

Martensdale-St. Marys Community School

Science Curriculum

Standard 1: Students can understand and apply skills used in scientific inquiry.

Grade: 5th Grade

Benchmark: The student will:	Grade Level Objectives	Instructional Strategies	Assessments	Instructional Timeline
A. Students can understand and apply the processes and skills of scientific inquiry	A.1. Plan and conduct scientific investigations	Outdoor/indoor labs Experiments research	Ongoing Formative assessments Vocab checks Journaling	
	A. 2. Recognize that scientists perform different types of investigations	Problem solving Identifying variables	Formative assessments Journaling	
	A. 3. Plan and conduct scientific investigations	Taking accurate measurements	Summative assessment Task completion	
B. Students can analyze and interpret scientific information	B.1. Identify and generate questions that can be answered through scientific investigations	Problem solving strategies Identify problems/solutions	Lab reports Journaling Must pose a question	
	B.2. Incorporate mathematics in science inquiries	Accurate data Formula understanding	Ongoing formative Check of work Formal assessment	
	B.3. Use evidence to develop reasonable explanations	Debates Making Models/Labs	Formal assessment Formative assessment	
	B.4. Communicate scientific procedures and explanations (C)	Journaling Peer conferences	Formative assessment	
	B. 5. Use appropriate tools and techniques to gather, process, and analyze data (T)	Math concepts Accurate measurements	Data collection Vocab checks	

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Standard 2: Students can understand concepts and relationships in life science.

Grade: 5th

Benchmarks: The student will:	Grade Level Objectives	Instructional Strategies	Assessments	Instructional Timeline
A. Students can understand structures of living things	A.1. Understand and apply knowledge of basic human body systems and how they work together	Graphic organizer Labs Research Discussion	Week long diet plan Exercise ideas	
B. Students can understand life cycles	B.1. Understand and apply knowledge of organisms and their environments, including: <ul style="list-style-type: none"> • Structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats. • How individual organisms are influenced by internal and external factors. • The relationships among living and non-living factors in terrestrial and aquatic ecosystems. 	Labs Compare/contrast Research Discussion	Life cycle comparisons Formative assessments Summative assessments Relationship definitions	
C. Students can understand environmental interactions and adaptations	C.1. Understand and apply knowledge of environmental stewardship (PS) (MCGF)	Labs Research Contemporary issues	Journaling Formative assessment Lab reports	
	C.2. Understand and apply knowledge of personal health and wellness issues	Labs Research	Lab reports	

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Standard 3: Students can understand concepts and relationships in Earth/Space sciences.

Grade: 5th

Benchmark: The student will:	Grade Level Objectives	Instructional Strategies	Assessments	Instructional Timeline
A. Students can understand ideas about Earth's composition and structure	A.1. Understand and apply knowledge of properties and uses of earth materials	Labs Research Discussion Models	Formative assessments Lab reports Vocab check	
	A.2. Understand and apply knowledge of fossils and the evidence they provide of past life on earth (HN)	Labs Research Discussion Models	Vocab checks	
B. Students can understand changes in and around Earth	B.1. Understand and apply knowledge of processes and changes on or in the earth's land, oceans, and atmosphere (G)	Labs Research Discussion Models	Formative assessments Vocab	
	B.2. Understand and apply knowledge of weather and weather patterns	Labs Research Discussion	Weather reports	
C. Students can understand concepts relating to the universe	C.1. Understand and apply knowledge of the properties, movements, and locations of objects in our solar system	Labs Research Models	Summative assessment Formative assessment	

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Standard 4: Students can understand concepts and relationships in physical science.

Grade: 5th

Benchmark: The student will:	Grade Level Objectives	Instructional Strategies	Assessments	Instructional Timeline
A. Students can understand and apply concepts related to mechanics forces and motion	A.1. Understand and apply knowledge of how forces are related to an object's motion	Background info Models Labs Discussion	Lab reports Journaling Bridge building	
B. Students can understand and apply the concept of energy	B.1. Understand and apply knowledge of sound, light, electricity, magnetism, and heat	Discussion Labs	Lab reports Models Formative assessments	
C. Students can understand and identify properties and changes of matter	C.1. Understand and apply knowledge of how to describe and identify substances based on characteristic properties	Models Labs Discussion Identify properties Think pair share	Lab reports Formative assessments Summative assessments	
	C.2. Understand and apply knowledge of states of matter and changes in states of matter	Labs Models Discussion	Social issues Formative assessment	
	C.3. Understand and apply knowledge of the concept of conservation of mass/matter	Labs Questioning Models discussion	Lab report Partner learning	