

**Curriculum Map
Theme: Power of One**

| 8th Grade | September | October/November | December | January | February | March | April | May | June |
|---------------------------------------|--|------------------|--|--|--|---|--|--|--|
| Component | Power of the Universe | | | Power of Innovation | | | Power of a Life Form | | |
| Topic | Structure of the Universe | | Human Impact | Coaster Physics | Sound Waves and Light Optics | Electricity and Magnetism | Genetics | Evolution | Summer Science STEM Olympics |
| Topic Description | (Seasons, Lunar Phases and Eclipses, Tidal Cycles) (Structure, Solar System, Stars) (Geologic Time Periods, Fossils, Rock Dating, History of Earth's Climate) | | Population Growth Impact on Species Protecting Environment | Start with Energy: Energy Transfer and Transformation Kinetic and Potential Collisions Forces and Motion: Types of Forces Motion Newtonian Physics | types of waves wave properties wave behaviors sound EM Spectrum Communication | magnetic and electric force circuits electromagnets | Mendelian Review Modern Genetics | Theory of Natural Selection Evidence of Evolution Artificial Selection | Review of science topics learned throughout the school year |
| Core Knowledge Correlation | Gravity, Stars, Galaxies Science Bio: Isaac Newton, Caroline Herschel | | | Forces, Motion, Density, Buoyancy, Work, Power, Types of Energy Science Bio: Albert Einstein | | 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 | | Evolution- Natural Selection, Extinction, Speciation Science Bio: Charles Darwin | |
| Essential Questions | How do the motions of the Earth, Moon and Sun affect us? What is the universe and what is Earth's place in it? How do people reconstruct and date events in Earth's planetary history? | | How do humans change the planet ? | How are forces related to energy? | What are the characteristic properties and behaviors of waves? | How is magnetism and electricity related to one another? | How does DNA control growth and function of cells? | How do people figure out that the Earth and life on Earth have changed through time? How do organisms change over time in response to changes in the environment? | |