

Unit Maps: Grade 4 Science



Physical Properties of Matter	Unit	CHECKPOINT		
		1	2	3
4.3 Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student will explain what it means to say that God created the world and all matter out of nothing at a certain point in time. *.				

Catholic Identity: Integration of Our Faith			
4.1A	display a deep sense of wonder and delight about the natural universe *		
4.1B	describe the unity of faith and reason *		
4.1C	describe relationships, elements, underlying order, harmony, and meaning *		
4.1D	share concern and care for the environment as part of God's creation *		

Learning Process Standards (Tools to Know)		Unit	CHECKPOINT		
			1	2	3
4.2A	plan and conduct investigations				
4.2B	collect information using appropriate scientific tools				

Content		Unit	CHECKPOINT		
			1	2	3
Properties of Matter					
4.3A	measure, compare, and contrast physical properties of matter, including mass, volume, states (solid, liquid, and gas), temperature, magnetism, and the ability to sink or float				
4.3A.1	compare and contrast a variety of mixtures, including solutions				

Learning Process Standards (Ways to Show)		Unit	CHECKPOINT		
			1	2	3
4.2C	record and organize data and observations				
4.2D	communicate observations about investigations				

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Force, Motion, and Energy	Unit	CHECKPOINT		
		1	2	3
4.4 Force, motion, and energy. The student knows that energy exists in many forms and can be observed in cycles, patterns, and systems.				

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Learning Process Standards (Tools to Know)	Unit	CHECKPOINT		
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Content	Unit	CHECKPOINT		
		1	2	3
Forms of Energy				
4.4A differentiate among forms of energy, including mechanical, sound, electrical, light, and thermal				

Electricity				
4.4B demonstrate that electricity travels in a closed path, creating an electrical circuit				
4.4B.1 differentiate between conductors and insulators of thermal and electrical energy				

Force				
4.4C design a descriptive investigation to explore the effect of force on an object such as a push or a pull, gravity, friction, or magnetism				

Learning Process Standards (Ways to Show)	Unit	CHECKPOINT		
		1	2	3
4.2C record and organize data and observations				
4.2D communicate observations about investigations				

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Natural Resources and Changes to Earth's Surface	Unit	CHECKPOINT		
		1	2	3
<p>4.5 Earth and space. The student knows that Earth consists of useful resources and its surface is constantly changing. The student shares care and concern for the environment as part of God's creation through the processes of conservation, preservation, overconsumption, and stewardship. *</p>				

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Learning Process Standards (Tools to Know)	Unit	CHECKPOINT		
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Content	Unit	CHECKPOINT		
		1	2	3
Properties of Soil				
4.5A	examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants			

Changes to Earth's Surface	Unit	1	2	3

Learning Process Standards (Ways to Show)	Unit	CHECKPOINT		
		1	2	3
4.2C	record and organize data and observations			
4.2D	communicate observations about investigations			

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Earth's Cycles and Patterns	Unit	CHECKPOINT		
		1	2	3
4.5 Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student describes God's relationship with man and nature. *				

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Weather				
4.5C	measure, record, and predict changes in weather			
4.5C.1	describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process			
4.5C.2	collect and analyze data to identify sequences and predict patterns of change in shadows, seasons, and the observable appearance of the Moon over time			

Learning Process Standards (Ways to Show)	Unit	CHECKPOINT		
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Interactions of Organisms in Ecosystems	Unit	CHECKPOINT		
		1	2	3
4.6 Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student explains how creation is an outward sign of God’s love. *				

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Food Webs				
4.6A describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web				
4.6A.1 investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food				

Learning Process Standards (Ways to Show)	Unit	CHECKPOINT		
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Adaptations and Behaviors	Unit	CHECKPOINT		
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4.6 Organisms and environments. The student knows that organisms undergo similar life processes and have structures and behaviors that help them survive within their environments and gives examples of the beauty evident in God’s creation. *				

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Adaptations				
4.6B explore how structures and functions enable organisms to survive in their environment				

Inherited Traits and Learned Behaviors				
4.6C explore and describe examples of traits that are inherited from parents to offspring such as eye color and shapes of leaves and behaviors that are learned such as reading a book and a wolf pack teaching their pups to hunt effectively				

Life Cycles				
4.6D explore, illustrate, and compare life cycles in living organisms such as beetles, crickets, radishes, or lima beans				

Learning Process Standards (Ways to Show)	Unit	CHECKPOINT		
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PROCESS STANDARDS: SCIENTIFIC INVESTIGATION AND REASONING		Unit	CHECKPOINT		
			1	2	3
4.2	The student uses scientific practices during laboratory and scientific investigations and uses critical thinking and scientific problem solving to make informed decisions.	Tools to Know			
		Ways to Show			

TOOLS TO KNOW		Unit	CHECKPOINT		
			1	2	3
4.2A	plan and conduct investigations				
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WAYS TO SHOW		Unit	CHECKPOINT		
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