SHERWOOD CHARTER SCHOOL

2016-2017 Middle School Science Curriculum Map
Year Long Theme: The Power of Relationships
Concept: Scientist Focus

7th Grade	September	October	November	December	January	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	The Nature of Science	Earth's Systems are related: Geosphere, Atmosphere, Hydrosphere, Biosphere	Earth and Human Activity: Exploring non-renewable energy sources	Molecules and Compounds	Chemical Reactions		The Everchanging Ecosystems and Biomes		Cells and Plants	STEM Sports
Topic Description	Scientific Method, variables, practicing lab report writing, focus on inference and observation as well as graphing	Energy flowing and matter cycling in all Earth's processes; water's movement causes weathering and erosion, land's changing surface and underground formations, tectonic processes related to ocean floor at trenches, rocks and fossil investigations related to land and water patterns; natural resources; Natural hazards related to geologic forces	Humans depend on Earth's land, ocean, atmosphere and biosphere for many different resources. Minerals, fresh water and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as a result of past geologic processes	structures and properties of matter; atom arrangement; solids with repeating subunits such as crystals	physical and chemical properties; chemcial reactions-original regrouped into new substances; reactants; how substances react chemically; conservation of matter; chemical reactions release or store energy; testing and designing solutions on a device that either releases or absorbs thermal energy by chemcial processes		Interdependent relationships in ecosystems; growth of populations limited due to resource access; Predicting consistent patterns of interactions in different ecosystems in terms of relationship between biotic and abiotic components (i.e.competitive, predatory, mutually benefical, etc); ecosystem dynamics, functioning and resilience; biodiversity and humans, developing possible solutions		tracing movement of matter and energy flow in organisms; energy in chemical processes and everyday life (i.e.photosynthesis and respiration); develop models to describe how food is rearranged through chemical reactions	Review of science topics and engineering
Core Knowledge Correlation	N/A	N/A	N/A	Atomic Structure-Theories of Matter, Start of modern chemistry Science Bio: Demetri Mendelev, Neils Bohr	Chemical Bonds-Metallic, Covalent, Ionic, Oxidation, Reductions, Acids, Bases, Catalyst Science Bio: Lavoisier, Meitner		N/A		Chemistry and Food Respiration-Photosynthesis, animal respiration Bio: Robert Hooke	N/A