

Time Frame	Unit	Standards	Evidence of Understanding	Assessment
9 Weeks (Sept.-Nov.)	Life Science	Organisms perform a variety of roles in an ecosystem.	<p>Students will have a clear understanding of populations of organisms can be categorized by how they acquire energy.</p> <p>Students will compare the roles of producers, consumers and decomposers and explain how they work together within an ecosystem.</p> <p>Food webs can be used to identify the relationships among producers, consumers, and decomposers in an ecosystem.</p> <p>Students will understand that organisms have symbiotic relationships in which individuals of one species are dependent upon individuals of another species for survival.</p> <p>Symbiotic relationships can be categorized as mutualism where both species benefit and the other is unaffected, and</p>	<p>Students will answer formative and summative questions.</p> <p>Lab Activities</p> <p>Illustrations</p> <p>Microscopes</p> <p>Design and build a self-sustaining ecosystem(terrarium, bottle biology).</p> <p>Investigate change in an established model of an ecosystem over time.</p> <p>Draw a food web using arrows to illustrate the flow of energy and properly identify the producers and consumers.</p> <p>Explain ways that humans can improve the health of ecosystems(recycling wastes, establishing rain gardens, planting native species.</p>

			<p>paratism where one species benefits and the other is harmed. Investigations of locally threatened or endangered species must be conducted and include considerations of the effects of remediation programs, species loss and the introduction of new species on the local environment.</p>	
<p>9 Weeks (Sept.-Nov.)</p>	<p>Life Science</p>	<p>All of the processes that take place within organisms require energy.</p>	<p>Students will have a clear understanding that the major source of energy is sunlight. Students will understand that energy entering ecosystems as sunlight is transferred and transformed by producers into energy that organisms use through the process of photosynthesis. That energy then passes from organism to organism as illustrated in food webs.</p> <p>Students will understand that in most</p>	<p>Students will answer formative and summative questions.</p> <p>Lab activities</p> <p>Illustrations</p> <p>Microscopes</p> <p>Investigate change in an established model of an ecosystem over time(terrarium, aquarium).</p> <p>Design experiments to observe what actually happens when one environmental factor is changed.</p> <p>Research Projects</p>

			ecosystems, energy derived from the sun is transferred and transformed into energy that organisms use by the process of photosynthesis in plants and other photosynthetic organisms.	
9 Weeks (Dec.-Feb.)	Earth and Space Science	The solar system includes the sun and all celestial bodies that orbit the sun. Each planet in the solar system has unique characteristics.	<p>Students will understand that the distance from the sun, size, composition and movement of each planet are unique. Planets revolve around the sun in elliptical orbits. Some of the planets have moons and/or debris that orbit them. Comets, asteroids and meteoroids orbit the sun.</p> <p>Students will identify the eight major planets in the solar system in their orbit around the sun.</p> <p>Students will understand that some planets have a moon or moons that orbit them. Earth is a planet that has a</p>	<p>Students will answer formative and summative questions.</p> <p>Students will construct models.</p> <p>Students will demonstrate models.</p> <p>Illustrations</p> <p>Lab Activities</p> <p>Research Projects</p> <p>Using a simple model, investigate the positions of the sun, moon and earth to detect and test the reasons why the moon and sun appear to change position in the sky and the phases of the moon.</p> <p>Repreent the sun, moon and earth and their orbits graphically and to scale using actual data and</p>

			<p>moon that orbits it. Planets' orbits are due to their gravitational attraction to the sun and moons orbit around planets because of their gravitational attraction to the planets.</p> <p>Students will understand that asteroids are metallic , rocky bodies that orbit the sun but are too small to be classified as a planet. A meteor appears when a particle or chunk of metallic or stony matter called a meteoroid enters earth's atmosphere from outer space. Comets are a mixture of ices (both water and frozen gases) that are not part of a planet. Pluto is classified as a dwarf planet.</p>	<p>measurements for the representation.</p> <p>Make a table or chart to represent the comparison between the sun and a red dwarf or blue dwarf.</p> <p>Make a table or chart or graphic that interprets the general characteristics of the major planets in the solar system.</p> <p>Identify a telescope as a tool that can be used to magnify the appearance of objects in the solar system.</p>
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9 weeks (Dec.-Feb.)	Earth and Space Science	The sun is one of many stars that exist in the universe.	<p>Students will have a clear understanding that the sun appears to be the largest star in the sky because it is the closest star to Earth. Some stars are larger than the sun and some stars are smaller than the sun.</p> <p>Students will understand general facts about the size and composition of the sun.</p> <p>*Current and new discoveries related to stars and the sun must be included.</p>	
9 Weeks(Dec.-Feb.)	Earth and Space Sciences	Most of the cycles and patterns of motion between the Earth and sun are predictable.	<p>Students will understand that Earth's revolution around the sun takes approximately 365 days. Earth completes one rotation on its axis in a 24-hour period, producing day and night .Earth's axis is tilted at an angle of 23.5 degrees and this tilt, along with earth's revolution around the sun, affects the amount of</p>	

			<p>direct sunlight that the Earth receives in a single day and throughout the year. The average daily temperature is related to the amount of direct sunlight received. Changes in average temperature throughout the year are identified as seasons.</p>	
9 Weeks (March-May)	Light, Sound and Motion	<p>The amount of change in movement of an object is based on the mass of the object and the amount of force exerted.</p>	<p>Students will clearly understand:</p> <p>Movement can be measured by speed. The speed of an object is calculated by determining the distance (d) traveled in a period of time (t).</p> <p>Earth pulls down on all objects with a gravitational force. Weight is a measure of the gravitational force between an object and the Earth.</p> <p>Any change in speed or direction of an object requires a force and is affected by the mass of the</p>	<p>Students will answer formative and summative questions.</p> <p>Lab Activities:</p> <p>Observations based on class participation Mirror Activities Tuning Forks Prisms Toy Cars</p> <p>Plan and implement a scientific experiment to investigate what happens when light enters a new medium.</p> <p>Design two different musical instruments, one using blowing and one using plucking, that can create the same three notes. (Recognize that</p>

			<p>object and the amount of force applied.</p>	<p>longer tubes produce lower pitches and shorter tubes produce higher pitches).</p>
<p>9 weeks (March-May)</p>	<p>Light, Sound and Motion</p>	<p>Light and sound are forms of energy that behave in predictable ways.</p>	<p>Students will have a clear understanding that:</p> <p>Light travels and maintains its direction until it interacts with an object or moves from one medium to another and then it can be reflected, refracted or absorbed.</p> <p>Sound is produced by vibrating objects and requires a medium through which to travel. The rate of vibration is related to the pitch of the sound.</p> <p>Sound is produced by vibrating objects and requires a</p>	

