

Martensdale-St. Marys Community School Science Curriculum

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

Grade: 6th

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. Identify and generate questions that can be answered through scientific investigations	Experiments Outdoor/indoor labs Research Discussion	Formative assessments Must pose a question	
	A.2. Design and conduct different kinds of scientific investigations.	Identify questions and find solutions	Lab reports	
	A.3. Understand that different kinds of questions suggest different kinds of scientific investigations.	Problem solving Strategies investigations research	Field observations	
B. Students can analyze and interpret scientific information	B. 1. Select and use appropriate tools and techniques to gather, analyze and interpret data.	Determining variables Taking accurate measurements	Task completion Journaling Vocab	
	B. 2. Incorporate mathematics in scientific inquiry.	Accurate data Understanding formulas	Check of work Formative assessments	
	B. 3. Use evidence to develop descriptions, explanations, predictions, and models.	Making models Labs Research	Pose questions Formative Assessments Summative Assess.	
	B. 4. Think critically and logically to make the relationships between evidence and explanations. (C)	Study other scientists Compare eras Research	Journaling Lab Reports	
	B. 5. Recognize and analyze alternative explanations and predictions. (HN)	Debates Persuasive essays	Research Observations	
	B. 6. Communicate and defend procedures and explanations. (T)	Debates Communicate	Reports Structured controversy	

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

Grade: 6th

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 the basic components and functions of cells, tissues, organs, and organ systems	Labs Microscope Slides Compare contrast cells and systems	Summative assessments Journal Formative assessment	
	A.2. Understand and apply knowledge of how different organisms pass on traits (heredity)	Punnett Squares Phenotypes/genotypes	Simulations Formative assessments	
B. Students can describe and understand life cycles	B.1. Understand and apply knowledge of the functions and interconnections of the major human body systems including the breakdown in structure or function that disease causes	Labs Research Slides Questioning Compare/contrast Venn Diagrams	Lab reports Vocab checks Formative assessments	
C. Students can understand environmental interaction and adaptation	C.1. Understand and apply knowledge of the complementary nature of structure and function and the commonalities among organisms	Outdoor labs Compare/contrast plants and animals Define problems Identify solutions Test solutions	Lab reports Formative assessments Demonstrate conservation strategies	
	C.2. Understand and apply knowledge of: <ul style="list-style-type: none"> • interdependency of organisms, changes in environmental conditions, and survival of individuals and species. • the cycling of matter and energy in ecosystems. 	Outdoor labs Indoor Labs Identify needs for living things Identify characteristics of living things Compare cycles Discussion	Define living things Formative Summative assessments	
	C.3. Understand and demonstrate knowledge of the social and personal implications of environmental issues (PS) (MCGF)	Identify social issues Identify school solutions		

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

Grade:6th

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 the water cycle, including consideration of events that impact groundwater quality	Research Models Labs Discussion	Formative assessments Models Summative assessment	
	A.2. Understand and apply knowledge of earth history based on physical evidence	Research Debate	Summative assessment	
B. Students can understand changes in and around Earth	B.1. Understand and apply knowledge of the structure and processes of the earth system and the processes that change the earth and its surface (G)	Research Labs Compare Contrast Identify dangers Propose solutions	Model changes How and why Lab reports Formative assessments	
	B.2. Understand and apply knowledge of the earth's atmospheric properties and how they influence weather and climate	Accurate measurements Collect data Labs	Formative assessments Vocab check	
C. Students can understand concepts relating to the universe	C.1. Understand and apply knowledge of the components of our solar system	Research Models	Summative assessments Formative assessments	

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

Grade: 6th

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 motions and forces	Labs Research Discussions Models	Boat lab Lab reports Formative assessments	
B. Students can understand and apply the concept of energy	B.1. Understand and apply knowledge of forms of energy and energy transfer	Labs Research Discussion Models	Lab reports Journals Formative/summative	
C. Students can understand and identify properties and changes of matter	C.1. Understand and apply knowledge of: <ul style="list-style-type: none"> • elements, compounds, mixtures, and solutions based on the nature of their physical and chemical properties. • physical and chemical changes and their relationship to the conservation of matter and energy. 	Labs Research Discussion Models Background information	Journaling Lab reports Formative and summative assessments	