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			
4.2	The student uses scientific practices during laboratory and scientific investigations and uses critical thinking and scientific problem solving to make informed decisions. Explain how science limits its focus to "how" things physically exist and is not designed to answer issues of meaning, the value of things, or the mysteries of the human person. * List the basic contributions of significant Catholics to science. *		
Tools to Know		**Ways to Show**	
4.2A	plan and conduct investigations	4.2C	record and organize data and observations
4.2B	collect information using appropriate scientific tools	4.2D	communicate observations about investigations
		4.2E	represent the natural world using models

Physical Properties of Matter		
3.3	**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. *	
Applied Standards		**Supporting Standards**
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

Force, Motion, and Energy		
4.4	**Force, motion, and energy.** The student knows that energy exists in many forms and can be observed in cycles, patterns, and systems.	
4.4A	differentiate among forms of energy, including mechanical, sound, electrical, light, and thermal	
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
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	

Natural Resources and Changes to Earth's Surface		
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. *	
4.5A	examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants	
4.5B	observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice	

Earth's Cycles and Patterns			
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. *		
4.5C	measure, record, and predict changes in weather	4.5C.1 4.5C.2	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 collect and analyze data to identify sequences and predict patterns of change in shadows, seasons, and the observable appearance of the Moon over time

Interactions of Organisms in Ecosystems			
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. *		
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

Adaptations and Behaviors			
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. *		
4.6B	explore how structures and functions enable organisms to survive in their environment		
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		
4.6D	explore, illustrate, and compare life cycles in living organisms such as beetles, crickets, radishes, or lima beans		