

Correlation with National Science Standards

Use the chart below to find Science A–Z units that best support the Next Generation Science Standards* topics for Middle School Earth and Space Science and several featured resources from those units that provide strong connections. Each Performance Expectation in the chart represents all three dimensions: Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts.

NOTE: Science A–Z resources primarily align with standards in grades K–5. However, the units and resources listed below provide a foundation for satisfying middle school standards.

| MS. Space Systems | | |
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| Performance Expectations | Disciplinary Core Ideas | Science A–Z Units (Featured Resources) |
| MS-ESS1-1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. | ESS1.A: The Universe and Its Stars | 3–4 The Solar System (Unit Nonfiction Books; <i>How Does a Lunar Eclipse Work?</i> Science Video; <i>A Guided Tour of the Moon</i> Science Video) |
| | ESS1.B: Earth and the Solar System | 5–6 Atmosphere and Climate (Unit Nonfiction Books) 3–4 The Solar System (Unit Nonfiction Books; <i>Orbital Paths</i> Process Activity) |
| MS-ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. | ESS1.A: The Universe and Its Stars | 5–6 Outside the Solar System (Unit Nonfiction Books; <i>Galaxies Far, Far Away</i> FOCUS Book; <i>Exoplanets</i> FOCUS Book; <i>The Milky Way Galaxy</i> Science Video; <i>Deep-Space Model</i> Process Activity; <i>Properties of Stars</i> Investigation Pack) |
| | ESS1.B: Earth and the Solar System | 5–6 Outside the Solar System (<i>Nebulae</i> FOCUS Book) 3–4 The Solar System (Unit Nonfiction Books; <i>Planets</i> Investigation Pack; <i>The Outer Solar System</i> FOCUS Book; <i>Formation of the Solar System</i> Science Diagram) |
| MS-ESS1-3. Analyze and interpret data to determine scale properties of objects in the solar system. | ESS1.B: Earth and the Solar System | 3–4 The Solar System (<i>The Asteroid Belt</i> FOCUS Book; <i>Comets</i> FOCUS Book; <i>Galileo’s Moons</i> FOCUS Book; <i>The Outer Solar System</i> FOCUS Book) |
| MS. History of Earth | | |
| Performance Expectations | Disciplinary Core Ideas | Science A–Z Units (Featured Resources) |
| MS-ESS1-4. Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth’s 4.6-billion-year-old history. | ESS1.C: The History of Planet Earth | 3–4 Habitats/Environment (<i>Habitats Then and Now</i> FOCUS Book) |

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| MS. History of Earth (continued) | | |
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| Performance Expectations | Disciplinary Core Ideas | Science A–Z Units (Featured Resources) |
| MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth’s surface at varying time and spatial scales. | ESS2.A: Earth’s Materials and Systems | 5–6 Changing Landforms (Unit Nonfiction Books; <i>From Fire to Land</i> Quick Reads) |
| | ESS2.C: The Roles of Water in Earth’s Surface Processes | 5–6 Changing Landforms (<i>Erosion</i> Process Activity; <i>Erosion</i> Investigation Pack) 5–6 Water (Unit Nonfiction Books; <i>Glaciers</i> Quick Reads; <i>Settling and Sedimentation</i> Process Activity) |
| MS-ESS2-3. Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions. | ESS1.C: The History of Planet Earth | 5–6 Changing Landforms (Unit Nonfiction Books; <i>How Deep Is Deep?</i> Quick Reads) |
| | ESS2.B: Plate Tectonics and Large-Scale System Interactions | 5–6 Changing Landforms (Unit Nonfiction Books) 3–4 Habitats/Environment (<i>Habitats Then and Now</i> FOCUS Book) |

| MS. Earth’s Systems | | |
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| Performance Expectations | Disciplinary Core Ideas | Science A–Z Units (Featured Resources) |
| MS-ESS2-1. Develop a model to describe the cycling of Earth’s materials and the flow of energy that drives this process. | ESS2.A: Earth’s Materials and Systems | 5–6 Changing Landforms (Unit Nonfiction Books) 5–6 Energy Resources (Unit Nonfiction Books; <i>Light Converts to Heat</i> Science Diagram) 5–6 Food Chains (<i>Paper Food Chains</i> and <i>Food Web</i> Process Activity) |
| MS-ESS2-4. Develop a model to describe the cycling of water through Earth’s systems driven by energy from the sun and the force of gravity. | ESS2.C: The Roles of Water in Earth’s Surface Processes | 5–6 Water (Unit Nonfiction Books; Fiction Books; <i>Water Cycle Model</i> Process Activity; <i>A Working Water Cycle</i> Project-Based Learning Pack; <i>Water, Water Everywhere</i> Science Video; <i>The Water Cycle</i> Interactive Science Lesson) |
| MS-ESS3-1. Construct a scientific explanation based on evidence for how the uneven distributions of Earth’s mineral, energy, and groundwater resources are the result of past and current geoscience processes. | ESS3.A: Natural Resources | 5–6 Energy Resources (Unit Nonfiction Books; <i>Renewable Energy</i> Investigation Pack; <i>Fission and Fusion</i> Quick Reads) 5–6 Changing Landforms (<i>Open Pit Mining</i> Quick Reads) 5–6 Water (<i>Water for the People</i> FOCUS Book) |

| MS. Weather and Climate | | |
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| Performance Expectations | Disciplinary Core Ideas | Science A–Z Units (Featured Resources) |
| MS-ESS2-5. Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. | ESS2.C: The Roles of Water in Earth’s Surface Processes | 5–6 Atmosphere and Climate (Unit Nonfiction Books; <i>From Space to You</i> Science Video) 5–6 Water (Unit Nonfiction Books) |
| | ESS2.D: Weather and Climate | 3–4 Clouds, Wind, and Storms (Unit Nonfiction Books; <i>Ice Storms</i> FOCUS Book; <i>Thunderstorms</i> FOCUS Book; <i>Weather and Climate</i> Interactive Science Lesson) |
| MS-ESS2-6. Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. | ESS2.C: The Roles of Water in Earth’s Surface Processes | 5–6 Atmosphere and Climate (<i>El Niño and La Niña</i> FOCUS Book; <i>Climate Change</i> FOCUS Book) |
| | ESS2.D: Weather and Climate | 5–6 Atmosphere and Climate (Unit Nonfiction Books; <i>Seasons and Climate</i> FOCUS Book) 3–4 Habitats/Environment (Unit Nonfiction Books) |
| MS-ESS3-5. Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century. | ESS3.D: Global Climate Change | 5–6 Atmosphere and Climate (Unit Nonfiction Books; <i>Global Climate Change</i> Interactive Science Lesson; <i>Emissions Testing Debate</i> ; <i>Climate Change</i> FOCUS Book; <i>Climate Change Clues</i> Quick Reads; <i>Volcanoes and Climate</i> Quick Reads) 5–6 Energy Resources (<i>Solar Energy Debate</i>) |

| MS. Human Impacts | | |
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| Performance Expectations | Disciplinary Core Ideas | Science A–Z Units (Featured Resources) |
| MS-ESS3-2. Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects. | ESS3.B: Natural Hazards | 5–6 Water (Unit Nonfiction Books; <i>Tsunami!</i> FOCUS Book; <i>Hailstorms</i> FOCUS Book) 5–6 Changing Landforms (<i>Tsunami Strike: Japan</i> Science Video) |
| MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment. | ESS3.C: Human Impacts on Earth Systems | 5–6 Atmosphere and Climate (Unit Nonfiction Books) 5–6 Energy Resources (<i>Renewable Energy Investigation Pack</i> ; <i>Oil Spills at Sea</i> Quick Reads, <i>Oil Spills and Pom Poms</i> Science Video; <i>Solar Cooker Process Activity</i> ; <i>Solar Energy Debate</i>) 5–6 Changing Landforms (<i>Beach Erosion Debate</i>) |
| MS-ESS3–4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth’s systems. | ESS3.C: Human Impacts on Earth Systems | 5–6 Atmosphere and Climate (Unit Nonfiction Books; <i>Global Climate Change</i> Interactive Science Lesson) 5–6 Water (<i>The Cryosphere</i> FOCUS Book; <i>Dams, Levees, and Dikes</i> Quick Reads; <i>Ice Sheets and Ice Caps</i> Quick Reads) |