

Marking Period 1 (MP1)	Science Curriculum Pacing Guide Grade 5
MP1 Standards for Science Content	<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. (U1; U2L2)</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. (U1; U2L2)</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. (U1; U2L2)</p> <p>5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen. (U2L1)</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. (U2L3)</p> <p>5-PS1-3 Make observations and measurements to identify materials based on their properties. (U2L2)</p> <p>5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances. (U2L3)</p>
MP1 Topics	<p>Unit 1 - Engineering Design Process</p> <p>Unit 2 - Matter</p>
MP1 Skills/Concepts	<ul style="list-style-type: none"> • Different proposals for solutions can be compared when defining and delimiting engineering problems. (U1) • Research into a problem should be carried out. Testing for a solution involves investigating how it performs. Tests are designed to identify failure points or difficulties. (U1) • Communicating with peers is an important part of the process. (U1) • Tests are often designed to identify failure points or difficulties. (U1) • Different solutions need to be tested. (U1) • Engineers improve existing technologies or develop new ones. (U1) • Matter of any type can be subdivided into particles that are too small to see (Full coverage occurs in Unit 2) (U1) • People's needs and wants change over time. (U1) • Engineers improve existing technologies or develop new ones. (U1) • Matter of any type can be subdivided into particles that are too small to see, but even then the matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations, including the inflation and shape of a balloon and the effects of air on larger particles or objects. (U2) • When two or more different substances are mixed, a new substance may be formed that has the same weight as the original substances. (U2) • Natural objects exist from the very small to the immensely large. (U2) • Measurements of a variety of properties can be used to identify materials. (U2) • Science affects everyday life. Creativity and imagination are important to science. (U2) • Natural objects exist from the very small to the immensely large. (U2) • The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish. (U2) • When two or more different substances are mixed, a new substance with different properties may be formed. No matter what reaction or change in properties occurs, the total weight of the substances does not change. (U2) • Cause and effect relationships are routinely identified and used to explain change. (U2) • A system can be described in terms of its components and their interactions. (U2) • Science assumes consistent patterns in natural systems. (U2)
MP1 Core Materials	<p>HMH Into Science</p>

Marking Period 2 (MP2)	Science Curriculum Pacing Guide Grade 5
<p>MP2</p> <p>Standards for Science Content</p>	<p>5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down. (U6L1)</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. (U6L2)</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 distances from Earth. (U6L3)</p> <p>5-ESS2-1 Develop a model using an example to describe the ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. (U5L1)</p>
<p>MP2</p> <p>Topics</p>	<p>Unit 6 - Patterns in the Sky</p> <p>Unit 5 Lesson 1 – Earth’s Systems Interact</p>
<p>MP2</p> <p>Skills/Concepts</p>	<ul style="list-style-type: none"> • The gravitational force of Earth acting on an object near Earth’s surface pulls that object toward the planet’s center. (U6L1) • The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year. (U6L2) • The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth. (U6L3) • Cause and effect relationships are routinely identified and used to explain change. (U6L1) • Similarities and differences in patterns can be used to sort, classify, communicate and analyze simple rates of change for natural phenomena. (U6L2) • Natural objects exist from the very small to the immensely large. (U6L3) • Earth’s major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth’s surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather. (U5L1)
<p>MP2</p> <p>Core Materials</p>	<p>HMH Into Science</p>

Marking Period 3 (MP3)	Science Curriculum Pacing Guide Grade 5
MP3 Standards for Science Content	<p>5-ESS2-1 Develop a model using an example to describe the ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. U5L2</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. U5L2</p> <p>5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. U5L3/L4</p> <p>5-LS1-1: Support an argument that plants get the materials they need for growth chiefly from air and water. U3L1</p>
MP3 Topics	<p>Unit 5 -Energy Interactions and Resources</p> <p>Unit 3 Lesson 1– Energy and Matter in Organisms</p>
MP3 Skills/Concepts	<p>Earth's major systems are the geosphere, the hydrosphere, the atmosphere, and the biosphere. These systems interact to affect Earth's surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine weather. U5L2</p> <p>Nearly all of Earth's available water is in the ocean. Most fresh water is in glaciers or underground; only a tiny fraction is in streams, lakes, wetlands, and the atmosphere. U5L2</p> <p>Different solutions need to be tested to determine which of them best solves the problem, given the criteria and the constraints. U5L3</p> <p>Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources. U5L3/L4</p> <p>Research should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs. Communicating with peers is an important part of the design process. Tests are often designed to identify failure points. U5L4</p> <p>The energy released from food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). U3L1</p> <p>Plants acquire their material for growth chiefly from air and water. U3L1</p> <p>Energy can be transferred in various ways and between objects. Matter is transported into, out of, and within systems. U3L1</p>
MP3 Core Materials	<p>HMH Into Science</p>

Marking Period 4 (MP4)	Science Curriculum Pacing Guide Grade 5
MP4 Standards for Science Content	<p>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. U3L2/L3</p> <p>5-LS2-1: Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. U3L3/U4L1&L2</p>
MP4 Topics	<p>Unit 3: Lessons 2-3- Energy and Matter in Organisms</p> <p>Unit 4: Energy and Matter in Ecosystems</p>
MP4 Skills/Concepts	<p>Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. U3L2/L3</p> <p>The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs. Some organisms break down dead organisms. Organisms can survive only where their needs are met. U3L3</p> <p>A system can be described in terms of its components and their interactions. U3L3</p> <p>Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. U3L3</p> <p>Food webs show how animals are related based on their food they eat. All food webs begin with plants and show how some animals eat plants and then other consumers eat those animals. U4L1</p> <p>Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as "decomposers." U4L1</p> <p>A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. U4L1</p> <p>Earth's major systems interact in multiple ways. U4L1</p> <p>A system can be described in terms of its components and their interactions. U4L1/L2</p> <p>There are cycles of matter and energy transfer in ecosystems. Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. U4L1</p> <p>Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. U4L1</p> <p>Organisms are related in food webs. Organisms can survive only in environments in which their particular needs are met. Newly introduced species can damage the balance of an ecosystem. U4L1/L2</p> <p>At whatever stage, communicating with peers about proposed solutions is an important part of the design process. U4L2</p>
MP4 Core Materials	<p>HMH Into Science</p>