Classical Magnet School

Course 8th Grade Science

	Sept	Oct	Nov	Dec	Jan-Mar	Mar-Apr	May-June
Textbook Chapters	Motion, Forces & Energy	The Nature of Science & Technology	Astronomy; Chemical Building Blocks	Chemical Building Blocks	Cells & Heredity	Electricity & Magnetism	Environmental Science
Essential Questions	How can you learn science? What is the relation between energy and work?	What are simple machines and how can they be designed and modified?	What are the properties of the parts of the solar system? How can matter be changed?	What are the periodic properties of the elements?	What is the structure of DNA and what is its role in mitosis? What are the roles of biological components in meiosis? What is the role of genetics in the inheritance of traits?	What influences electricity and how does its use in technology affect our lives?	How is forensics used to investigate and solve crimes? How do general environmental factors affect our world?
Standards	8.1 – An object's inertia causes it to continue moving the way it is moving unless it is acted upon by a force to change its motion. NS.5-8.1 • Abilities necessary to do scientific inquiry. NS.5-8.2 • Transfer of energy	8.4 – In the design of structures there is a need to consider factors such as function, materials, safety, cost and appearance. NS.5-8.5 • Abilities of technological design	8.3 – The solar system is composed of planets and other objects that orbit the sun. NS.5-8.4 • Earth in the solar system NS.5-8.2 • Properties and changes of properties in matter	Materials can be classified as pure substances or mixtures, depending on their chemical and physical properties. NS.5-8.2 • Properties and changes of properties in matter	8.2 – Reproduction is a characteristic of living systems and it is essential for the continuation of every species. NS.5-8.3 • Reproduction and heredity	Energy cannot be created or destroyed; however, energy can be converted from one form to another. The electrical force is a universal force that exists between any two charged objects. NS.5-8.5 • Abilities of technological design	Humans use various sources of energy and all have advantages and disadvantages. NS.5-8.3 • Populations and ecosystems
Themes/ Topics	* Introduction & Safety * Energy & Work	* Simple Machines * Bridges	* Solar System * Changes in Matter	* Elements & The Periodic Table	* DNA & Mitosis * Reproduction & Meiosis	* Electricity & Magnetism	* Environmental Science