

**A Correlation of Carolina's Curricula
with the
Hawaii Content and Performance Standards,
Science Grades K–8**

Prepared by

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Carolina Curriculum Units with Recommended Grade Ranges

	Grades	Life Science	Earth Science	Physical Science	Technology
STC®	K–2	<i>Organisms</i> (O)	<i>Weather</i> (W)	<i>Solids and Liquids</i> (SL)	<i>Comparing and Measuring</i> (CM)
	1–3	<i>The Life Cycle of Butterflies</i> (LCB)	<i>Soils</i> (S)	<i>Changes</i> ©	<i>Balancing and Weighing</i> (BW)
	2–4	<i>Plant Growth and Development</i> (PGD)	<i>Rocks and Minerals</i> (RM)	<i>Chemical Tests</i> (CT)	<i>Sound</i> (So)
	3–5	<i>Animal Studies</i> (AS)	<i>Land and Water</i> (LW)	<i>Electric Circuits</i> (EC)	<i>Motion and Design</i> (MD)
	4–6	<i>Microworlds</i> (M)	<i>Ecosystems</i> (E)	<i>Food Chemistry</i> (FC)	<i>Floating and Sinking</i> (FS)
	5–7	<i>Experiments with Plants</i> (EP)	<i>Measuring Time</i> (MT)	<i>Magnets and Motors</i> (MM)	<i>The Technology of Paper</i> (TP)
STC/MS™	6–8	<i>Human Body Systems</i> (HBS)	<i>Catastrophic Events</i> (CE)	<i>Properties of Matter</i> (POM)	<i>Energy, Machines, and Motion</i> (EMM)
		<i>Organisms—From Macro to Micro</i> (OMM)	<i>Earth in Space</i> (ES)	<i>Light</i> (L)	<i>Electrical Energy and Circuit Design</i> (EECD)
BBS	K–2	<i>Understanding My Body</i> (UMB)	<i>Sky Watchers</i> (SW)		
	3–5	<i>Human Bodyworks</i> (HB)			
CCS	3–5		<i>Space Science Sequence</i> (SSS)		

**Hawaii Content and Performance Standards
Science Grades K-8**

Kindergarten

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION—Discover, invent, and investigate using the skills necessary to engage in the scientific process

Topic	Benchmark	Curriculum
SCIENTIFIC INQUIRY	SC.K.1.1 Use the senses to make observations	All STC units (for safety reasons, taste is not used in any STC units)
SCIENTIFIC INQUIRY	SC.K.1.2 Ask questions about the world around them	All STC units
SCIENTIFIC INQUIRY	SC.K.1.3 Collect data about living and non-living things	All STC units

Standard 2: The Scientific Process: NATURE OF SCIENCE—Understand that science, technology, and society are interrelated

Topic	Benchmark	Curriculum
SCIENCE, TECHNOLOGY, AND SOCIETY	SC.K.2.1 Identify different types of technologies at home, in the classroom, and/or in the world	All STC units

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT—Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment

Topic	Benchmark	Curriculum
INTERDEPENDENCE	SC.K.3.1 Identify similarities and differences between plants and animals	O

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS—Understand the structures and functions of living organisms and how organisms can be compared scientifically

Topic	Benchmark	Curriculum
CLASSIFICATION	SC.K.4.1 Identify differences between living and non-living things	O, W, CM

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION—Understand genetics and biological evolution and their impact on the unity and diversity of organisms

Topic	Benchmark	Curriculum
HEREDITY	SC.K.5.1 Identify ways in which some offspring are very much like their parents, although not exactly	O, UMB

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY—Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe

**Hawaii Content and Performance Standards
Science Grades K-8**

Topic	Benchmark	Curriculum
NATURE OF MATTER	SC.K.6.1 Classify objects by their attributes (e.g. physical properties, materials of which they are made)	O, W, SL

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION—Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic

Topic	Benchmark	Curriculum
FORCES AND MOTION	SC.K.7.1 Identify that objects that will fall to the ground unless something is holding them up	SL

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE—Understand the Earth and its processes, the solar system, and the universe and its contents

Topic	Benchmark	Curriculum
FORCES THAT SHAPE THE EARTH	SC.K.8.1 Report and describe weather changes from day to day and over the seasons	W (seasons not included)
THE UNIVERSE	SC.K.8.2 Identify different types of celestial objects seen in the day and night sky	W (night sky not included), SW

**Hawaii Content and Performance Standards
Science Grades K-8**

Grade 1

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION—Discover, invent, and investigate using the skills necessary to engage in the scientific process

Topic	Benchmark	Curriculum
SCIENTIFIC INQUIRY	SC.1.1.1 Collect, record, and organize data using simple tools, equipment, and techniques safely	All STC units
SCIENTIFIC INQUIRY	SC.1.1.2 Explain the results of an investigation to an audience using simple data organizers (e.g., charts, graphs, pictures)	All STC units

Standard 2: The Scientific Process: NATURE OF SCIENCE—Understand that science, technology, and society are interrelated

Topic	Benchmark	Curriculum
SCIENCE, TECHNOLOGY, AND SOCIETY	SC.1.2.1 Explain why people create technological devices	All STC units
UNIFYING CONCEPTS AND THEMES	SC.1.2.2 Describe a variety of changes that occur in nature	O, W, SL, LCB, S

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT—Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment

Topic	Benchmark	Curriculum
CYCLES OF MATTER OF ENERGY	SC.1.3.1 Identify the requirements of plants and animals to survive (e.g., food, air, light, water)	O, LCB, S, UMB

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS—Understand the structures and functions of living organisms and how organisms can be compared scientifically

Topic	Benchmark	Curriculum
CLASSIFICATION	SC.1.4.1 Describe how living things have structures that help them to survive	O, LCB, S, UMB

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION—Understand genetics and biological evolution and their impact on the unity and diversity of organisms

Topic	Benchmark	Curriculum
HEREDITY	SC.1.5.1 Identify ways in which the same kinds of plants and the same kinds of animals differ	O, UMB

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Science Grades K-8**

UNITY AND DIVERSITY	SC.1.5.2 Describe the physical characteristics of living things that enable them to live in their environment	O, LCB, S
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Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY—Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe

Topic	Benchmark	Curriculum
NATURE OF MATTER	SC.1.6.1 Identify solids, liquids, and gases and their basic properties	SL, S, C, BW

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION—Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic

Topic	Benchmark	Curriculum
FORCES AND MOTION	SC.1.7.1 Describe how the motion of an object can be changed by force (push or pull)	SL

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE—Understand the Earth and its processes, the solar system, and the universe and its contents

Topic	Benchmark	Curriculum
THE UNIVERSE	SC.1.8.1 Describe that the sun warms the land, air, and water	O, W, SW

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Science Grades K-8**

Grade 2

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION—Discover, invent, and investigate using the skills necessary to engage in the scientific process

Topic	Benchmark	Curriculum
SCIENTIFIC INQUIRY	SC.2.1.1 Develop predictions based on observations	All STC units
SCIENTIFIC INQUIRY	SC.2.1.2 Conduct a simple investigation using a systematic process safely to test a prediction	All STC units

Standard 2: The Scientific Process: NATURE OF SCIENCE—Understand that science, technology, and society are interrelated

Topic	Benchmark	Curriculum
UNIFYING CONCEPTS AND THEMES	SC.2.2.1 Describe changes that have occurred in society as a result of new technologies	All STC units

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT—Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment

Topic	Benchmark	Curriculum
INTERDEPENDENCE	SC.2.3.1 Describe how animals depend on plants and animals	O, LCB, PGD

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS—Understand the structures and functions of living organisms and how organisms can be compared scientifically

Topic	Benchmark	Curriculum
CLASSIFICATION	SC.2.4.1 Explain how plants and animals go through life cycles	O, LCB, PGD

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION—Understand genetics and biological evolution and their impact on the unity and diversity of organisms

Topic	Benchmark	Curriculum
UNITY AND DIVERSITY	SC.2.5.1 Identify distinct environments and the different kinds of organisms each environment supports	O, LCB, S, PGD

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY—Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe

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Topic	Benchmark	Curriculum
NATURE OF MATTER	SC.2.6.1 Identify ways to change the physical properties of objects	SL, S, C, CT

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION—Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic

Topic	Benchmark	Curriculum
FORCES AND MOTION	SC.2.7.1 Identify the properties of magnets	SL, RM

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE—Understand the Earth and its processes, the solar system, and the universe and its contents

Topic	Benchmark	Curriculum
EARTH MATERIALS	SC.2.8.1 Identify different Earth materials and classify them by their physical properties	O, SL, S, C, RM, CT
EARTH MATERIALS	SC.2.8.2 Identify the limited supply of natural resources and how they can be extended through conservation, reuse, and recycling	S

**Hawaii Content and Performance Standards
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Grade 3

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION—Discover, invent, and investigate using the skills necessary to engage in the scientific process

Topic	Benchmark	Curriculum
SCIENTIFIC INQUIRY	SC.3.1.1 Pose a question and develop a hypothesis based on observations	All STC units
SCIENTIFIC INQUIRY	SC.3.1.2 Safely collect and analyze data to answer a question	All STC units

Standard 2: The Scientific Process: NATURE OF SCIENCE—Understand that science, technology, and society are interrelated

Topic	Benchmark	Curriculum
SCIENCE, TECHNOLOGY, AND SOCIETY	SC.3.2.1 Describe ways technologies in fields such as agriculture, information, manufacturing, or communication have influenced society	All STC units

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT—Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment

Topic	Benchmark	Curriculum
INTERDEPENDENCE	SC.3.3.1 Describe how plants depend on animals	LCB, PGD, AS

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS—Understand the structures and functions of living organisms and how organisms can be compared scientifically

Topic	Benchmark	Curriculum
CELLS, TISSUES, ORGANS, AND ORGAN SYSTEMS	SC.3.4.1 Compare distinct structures of living things that help them to survive	LCB, S, PGD, AS

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION—Understand genetics and biological evolution and their impact on the unity and diversity of organisms

Topic	Benchmark	Curriculum
UNITY AND DIVERSITY	SC.3.5.1 Describe the relationship between structure and function in organisms	LCB, S, PGD, AS

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY—Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe

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Topic	Benchmark	Curriculum
ENERGY AND ITS TRANSFORMATION	SC.3.6.1 Define energy and explain that the sun produces energy in the form of light and heat	LW
WAVES	SC.3.6.2 Explain how things make sound through vibrations	So
WAVES	SC.3.6.3 Explain how light traveling in a straight line changes when it reaches an object	

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION—Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic

Topic	Benchmark	Curriculum
FORCES AND MOTION	SC.3.7.1 Compare how simple machines do work to make life easier	MD

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE—Understand the Earth and its processes, the solar system, and the universe and its contents

Topic	Benchmark	Curriculum
EARTH MATERIALS	SC.3.8.1 Describe different Earth materials (e.g., rocks, minerals, sand, soil) and explain their formation and composition	S, C, PGD, RM, CT, LW
FORCES THAT SHAPE THE EARTH	SC.3.8.2 Describe how the water cycle is related to weather and climate	LW
THE UNIVERSE	SC.3.8.3 Safely observe and describe the basic movements of the sun and moon	
THE UNIVERSE	SC.3.8.4 Describe that constellations stay the same, though they "appear" to move across the night sky	

**Hawaii Content and Performance Standards
Science Grades K-8**

Grade 4

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION—Discover, invent, and investigate using the skills necessary to engage in the scientific process

Topic	Benchmark	Curriculum
SCIENTIFIC INQUIRY	SC.4.1.1 Describe a testable hypothesis and an experimental procedure	All STC units
SCIENTIFIC INQUIRY	SC.4.1.2 Differentiate between an observation and an inference	All STC units

Standard 2: The Scientific Process: NATURE OF SCIENCE—Understand that science, technology, and society are interrelated

Topic	Benchmark	Curriculum
SCIENCE, TECHNOLOGY, AND SOCIETY	SC.4.2.1 Describe how the use of technology has influenced the economy, demography, and environment of Hawaii	All STC units describe how technology has influenced our lives, but STC has nothing specific to Hawaii

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT—Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment

Topic	Benchmark	Curriculum
CYCLES OF MATTER AND ENERGY	SC.4.3.1 Explain how simple food chains and food webs can be traced back to plants	E
INTERDEPENDENCE	SC.4.3.2 Describe how an organism's behavior is determined by its environment	PGD, AS, LW, E

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS—Understand the structures and functions of living organisms and how organisms can be compared scientifically

Topic	Benchmark	Curriculum
CELLS, TISSUES, ORGANS, AND ORGAN SYSTEMS	SC.4.4.1 Identify the basic differences between plant cells and animal cells	M

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION—Understand genetics and biological evolution and their impact on the unity and diversity of organisms

Topic	Benchmark	Curriculum
BIOLOGICAL EVOLUTION	SC.4.5.1 Compare fossils and living things	RM
UNITY AND DIVERSITY	SC.4.5.2 Describe the roles of various organisms in the same environment	PGD, AS, E

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UNITY AND DIVERSITY	SC.4.5.3 Describe how different organisms need specific environmental conditions to survive	PGD, AS, M, E
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Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY—Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe

Topic	Benchmark	Curriculum
NATURE OF MATTER	SC.4.6.1 Describe how some materials may be combined to form new substances	CT
ENERGY AND ITS TRANSFORMATION	SC.4.6.2 Explain what is needed for electricity to flow in a circuit to create light and sound	EC (sound not included)

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION—Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic

Topic	Benchmark	Curriculum
FORCES OF THE UNIVERSE	SC.4.7.1 Describe that the mass of the Earth exerts a gravitational force on all objects	LW, MD, FS

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE—Understand the Earth and its processes, the solar system, and the universe and its contents

Topic	Benchmark	Curriculum
FORCES THAT SHAPE THE EARTH	SC.4.8.1 Describe how slow processes sometimes shape and reshape the surface of the Earth	RM, LW
FORCES THAT SHAPE THE EARTH	SC.4.8.2 Describe how fast processes (e.g., volcanoes, earthquakes) sometimes shape and reshape the surface of the Earth	RM, LW
EARTH IN THE SOLAR SYSTEM	SC.4.8.3 Describe the relationship between the sun and the Earth's daily rotation and annual revolution	

**Hawaii Content and Performance Standards
Science Grades K-8**

Grade 5

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION—Discover, invent, and investigate using the skills necessary to engage in the scientific process

Topic	Benchmark	Curriculum
SCIENTIFIC INQUIRY	SC.5.1.1 Identify the variables in scientific investigations and recognize the importance of controlling variables in scientific experiments	All STC units, HB, SSS
SCIENTIFIC INQUIRY	SC.5.1.2 Formulate and defend conclusions based on evidence	All STC units, HB, SSS

Standard 2: The Scientific Process: NATURE OF SCIENCE—Understand that science, technology, and society are interrelated

Topic	Benchmark	Curriculum
UNIFYING CONCEPTS AND THEMES	SC.5.2.1 Use models and/or simulations to represent and investigate features of objects, events, and processes in the real world	All STC units, HB, SSS

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT—Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment

Topic	Benchmark	Curriculum
CYCLES OF MATTER AND ENERGY	SC.5.3.1 Describe the cycle of energy among producers, consumers, and decomposers	E
INTERDEPENDENCE	SC.5.3.2 Describe the interdependent relationships among producers, consumers, and decomposers in an ecosystem in terms of the cycle of matter	E

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS—Understand the structures and functions of living organisms and how organisms can be compared scientifically

Topic	Benchmark	Curriculum
CELLS, TISSUES, ORGANS, AND ORGAN SYSTEMS	SC.5.4.1 Describe the structures of the human body and how they work together to sustain life	HB

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION—Understand genetics and biological evolution and their impact on the unity and diversity of organisms

Topic	Benchmark	Curriculum
HEREDITY	SC.5.5.1 Recognize that some traits of living things are inherited and others are learned	AS

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Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY—Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe

Topic	Benchmark	Curriculum
ENERGY AND ITS TRANSFORMATION	SC.5.6.1 Identify different forms of energy (e.g., thermal, electrical, nuclear, light, sound) and how they can change and transfer energy from one form to another	AS, LW, EC, MD, E, FC, MM (AS, LW, MD, FC-energy forms only)
ENERGY AND ITS TRANSFORMATION	SC.5.6.2 Describe ways that heat can be transferred from one object to another	
WAVES	SC.5.6.3 Compare what happens to light when it is reflected, refracted, and absorbed	M

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION—Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic

Topic	Benchmark	Curriculum
FORCES OF THE UNIVERSE	SC.5.7.1 Explain how electrically charged materials can push or pull other charged materials	EC, MD

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE—Understand the Earth and its processes, the solar system, and the universe and its contents

Topic	Benchmark	Curriculum
EARTH IN THE SOLAR SYSTEM	SC.5.8.1 Describe the relationship (size and distance) of Earth to other components in the solar system	SSS
EARTH IN THE SOLAR SYSTEM	SC.5.8.2 Describe examples of what astronomers have discovered using telescopes	SSS
EARTH IN THE SOLAR SYSTEM	SC.5.8.3 Explain that the planets orbit the sun and that the moon orbits the Earth	MT (moon orbits the Earth only), SSS
EARTH IN THE SOLAR SYSTEM	SC.5.8.4 Demonstrate that day and night are caused by the rotation of the Earth on its axis	SSS

**Hawaii Content and Performance Standards
Science Grades K-8**

Grade 6

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION—Discover, invent, and investigate using the skills necessary to engage in the scientific process

Topic	Benchmark	Curriculum
SCIENTIFIC INQUIRY	SC.6.1.1 Formulate a testable hypothesis that can be answered through a controlled experiment	All STC and STC/MS units
SCIENTIFIC INQUIRY	SC.6.1.2 Use appropriate tools, equipment, and techniques safely to collect, display, and analyze data	All STC and STC/MS units

Standard 2: The Scientific Process: NATURE OF SCIENCE—Understand that science, technology, and society are interrelated

Topic	Benchmark	Curriculum
SCIENCE, TECHNOLOGY, AND SOCIETY	SC.6.2.1 Explain how technology has an impact on society and science	All STC and STC/MS units
SCIENCE, TECHNOLOGY, AND SOCIETY	SC.6.2.2 Explain how the needs of society have influenced the development and use of technologies	All STC and STC/MS units

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT—Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment

Topic	Benchmark	Curriculum
CYCLES OF MATTER AND ENERGY	SC.6.3.1 Describe how matter and energy are transferred within and among living systems and their physical environment	E, FC, OMM

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS—Understand the structures and functions of living organisms and how organisms can be compared scientifically

Topic	Benchmark	Curriculum
	<i>No benchmark at this level</i>	

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION—Understand genetics and biological evolution and their impact on the unity and diversity of organisms

Topic	Benchmark	Curriculum
	<i>No benchmark at this level</i>	

**Hawaii Content and Performance Standards
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Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY—Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe

Topic	Benchmark	Curriculum
ENERGY AND ITS TRANSFORMATION	SC.6.6.1 Compare how heat energy can be transferred through conduction, convection, and radiation	CE, ES, PM
ENERGY AND ITS TRANSFORMATION	SC.6.6.2 Describe the different types of energy transformations	E, FC, M, EECD, EMM, L, PM
ENERGY AND ITS TRANSFORMATION	SC.6.6.3 Explain how energy can change forms and is conserved	E, FC, MM, CE, EECD, ES, EMM, L, PM
ENERGY AND ITS TRANSFORMATION	SC.6.6.4 Describe and give examples of different types of energy waves	CE, ES, L
NATURE OF MATTER	SC.6.6.5 Explain how matter can change physical or chemical forms, but the total amount of matter remains constant	FC, CE, PM
NATURE OF MATTER	SC.6.6.6 Describe and compare the physical and chemical properties of different substances	FC, PM
NATURE OF MATTER	SC.6.6.7 Describe the organization of the periodic table	PM
NATURE OF MATTER	SC.6.6.8 Recognize changes that indicate that a chemical reaction has taken place	CE, EMM, PM
NATURE OF MATTER	SC.6.6.9 Describe matter using the atomic model	PM
WAVES	SC.6.6.10 Explain how vibrations in materials set up wavelike disturbances that spread away from the source	CE

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION—Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic

Topic	Benchmark	Curriculum
FORCE AND MOTION	SC.6.7.1 Describe examples of how forces affect an object's motion	FS, MT, CE, EECD, ES, EMM
FORCES OF THE UNIVERSE	SC.6.7.2 Explain that electric currents can produce magnetic effects and that magnets can cause electric circuits	MM, EECD

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE—Understand the Earth and its processes, the solar system, and the universe and its contents

Topic	Benchmark	Curriculum
	<i>No benchmark at this level</i>	

**Hawaii Content and Performance Standards
Science Grades K-8**

Grade 7

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION—Discover, invent, and investigate using the skills necessary to engage in the scientific process

Topic	Benchmark	Curriculum
SCIENTIFIC INQUIRY	SC.7.1.1 Design and safely conduct a scientific investigation to answer a question or test a hypothesis	All STC/MS units
SCIENTIFIC INQUIRY	SC.7.1.2 Explain the importance of replicable trials	All STC/MS units
SCIENTIFIC KNOWLEDGE	SC.7.1.3 Explain the need to revise conclusions and explanations based on new scientific evidence	All STC/MS units

Standard 2: The Scientific Process: NATURE OF SCIENCE—Understand that science, technology, and society are interrelated

Topic	Benchmark	Curriculum
SCIENCE, TECHNOLOGY, AND SOCIETY	SC.7.2.1 Explain the use of reliable print and electronic sources to provide scientific information and evidence	All STC/MS units

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT—Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment

Topic	Benchmark	Curriculum
CYCLES OF MATTER AND ENERGY	SC.7.3.1 Explain how energy moves through food webs, including the roles of photosynthesis and cellular respiration	OMM
INTERDEPENDENCE	SC.7.3.2 Explain the interaction and dependence of organisms on one another	EP, OMM
INTERDEPENDENCE	SC.7.3.3 Explain how biotic and abiotic factors affect the carrying capacity and sustainability of an ecosystem	OMM

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS—Understand the structures and functions of living organisms and how organisms can be compared scientifically

Topic	Benchmark	Curriculum
CELLS, TISSUES, ORGANS, AND ORGAN SYSTEMS	SC.7.4.1 Describe the cell theory	OMM
CELLS, TISSUES, ORGANS, AND ORGAN SYSTEMS	SC.7.4.2 Describe the basic structure and function of various types of cells	OMM
CELLS, TISSUES, ORGANS, AND ORGAN SYSTEMS	SC.7.4.3 Describe the levels of organization in organisms	HBS, OMM

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CLASSIFICATION	SC.7.4.4 Classify organisms according to their degree of relatedness	EP, OMM
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Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION—Understand genetics and biological evolution and their impact on the unity and diversity of organisms

Topic	Benchmark	Curriculum
HEREDITY	SC.7.5.1 Differentiate between sexual and asexual reproduction	OMM
HEREDITY	SC.7.5.2 Describe how an inherited trait can be determined by one or more genes which are found on chromosomes	OMM
HEREDITY	SC.7.5.3 Explain that small differences between parents and offspring could produce descendants that look very different from their ancestors	OMM
UNITY AND DIVERSITY	SC.7.5.4 Analyze how organisms' body structures contribute to their ability to survive and reproduce	EP, OMM
BIOLOGICAL EVOLUTION	SC.7.5.5 Explain how fossils provide evidence that life and environmental conditions have changed over time	ES
UNITY AND DIVERSITY	SC.7.5.6 Explain why variation(s) in a species' gene pool contributes to its survival in a constantly changing environment	OMM

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY—Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe

Topic	Benchmark	Curriculum
	<i>No benchmark at this level</i>	

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION—Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic

Topic	Benchmark	Curriculum
	<i>No benchmark at this level</i>	

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE—Understand the Earth and its processes, the solar system, and the universe and its contents

Topic	Benchmark	Curriculum
	<i>No benchmark at this level</i>	

**Hawaii Content and Performance Standards
Science Grades K-8**

Grade 8

Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION—Discover, invent, and investigate using the skills necessary to engage in the scientific process

Topic	Benchmark	Curriculum
SCIENTIFIC INQUIRY	SC.8.1.1 Determine the link(s) between evidence and the conclusion(s) of an investigation	All STC/MS units
SCIENTIFIC INQUIRY	SC.8.1.2 Communicate the significant components of the experimental design and results of a scientific investigation	All STC/MS units

Standard 2: The Scientific Process: NATURE OF SCIENCE—Understand that science, technology, and society are interrelated

Topic	Benchmark	Curriculum
SCIENCE, TECHNOLOGY, AND SOCIETY	SC.8.2.1 Describe significant relationships among society, science, and technology and how one impacts the other	All STC/MS units
UNIFYING CONCEPTS AND THEMES	SC.8.2.2 Describe how scale and mathematical models can be used to support and explain scientific data	All STC/MS units

Standard 3: Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT—Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment

Topic	Benchmark	Curriculum
	<i>No benchmark at this level</i>	

Standard 4: Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS—Understand the structures and functions of living organisms and how organisms can be compared scientifically

Topic	Benchmark	Curriculum
	<i>No benchmark at this level</i>	

Standard 5: Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION—Understand genetics and biological evolution and their impact on the unity and diversity of organisms

Topic	Benchmark	Curriculum
BIOLOGICAL EVOLUTION	SC.8.5.1 Describe how changes in the physical environment affect the survival of organisms	ES, OMM

**Hawaii Content and Performance Standards
Science Grades K-8**

Standard 6: Physical, Earth, and Space Sciences: NATURE OF MATTER AND ENERGY—Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe

Topic	Benchmark	Curriculum
WAVES	SC.8.6.1 Explain the relationship between the color of light and wavelength within the electromagnetic spectrum	L
WAVES	SC.8.6.2 Explain how seismic waves provide scientists with information about the structure of Earth's interior	CE
WAVES	SC.8.6.3 Identify the characteristics and properties of mechanical and electromagnetic waves	EECD, L

Standard 7: Physical, Earth, and Space Sciences: FORCE AND MOTION—Understand the relationship between force, mass, and motion of objects; and know the major natural forces: gravitational, electric, and magnetic

Topic	Benchmark	Curriculum
FORCES OF THE UNIVERSE	SC.8.7.1 Explain that every object has mass and therefore exerts a gravitational force on other objects	ES

Standard 8: Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE—Understand the Earth and its processes, the solar system, and the universe and its contents

Topic	Benchmark	Curriculum
EARTH MATERIALS	SC.8.8.1 Compare the characteristics of the three main types of rocks	CE
EARTH MATERIALS	SC.8.8.2 Illustrate the rock cycle and explain how igneous, metamorphic, and sedimentary rocks are formed	CE
EARTH IN THE SOLAR SYSTEM	SC.8.8.3 Describe how the Earth's motions and tilt on its axis affect the seasons and weather patterns	ES
FORCES THAT SHAPE THE EARTH	SC.8.8.4 Explain how the sun is a major source of energy influencing climate and weather on Earth	CE, ES
FORCES THAT SHAPE THE EARTH	SC.8.8.5 Explain the concepts of continental drift and plate tectonics	CE
FORCES THAT SHAPE THE EARTH	SC.8.8.6 Explain the relationship between density and convection currents in the ocean and atmosphere	CE
FORCES THAT SHAPE THE EARTH	SC.8.8.7 Describe the physical characteristics of oceans	CE
THE UNIVERSE	SC.8.8.8 Describe the composition of objects in the galaxy	ES
THE UNIVERSE	SC.8.8.9 Explain the predictable motions of the Earth and moon	ES

**Hawaii Content and Performance Standards
Science Grades K-8**

THE UNIVERSE	SC.8.8.10 Compare the characteristics and movement patterns of the planets in our solar system	ES
THE UNIVERSE	SC.8.8.11 Describe the major components of the universe	ES
THE UNIVERSE	SC.8.8.12 Describe the role of gravitational force in the motions of planetary systems	ES