

Grade 5 Science Common Core Pacing Guide

| Target Standard | “I Can” Statement | Vocabulary | Time Frame |
|--|--|---|--------------------------|
| Structures and Properties of Matter | | | Trimester 1 September |
| 5-PSI-1 Develop a model to describe that matter is made of particles too small to be seen. | I can develop a model to describe that matter is made of particles too small to be seen. | matter model gases solids liquids particles observation weight mass evaporation cooling condensation volume temperature response density qualities investigation substance mixture | 2 Weeks |
| 5-PSI-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. | I can 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. | | |
| Structures and Properties of Matter & Chemical Reactions | | | |
| 5-PSI-3 Make observations and measurements to identify materials based on their properties. | I can make observations and measurements to identify materials based on their properties. | | |
| 5-PSI-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances. | I can conduct an investigation to determine whether the mixing of two or more substances results in new substances. | | |
| Assessments/Projects Pre and Post Test Weekly Kahoot Vocabulary Review Vocabulary Quizzes Exit Tickets Interactive Notebooks/Observation Notes/Diagrams | Resources Informational texts Weekly Kahoot Vocab Review United Streaming/YouTube BrainPop Scholastic TruFlix/FreedomFlix | | |

| | | | |
|--|---|---|-------------------------|
| Gravitational Force | | | Trimester 1 November |
| 5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down. | I can support an argument that the gravitational force exerted by Earth on objects is directed down. | down gravity force pressure exertion distance brightness light size day night shadows sun, moon, star | 3 Weeks |
| Earth/Sun/Moon | | | |
| 5-ESSI-1 Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. | I can support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. | | |
| 5-ESSI-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. | I can 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. | | |
| Assessments/Projects Pre and Post Test | Resources Informational texts | | |

| | | | |
|---|---|--|------------------------|
| Weekly Kahoot Vocabulary Review Vocabulary Quizzes Exit Tickets Interactive Notebooks/Observation Notes/Diagrams | Weekly Kahoot Vocab Review United Streaming/YouTube BrainPop Scholastic TruFlix/FreedomFlix | month/year | |
| Plants: Molecules to Organisms: Structures and Processes | | | Trimester 2 January |
| 5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water. | I can support an argument that plants get the materials they need for growth chiefly from air and water. | plant soil systems growth resources decompose changes organisms ecosystems bacteria fungi environment restore recycle species energy warmth growth process transfer | 3 Weeks |
| Ecosystems | | | |
| 5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers and the environment | I can develop a model to describe the movement of matter among plants, animals, decomposers and the environment. | | |
| Food Chain/Web/Pyramid | | | |
| 5-PS3-1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. | I can use models to describe how energy in animals' food once came from the sun. | | |
| Assessments/Projects Pre and Post Test Weekly Kahoot Vocabulary Review Vocabulary Quizzes Exit Tickets Interactive Notebooks/Observation Notes/Diagrams | Resources Informational texts Weekly Kahoot Vocab Review United Streaming/YouTube BrainPop Scholastic TruFlix/FreedomFlix | | |

| | | | |
|---|--|---|----------------------|
| Earth's Systems | | | Trimester 3 March |
| 5-ESS2-1 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. 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. | I can develop a model to describe the ways the geosphere, biosphere, hydrosphere, and atmosphere all interact. I can describe and graph the amounts and percentages of water and fresh water in various reservoirs to show evidence of the distribution of water on Earth. | landform climate atmosphere geosphere biosphere hydrosphere oceans lakes glaciers ground water ice caps reservoirs communities agriculture effects individual resources environments solutions methods | 3 Weeks |
| Earth and Human Activity | | | |
| 5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. | I can obtain and combine information about ways individual communities use science ideas to protect the Earth. | | |
| Assessments/Projects Pre and Post Test Weekly Kahoot Vocabulary Review Vocabulary Quizzes Exit Tickets Interactive Notebooks/Observation Notes/Diagrams | Resources Informational texts Weekly Kahoot Vocab Review United Streaming/YouTube BrainPop Scholastic TruFlix/FreedomFlix | | |
| Engineering Design | | | Trimesters 1, 2, 3 |
| 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. 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. 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. | I can plan and conduct a well-designed investigation and use scientific skills to help me learn and problem solve like a scientist and an engineer. I can define a simple design problem reflecting a need or a want. I can generate and compare multiple possible solutions to a problem. I can plan and carry out fair tests to identify parts of a model or prototype that can be improved.) | Investigation Methods Observation Hypothesis Variable(s) independent, dependent, controlled variable | |
| The 8 Scientific and Engineering Practices | | | Trimesters 1, 2, 3 |
| Scientists observe something they want to study and use scientific inquiry to plan and conduct their study. They use science process skills as tools to help them gather, organize, analyze, and present their information like an engineer does. | 8 Practices 1-Asking questions (scientist) and defining problems (engineer): *Ask questions about what would happen if a variable is changed. *Identify testable and non-testable questions. *Ask questions that can be investigated and predict reasonable outcomes based on patterns such as cause and effect. 2-Developing and using models: | Procedure Materials Test/experiment Reasonable Outcomes Models Solution(s) Data (gather and record) | |

| | | | |
|--|---|--|--|
| | <p>*Build and revise simple models to represent, describe, or predict events and design solution.</p> <p>3-Planning and carrying out investigations: *Design and conduct investigations collaboratively that control variables and provide evidence, in the form of observations and/or data, to support explanations or design solutions. *Evaluate appropriate methods and/or tools for collecting data.</p> <p>4-Analyze and Interpret Data: *Participate in quantitative approaches to collecting data and conduct multiple trials of qualitative observations, in order to make sense of phenomena, as well as evaluate and refine design solutions.</p> <p>5- Use mathematics and computational thinking: *Decide if qualitative or quantitative data are best to determine whether a proposed object or tool meets criteria for success.</p> <ul style="list-style-type: none"> • Create and/or use graphs and/or charts generated from simple algorithms to compare alternative solutions to an engineering problem. <p>6-Constructing explanations (scientist) and designing solutions (engineer) *Identify and use appropriate evidence (e.g., measurements, observations, patterns) to construct or support an explanation or design a solution to a problem. * Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design solution.</p> <p>7-Engaging in argument from evidence *Construct, compare, and refine arguments based on an evaluation of the evidence and data presented</p> <ul style="list-style-type: none"> • Respectfully provide and receive critiques from peers by citing relevant evidence and posing specific questions. <p>8-Obtaining, evaluating, and communicating information *Evaluate the merit and accuracy of ideas and methods.</p> <ul style="list-style-type: none"> • Read and comprehend grade-appropriate complex texts and/or other reliable media in order to obtain and combine information from books and/or other reliable media to form written and/or oral explanations of phenomena or solutions to a design problem. <p>Source: NGSS Appendix F (2013)-Science and Engineering Practices</p> | <p>Argument from evidence: Citing relevant evidence and posing specific questions Conclusion</p> | |
|--|---|--|--|