SHERWOOD CHARTER SCHOOL

Curriculum Map
Year Long Theme: Power of Relationships
Concept: Scientific Connections Across the Curriculum

8th Grade	September	October	November/December	Janurary	February	March	April/May	June
Component	Earth Scientists Spotlight: Alfred Wegener, Mary Anning			Physical Scientists Spotlight: Sir Isaac Newton, Rosalind Franklin			Life Scientists Spotlight: Robert Hooke, Rachel Carson	
Topic	Scientific Processes and Application in Engineering	Change is Slow: History of the Earth, Time, and The Solar System	Earth and Human Activity: Resiliant, Self-Sustainable Communities	Electricity/Magnetism/Waves and Sound	What goes up, Must come down: Newton's Laws/Energy and Machines (Rollercoaster Unit)	Genetic Mutations	The Code of Life: Evolution/Adaptation/Natural Selection	Summer Science STEM Olympics
Topic Description	Scientific Method, variables, practicing lab report writing, focus on inference and observation as well as graphing. Integration and application of engineering standards.	Earth, Moon, Sun-lunar phases, eclipses sun and moon; role of gravity in the solar system, scale of objects in the solar system The solar system formed from a nebular cloud of dust and gas 4.6 Ga (billion years ago). The Earth has changed through time and and has been affected by both catastrophic (e.g., earthquakes, meteorite impacts, volcanoes) and gradual geologic events (e.g., plate movements, mountain building) as well as the effects of biological evolution (formation of an oxygen atmosphere). Geologic time can be determined through both relative and absolute dating.	Increases in human pop. With consumption of natural resources impacting Earth's systems Students use their research skills to determine all of the ways that global warming can impact life on Earth.	Factors that affect strength of electric and magnetic forces, gravitational interactions are attractive, mass of objects; Forces of a distance fields through space waves-wavelength, frequency, and amplitude; wave properties, electromagnetic radiation; digitalized signals for information transmission	Newton's Third Law; the greater the mass of object, the greater the force; kinetic energy; potential energy	Students will work through a variety of genetics concepts and review/practice different science skills	Common Ancestry and Diversity (fossil record); Anatomical similarities, Comparisions of embryological development, Natural Selection, Selective Breeding, Adaptation	STEM and engineering activities and review
Core Knowledge Correlation	N/A	Gravity, Stars, Galaxies Science Bio: Isaac Newton, Caroline Herschel	N/A	Electricity-flow, charges, static Earth's magnetism Science Bio: Charles Steinmet, James Maxwell, Mary Sommerville Electromagnetic Radiation Properties of waves-speed, frequency, amplitude Science bio: Dorothy Hodgkin	Forces, Motion, Density, Buoyancy, Work, Power, Types of Energy Science Bio: Albert Einstein	N/A	Evolution- Natural Selection, Extinction, Speciation Science Bio: Charles Darwin	N/A