5th Grade

Matter and Energy in Organisms and Ecosystems (1st 9 weeks)			
Standard	Clarification Statement	Activities/Experiments (Investigate and Think Like A Scientist are found in Exploring Science)	Literacy Connections
S.5.GS.5 **Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.**	Clarification Statement: Examples of models could include diagrams and flow charts.		
	S.5.GS.6 **Support an argument that plants get the materials they need for growth chiefly from air and water.**	Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.	
	S.5.GS.7	Emphasis is on the idea that matter that is not food (air, water,	

	Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could	
		include organisms, ecosystems, and the Earth.	
Earth's Systems (2nd 9 weeks)			
Standards	Clarification Statement	Activities/Experiments	Literacy Connections
S.5.GS.8 **Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.**	Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system.		
S.5.GS.9			

Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.			
S.5.GS.10 **Obtain and combine information about ways individual communities use science ideas to protect the**			
	Earth's resources and environment.		
Space Systems: Stars and the Solar System (3rd 9 weeks)			
Standards	Clarification Statement		
S.5.GS.11 **Support an argument that the gravitational force exerted by Earth on objects is directed down.**	"Down" is a local description of the direction that points toward the center of the spherical Earth.		
	S.5.GS.12		

	Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth.		
	S.5.GS.13 **Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.**	Examples of patterns could include the position and motion of Earth with respect to the sun and selected stars that are visible only in particular months.	

Structure and Properties of Matter (4th 9 weeks)			
Standards	Clarification Statement	Activities/Experiments	Literacy Connections
S.5.GS.1 **Develop a model to describe that matter is made of particles too small to be seen**	Examples of evidence could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.		Sinking of the Titanic The World's Ocean
	S.5.GS.2	Examples of reactions or changes could include phase changes,	

	Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	dissolving, and mixing that form new substances.	
	S.5.GS.3 **Make observations and measurements to identify materials based on their properties.**	Examples of materials to be identified could include baking soda and other powders, metals, minerals, and liquids. Examples of properties could include color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility; density is not intended as an identifiable property.	
	S.5.GS.4 **Conduct an investigation to determine whether the mixing of two or more substances results in new substances.**		
Standard: Engineering, Technology, and Applications of Science			

Engineering Design (Ongoing)			
Standards	Clarification Statement	Activities/Experiments	Literacy Connections
S.3-5.ETS.1 **Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.**		**all three standards**	
	S.3-5.ETS.2 **Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.**		
	S.3-5.ETS.3 **Plan and carry out fair tests in which variables are controlled and failure points are**		
		considered to identify aspects of a model or prototype that can be improved.	

*****Special Notes*****	*****Special Notes*****	*****Special Notes*****	
Lab Safety **Students use safe and proper techniques for handling, manipulating, and caring for science materials and treating living organisms humanely.**	Scientific Method The content focus develops early problem solving skills through observing, experimenting and concluding.	Math skills such as data collection, measurement, and graphing are embedded throughout the standards.	