

# SAUSD Common Core Aligned Curriculum Map: Science Grade 7 Year at a Glance

	Title	Time	Performance Task	Big Idea	Essential Questions	Core Texts
First Semester	<b>Unit 1:</b> Structure, Function, and Information Processing	6 Weeks	<ul style="list-style-type: none"> <li>Plan and do an investigation that shows that organisms are made of cells.</li> <li>Construct a physical model of a cell.</li> <li>Write a description of how the body is a system of multiple interacting subsystems that form a hierarchy from cells to the body.</li> </ul>	The structures of organisms contribute to life's functions.	<p>What evidence do we have that all living organisms are made of cells?</p> <p>How can cell theory be used to develop a physical model of the cell?</p> <p>How do systems interact in cells and organisms?</p> <p>How do organisms gather and use information from the environment?</p>	Holt Life Science (P. 112-142)
	<b>Unit 2:</b> Growth Development and Reproduction of Organisms	9 Weeks	<ul style="list-style-type: none"> <li>Plan and do an investigation that shows how the environment and genetic factors determine the growth of an organism.</li> <li>Write an essay that explains the genetic implications for sexual and asexual reproduction.</li> <li>Make a poster or brochure, which synthesizes information about the ways humans influence the inheritance of traits in organisms.</li> </ul>	Organisms grow, develop, and reproduce.	<p>How do the environment and genetic factors determine the growth of plants and animals?</p> <p>What are the genetic implications for sexual and asexual reproduction?</p> <p>How do structures and behaviors increase the likelihood of successful reproduction by organisms?</p> <p>How can humans select for specific traits through technology and genetic modifications?</p>	Holt Life Science (P. 170-218, P. 356-390) SEUP Genetics Kit
	<b>Unit 3:</b> Engineering Design Process – Robotic Hand	3 Weeks	<ul style="list-style-type: none"> <li>Construct a simple “bionic” hand that can pick up a wad of paper</li> <li>Write a letter, role-playing as an engineer, to an amputee about what the robotic hand that you developed can do.</li> </ul>	A system, such as a bionic hand, has parts that work together to complete a task.	<p>What tasks and movements can be done by the human hand?</p> <p>What structures are found in the human hand are what are their functions?</p> <p>How can engineers develop an artificial hand that mimics the human hand?</p>	Video Clips – Prosthetic Hands: Range of Motion Article – DOD working toward fully functional prosthetic arms NASA: I want to hold Your Hand instructions

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Second Semester	<b>Unit 4:</b> Matter and Energy in Organisms and Ecosystems	3 Weeks	<ul style="list-style-type: none"> <li>Construct a model (conceptual or physical) to explain the transfer of energy and cycling of matter in the ecosystem</li> </ul>	Organisms obtain and use matter and energy, which move through an ecosystem.	<p>How do organisms obtain matter and energy from the ecosystem to survive and grow?</p> <p>What is the role of photosynthesis and respiration in cycling matter in ecosystems?</p>	Holt Life Science (P. 394-395)
	<b>Unit 5:</b> Interdependent Relationships in Ecosystems	4 Weeks	<ul style="list-style-type: none"> <li>Plan and do an investigation that shows how organisms and populations of organisms dependent on their interactions with other organisms and with nonliving factors.</li> <li>Write an essay that explains how limited resources influence competition among and between organisms and populations.</li> <li>Make a poster or brochure that synthesizes information about scientific, economic, political, and social justifications used in making decisions about maintaining biodiversity in ecosystems.</li> </ul>	Organisms interact with other organisms in an ecosystem.	<p>How are organisms and populations of organisms dependent on their interactions with other organisms and with nonliving factors?</p> <p>How do limited resources influence competition among and between organisms and populations?</p> <p>What are the scientific, economic, political, and social justifications used in making decisions about maintaining biodiversity in ecosystems?</p>	BIODIVERSITY UNIT Articles Easter's End The Panther Problem Invasive Species
	<b>Unit 6:</b> Biological Evolution: Natural Selection and Adaptations	8 Weeks	<ul style="list-style-type: none"> <li>Use evidence to explain how the fossil record can be used to describe the history of life on earth.</li> <li>Do an investigation to determine the effects of variation on survival under different environmental conditions.</li> <li>Write an essay that synthesizes evidence that Darwin used to develop his theory of evolution.</li> </ul>	Genetic variation among organisms in a species combined with changes in the environment effect survival and reproduction.	<p>How can the fossil record be used to describe evidence of the history of life on Earth?</p> <p>What evidence did Darwin use to develop his theory of evolution?</p>	Holt Life Science (P. 228-326) SEPUP Evolution
	<b>Unit 7:</b> Human Reproduction	2 Weeks	<ul style="list-style-type: none"> <li>Describe the structure and function of the male and female human reproductive systems, including the process of egg and sperm production and egg fertilization.</li> </ul>	Organisms grow, develop, and reproduce.	How do organisms change in predictable ways as they progress from conception to old age?	Holt Life Science (P. 554-576)