



Life Science

Strand	Common Curriculum Goal	Content Standard	Standard	Unit Name	Course Topic Description
SC.CM.SI Scientific Inquiry	Formulate and express scientific questions or hypotheses to be investigated.	Make observations. Formulate and express scientific questions or hypotheses to be investigated based on the observations.	SC.CM.SI.01 Based on observations and scientific concepts, ask questions or form hypotheses that can be answered or tested through scientific investigations.	Life	Exploring Life
SC.CM.SI Scientific Inquiry	Design safe and ethical scientific investigations to address questions or hypotheses.	Design scientific investigations to address and explain questions or hypotheses.	SC.CM.SI.02 Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.	Life	Exploring Life
SC.CM.SI Scientific Inquiry	Conduct procedures to collect, organize, and display scientific data.	Collect, organize, and display scientific data.	SC.CM.SI.03 Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.	Life	Exploring Life
SC.CM.SI Scientific Inquiry	Analyze scientific information to develop and present conclusions.	Analyze scientific information to develop and present conclusions.	SC.CM.SI.04 Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.	Life	Exploring Life
SC.CM.LS Life Science	Understand the characteristics, structure, and functions of organisms.	Describe the characteristics, structure, and functions of organisms.	SC.CM.LS.01 Describe, explain, and compare the structure and functions of cells in organisms.	Life	The Structure of Viruses and Cells
			SC.CM.LS.01.01 Describe how biological systems can maintain equilibrium (homeostasis).	The Human Body	Bones, Muscles and Skin
					Nutrients and Digestion
SC.CM.LS.01.02 Identify unique	Life	The Structure of Viruses	The Circulatory System		
			Respiration and Excretion		
			The Nervous and Endocrine Systems		
			Reproduction and Growth		

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			structures in cells from plants, animals, and prokaryotes.		and Cells
			SC.CM.LS.01.03 Identify cell organelles and state how their activities contribute to a particular type of cell carrying out its function.	Life	The Structure of Viruses and Cells Cell Processes
			SC.CM.LS.01.04 Explain the role of the cell membrane in cell transport.	Life	The Structure of Viruses and Cells Cell Processes
			SC.CM.LS.01.05 Distinguish between active and passive transport, including diffusion and osmosis, explaining the mechanics of each.	Life	Cell Processes
			SC.CM.LS.01.06 Describe photosynthesis as a chemical process and part of the carbon cycle.	Life Plants	Cell Processes Plant Processes
			SC.CM.LS.01.07 Explain how the development of tools and technology, including microscopes, has aided in the understanding of cells and microbes.	Life	The Structure of Viruses and Cells
SC.CM.LS Life Science	Understand the transmission of traits in living things.	Understand the transmission of traits in living things.	SC.CM.LS.02 Explain laws of heredity and their relationship to the structure and function of DNA.	Heredity and Evolution	Heredity
			SC.CM.LS.02.01 Describe the structure of DNA and the way that DNA functions to control protein synthesis.	Heredity and Evolution	Heredity
			SC.CM.LS.02.02 Recognize and understand the differences between meiosis and mitosis in cellular reproduction.	Life	Cell Reproduction
			SC.CM.LS.02.03 Recognize that changes in DNA (mutations) and anomalies in chromosomes create changes in	Heredity and Evolution	Heredity Evolution

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			organisms.		
			SC.CM.LS.02.04 Apply concepts of inheritance of traits, including Mendel's laws, Punnett squares, and pedigree, to determine the characteristics of offspring.	Heredity and Evolution	Heredity Evolution
			SC.CM.LS.02.05 Recognize the existence of technology that can alter and/or determine inherited traits.	Life	Cell Reproduction
SC.CM.LS Life Science	Understand the relationships among living things and between living things and their environments.	Explain and analyze the interdependence of organisms in their natural environment.	SC.CM.LS.03 Describe and analyze the effect of species, including humans, on an ecosystem.	Ecology	Ecosystems Resources and the Environment
			SC.CM.LS.03.01 Predict outcomes of changes in resources and energy flow in an ecosystem.	Ecology	Life and the Environment
			SC.CM.LS.03.02 Explain how humans and other species can impact an ecosystem.	Ecology	Ecosystems Resources and the Environment
			SC.CM.LS.03.03 Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.	Ecology	Life and the Environment
		Describe and analyze diversity of species, natural selection, and adaptations.	SC.CM.LS.04 Analyze how living things have changed over geological time, using fossils and other scientific evidence.	Heredity and Evolution	Evolution
			SC.CM.LS.04.01 Recognize that, over time, natural selection may result in development of a new species or subspecies.	Heredity and Evolution	Evolution
			SC.CM.LS.04.02 Recognize that natural selection and its evolutionary consequences provide an explanation of	Heredity and Evolution	Evolution



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			the fossil record as well as an explanation for the molecular similarities among varied species.		
			SC.CM.LS.04.03 Explain how biological evolution can account for the diversity of species developed over time.	Heredity and Evolution	Evolution
				Diversity of Life	Classifying Living Things
			SC.CM.LS.04.04 Explain the relationship between genetics, mutations, and biological evolution.	Heredity and Evolution	Heredity
					Evolution
			SC.CM.LS.04.05 Explain how our understanding of evolution has changed over time.	Heredity and Evolution	Evolution