

	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May
Textbook Chapters	Nature of Science and Technology		Human Biology and Health				Motion, Force and Energy			
Other Major Readings										
Essential Questions	How is scientific knowledge created and communicated?		How are organisms structured to ensure efficiency and survival?				What makes objects move the way they do?			
Standards	Scientific Inquiry Scientific Literacy Scientific Numeracy		7.2 Many organisms, including humans have specialized systems that interact with each other to maintain homeostasis				8.1 An objects inertia causes it to continue moving the way it is moving unless acted upon by a force to change its motion (Newton's Laws)			
Major Skills	*Identify questions that can be answered through scientific investigation *Design and conduct appropriate types of investigations * Identify independent and dependent variables *Use mathematical operations to analyze and interpret data	*Read & interpret the credibility of scientific claims from a variety of sources * Use appropriate tools and techniques to gather data *Draw conclusions and identify sources of error Communicate about science in different formats, using relevant science vocabulary, supporting evidence and clear logic	*Describe the basic structure and function of both plant and animal cell and how they support life *Compare and contrast the structure of plant, animal and bacteria cells *Describe the four levels of organization of the human body- cells, tissue, organ and organ system and their interactions with each other	*Explain the basic structure and function of the human skeleton *Compare and contrast the four types of movable joints and relate them to simple machines *Describe the different types muscles and movements in the body *Explain how bones and muscles work together to cause motion	*Describe the function of the cardiovascular system, including the structure of the heart and the path the blood travels. *Compare and contrast the 3 types of blood vessels *Identify the components of blood and other materials that move through the blood stream *Explain respiration and how oxygen and carbon dioxide are exchanged in the lungs	*Identify and label the parts of the digestive system *Illustrate the physical and chemical function of the digestive system in breaking down and processing food. *Explain how the digestive, respiratory and cardiovascular system work together to bring oxygen and nutrients to cells and rid them of waste	*Determine when an object is in motion *Calculate speed *Graph motion in a distance vs. time coordinate plane *Describe velocity and how it differs from speed *Describe three ways an object can accelerate	*Define force, balanced and unbalanced * Describe friction *Design an experiment to investigate frictional force *Describe gravity and factors affecting gravitational attraction	*Describe how an object at rest remains at rest * Describe the relationship between mass of an object the applied force to it and the acceleration that results *F=MxA *Describe and demonstrate Newton's 3 rd law of motion	
Themes/ Topics	Scientific Method	Scientific Method	Organization of the human body and cell structure	Muscular-Skeletal System	Cardiovascular and Respiratory System	Digestion	Motion, Acceleration, Force, Friction and Gravity Newtons's Laws			
Field Trips / Guest Speakers										
Coached Projects		Science Fair Project	Cell Models		"Feel the Beat"		"Shipping and Sliding"			

