

## Grade 5 Science Curriculum Map

<b>Unit 1: Earth and the Universe</b>	<b>Unit 2: Earth's Systems</b>
<p><b>ESS1.A: The Universe and its Stars</b></p> <ul style="list-style-type: none"> <li>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. (5-ESS1-1)</li> </ul> <p><b>ESS1.B: Earth and the Solar System</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	<p><b>ESS2.A: Earth Materials and Systems</b></p> <ul style="list-style-type: none"> <li>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. (5-ESS2-1)</li> </ul> <p><b>ESS2.C: The Roles of Water in Earth's Surface Processes</b></p> <ul style="list-style-type: none"> <li>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. (5-ESS2-2)</li> </ul>
<b>Unit 3: Human Impacts on Earth</b>	<b>Unit 4: Matter and Its Interactions</b>
<p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"> <li>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</li> </ul>	<p><b>PS1.A: Structure and Properties of Matter</b></p> <ul style="list-style-type: none"> <li>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 shows 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; the effects of air on larger particles or objects. (5-PS1-1)</li> <li>The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish. (5-PS1-2)</li> <li>Measurements of a variety of properties can be used to identify materials. (Boundary: At this grade level, mass and weight are not distinguished, and no attempt is made to define the unseen particles or explain the atomic-scale mechanism of evaporation and condensation.) (5-PS1-3)</li> </ul> <p><b>PS1.B: Chemical Reactions</b></p> <ul style="list-style-type: none"> <li>When two or more different substances are mixed, a new substance with different properties may be formed. (5-PS1-4)</li> <li>No matter what reaction or change in properties occurs, the total weight of the substances does not change. (Boundary: Mass and weight are not distinguished at this grade level.) (5-PS1-2)</li> </ul>
<b>Unit 5: Forces</b>	<b>Unit 6: Energy in Organisms</b>
<p><b>PS2.B: Types of Interactions</b></p> <ul style="list-style-type: none"> <li>The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center. (5-PS2-1)</li> </ul>	<p><b>LS1.C: Organization for Matter and Energy Flow in Organisms</b></p> <ul style="list-style-type: none"> <li>Plants acquire their material for growth chiefly from air and water. (5-LS1-1)</li> </ul> <p><b>PS3.D: Energy in Chemical Processes and Everyday Life</b></p> <ul style="list-style-type: none"> <li>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). (5-PS3-1)</li> </ul> <p><b>LS1.C: Organization for Matter and Energy Flow in Organisms</b></p> <ul style="list-style-type: none"> <li>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. (secondary to 5-PS3-1)</li> </ul>
<b>Unit 7: Ecosystem Dynamics</b>	<b>Unit 8 Engineering Design</b>
<b>LS2.A: Interdependent Relationships in Ecosystems</b>	

<ul style="list-style-type: none"> <li>▪ The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as “decomposers.” Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. 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. (5-LS2-1)</li> </ul> <p><b>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</b></p> <ul style="list-style-type: none"> <li>▪ Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. (5-LS2-1)</li> </ul>	