

## Science Curriculum for 7<sup>th</sup> and 8<sup>th</sup> Grades

Grade	Unit taught	Grade level Concepts:
8	Sun-Earth-Moon System (Astronomy)	<ul style="list-style-type: none"> <li>• The apparent motion of the Sun across the sky, the Moon's phases and eclipses result from the motions of Earth around the Sun, Moon, and Earth.</li> <li>• Gravitational interaction between Sun, Moon, and Earth produces tides on Earth.</li> <li>• The Sun is the major source of energy for Earth. Sunspots occur in a predictable cycle and influence space weather.</li> </ul>
7 or 8	Development & Reproduction of Organisms	<ul style="list-style-type: none"> <li>• Different kinds of living things obtain food and release energy in different ways.</li> <li>• Organisms can be classified based on their structure and function.</li> </ul>
8	Motors & Simple Machines	<ul style="list-style-type: none"> <li>• The force a motor exerts depends on how it is connected to a source of power.</li> <li>• Work is the product of force and distance.</li> <li>• Machines reduce the effort needed to do a given amount of work by increasing the distance over which the work is done.</li> </ul>
7	Forces & Machines	<ul style="list-style-type: none"> <li>• We encounter gravity, elastic forces, friction, and magnetic forces frequently.</li> <li>• These forces can act on objects and change their speed and direction.</li> <li>• Kinetic energy and potential energy can be transformed from one form to another.</li> </ul>
7	Plate Tectonics	<ul style="list-style-type: none"> <li>• Earthquake waves travel in all directions from an epicenter.</li> <li>• Earthquake waves reveal the layered nature of the Earth's interior.</li> <li>• Plate movements reveal the movement of the continents over time.</li> <li>• A volcano's type depends on the nature of that volcano's lava.</li> <li>• Volcanic ash affects the Earth's environment and weather.</li> </ul>
7 or 8	Respiration & Circulation	<ul style="list-style-type: none"> <li>• During gas exchange in the lungs, oxygen is absorbed by the bloodstream and carbon dioxide is released.</li> <li>• In cellular respiration, oxygen and nutrient combine to release the energy needed for life activities. Carbon dioxide is a waste product of cellular respiration.</li> </ul>