <p>Create a model to show the reason for day/night and the seasons</p> <p>Instructional Resources: Discovery Education Science Techbook NGSS Edition Nearpod</p> <p>Student Technology: Chromebooks Google Classroom Quizlet Live</p> <p>Teacher Technology: ActivePanel ActiView YouTube Videos</p>	<p>Formative Assessments: Quizzes Homework/Classwork Teacher Observation Discussion</p> <p>Summative Assessments: Chapter Test Project Presentations</p> <p>Benchmark Assessment: EOY Benchmark</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard: Math NBT.A.3.B Applying place value knowledge to compare distances of stars, moon and sun from the earth.</p> <p>Technology Standard: 8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.</p>
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<p>April - June</p> <p>The Sun's Energy and the Biosphere Balance of Ecosystems Photosynthesis Food Chains Ecological Footprint</p>	<p>5-PS3-1 Use models to describe that energy in animals' food (used for repair, growth, motion, and to maintain body warmth) was once energy from the sun.</p> <p>5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.</p> <p>5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p>	<p>Conduct research on the characteristics of an ecosystem</p> <p>Identify biotic and abiotic factors in an ecosystem</p> <p>Create a model to show the process of photosynthesis</p> <p>Identify the elements of a food chain and create one in a specific ecosystem</p> <p>Discuss the effects of an organisms being removed from an ecosystem</p> <p>View and discuss a video on the biosphere</p> <p>Instructional Resources: Discovery Education Science Techbook NGSS Edition</p> <p>Student Technology: Chromebooks Google Classroom Nearpod DE Techbook Interactive Parts of Ecosystems Google Slides Brain Pop Food Chains Food Web Game Ecology Interactive</p> <p>Brain Pop Food Fight Game Brain Pop Energy Pyramid Quizlet/Quizlet Live</p> <p>Teacher Technology: ActivePanel</p>	<p>Formative Assessments: Quizzes Homework/Classwork Teacher Observation Discussion Quizlet Completed Station Work Exit tickets Class Poll Nearpod</p> <p>Summative Assessments: Photosynthesis Model Ecosystems Project Unit Test</p> <p>Accommodations and Modifications</p>	<p>Interdisciplinary Standard: Math 5.MD B.2 Create a line graph to represent data of a given population of species over time</p> <p>Technology Standard: 8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.</p>
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Alternate Assessments: Performance Assessment, Photosynthesis Model, Worksheets/Activities

21st Century Standards: 9.1.8.E.2 9.2.8.B.3

21st Century Skills: Critical Thinking, Collaboration, Communication, Productivity, Social Skills

Career Ready Practices: CRP1, CRP2, CRP4, CRP5