



**Curriculum Map  
Theme:**

6th Grade	September	October	November	December	January	February	March	April	May	June
<b>Component</b>	Power of the Universe			Power of Innovation		Power of a Life Form				
<b>Topic</b>	The Nature of Science/Mapping Earth	Weather	Human Impact	Engineering and Design Month!	Thermal Energy	Cells	Human Anatomy and Functions	Plants	Amazing Race of Science	
<b>Topic Description</b>	Scientific Method, variables, how to write a lab report, various science skills practice	Describing Weather, Clouds, Pressure Systems, Mapping Weather, Weather and Climate, Hurricanes	Intro to Human Impact, Pollution, Global Warming, Environmental Issues, Protecting Environment	The Engineering and Design Process	Energy & Thermal Energy (What is Heat?, Heat Transfer, Temperature, Phase Change, Temperature Change)	Classes and Types Multicellular Cell Membrane	Skin Bones Muscles Nervous Circulatory and Respiration Digestion Organ System Interactions	Plant needs and anatomy trees reproduction adaptations physiology	Review of science topics learned throughout the school year	
<b>NGSS AND CCSS ALIGNMENT</b>	NGSS: MS-ETS-1-1, MS-ETS-1-3, CCSS: RST.6-8.1, RST.6-8.9, WHST.6-8.7, WHST.6-8.8, WHST.6-8.9	NGSS: MS-ESS2-4, MS-ESS2-5, MS-ESS2-6, MS-ESS3-5 CCSS: RST.6-8.1, RST.6-8.9, WHST.6-8.8, 6.NS.C.5	NGSS: MS-ESS3-3 CCSS: WHST.6-8.7, WHST.6-8.8, 6.RP.A.1, 6.EE.B.6	NGSS: MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4	NGSS: MS-PS3-3, MS-PS3-4, MS-PS3-5 CCSS: RST.6-8.1, RST.6-8.3, WHST.6-8.1, WHST.6-8.7, 6.RPA.1	NGSS: MS-LS1-1, MS-LS1-2, CCSS: RST.6-8.1, RI.6.8, WHST.6-8.1, WHST.6-8.7, WHST.6-8.8, 6.EE.C.9	NGSS: MS-LS1-3, MS-LS1-8 CCSS: RST.6-8.1, RI.6.8, WHST.6-8.1, WHST.6-8.7, WHST.6-8.8, 6.EE.C.9	NGSS: MS-LS1-4, MS-LS1-5, CCSS: RST.6-8.1, RST.6-8.2, RST.6-8.4, RST.6-8.7, RI.6.8, WHST.6-8.1, WHST.6-8.2, WHST.6-8.9, 6.SP.A.2, 6.SP.B.4, 6.SP.B.5	NGSS: MS-ETS-1-1, MS-ETS-1-3,	
<b>Essential Questions</b>	How does the process of scientific investigation contribute to what we know about the world?	What regulates weather and climate?	How do the Earth's surface processes and human activities affect each other?	How do engineers solve problems?	How is energy transferred between objects or systems?	How do the structures of organisms enable life's functions?	How do organisms grow and develop?	How do organisms obtain and use the matter and energy they need to live and grow?		

Curriculum Map Theme:										
7th 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	Nature of Science	Earth's Processes: Atmosphere, Plate Tectonics, Sea Floor Spreading, Types of Fossils Introduction (see note at the bottom)	Human Impact	Atoms	Chemistry		Matter Cycling and Photosynthesis	Ecology		STEM Sports: Science Review
Topic Description	Nature of Science	Plate Tectonics, Seafloor Spreading, Continental Drift  Types of Fossils	Natural Resources and Synthetic Products, Resource Distribution	History of the Atom Atoms Structure Periodic Table of Elements	Elements, Mixtures, Compounds Chemical Bonding Chemical Reactions Chem Equations Types of Reactions		Photosynthesis and Cellular Respiration	Review of ecology definition Feeding and Energy Flow Ecological Roles and Relationships Nutrient Cycling Biomes and Aquatic Ecosystems Environmental Changes Biodiversity		Review of Science Engineering Concepts from the school year
NGSS AND CCSS ALIGNMENT	NGSS: MS-ESS2-1, MS-ESS2-2, MS-ESS2-3 CCSS: RST.6-8.1, RST.6-8.7, RST.6-8.9, WHST.6-8.1, WHST.6-8.2, 7.EE.B.4 MS-ESS3-1, MS-ESS3-2 CCSS: RST.6-8.1, RST.6-8.7, RST.6-8.9, WHST.6-8.1, WHST.6-8.2, 7.EE.B.4 MS-PS1-3 CCSS: RST.6-8.1, RST.6-8.7, RST.6-8.9, WHST.6-8.1, WHST.6-8.2, 7.EE.B.4			NGSS: MS-PS1-1 CCSS: RST.6-8.1, RST.6-8.7, WHST.6-8.8	NGSS: MS-PS1-2, MS-PS1-4, MS-PS1-5, MS-PS1-6 CCSS: RST.6-8.1, RST.6-8.3, RST.6-8.7, WHST.6-8.7		NGSS: MS-LS1-6, MS-LS1-7 CCSS: RST.6-8.1, RST.6-8.2, WHST.6-8.2, WHST.6-8.9	NGSS: MS-LS2-1, MS-LS2-2, MS-LS2-3, MS-LS2-4, MS-LS2-5 CCSS: RST.6-8.1, RST.6-8.7, RST.6-8.8, WHST.6-8.1, WHST.6-8.2, WHST.6-8.9		
Essential Questions	How does the movement of tectonic plates impact the surface of Earth? What are renewable and nonrenewable resources and how can humans use them?			How do scientists build on previous work when developing theories?	What role does chemistry play in the world around us?		How does structure relate to function in living systems from the cellular to the organismic level?	How does a system of living and non-living things operate to meet the needs of the organisms in an ecosystem?		
Phenomenon Anticipatory Set	Saharan Air Layer Phenomenon			crystalized salt gardens Groups will complete the process of growing a crystal salt garden while making connections to molecules	Cycling of Matter phenomenon You Can Light a Match With Just a Rubber Band phenomenon			Star Pearlfish Living in a Sea Cucumber's Bum phenomenon		
Cross Curriculum Integration/Field Trips	Writing- lab reports, summaries, current events Art- foldables, graphic organizers, posters, comics Technology- powerpoint presentations			Math- Graphing, calculating data Writing- lab reports, current events Reading-articles Art- Foldables and graphic organizers	Writing- lab reports, summaries, current events Art- foldables, graphic organizers, posters, comics Technology- powerpoint presentations		Math- Graphing, calculating data Writing- lab reports, current events Art- Foldables and graphic organizers	Eco Foot Print Presentation by Metro Recycling		
Assessment Strategies Formative & Summative	Summative- Quizzes Formative- Exit Tickets			Formative- Exit Tickets Authentic-Atom Building	Summative- Vocab. Quizzes Formative-Exit Tickets		Formative- Exit Tickets Summative- Quiz Authentic- Plant/Animal Cell Story Writing	Summative- Vocab. Quizzes Formative-Exit Tickets Authentic- Ecosystem Quadrama Project		
Primary Sources	CPO Science DSM Science TpT resources			CPO Science Better Lesson Resources	"Chemical Properties and Reactions" Better Lesson Unit "Chemistry" Unit Jennifer Smith Better Lessons <a href="http://betterlesson.com/lesson/639577/gum-droppin-knowledge-about-atoms-and-molecules?grade=&amp;subject=21809">http://betterlesson.com/lesson/639577/gum-droppin-knowledge-about-atoms-and-molecules?grade=&amp;subject=21809</a>		TpT Dissection of a Pickle DSM Plants and Animals "Cells, Structures.." Better Lesson Unit	Better Lesson, "Interdependence of Ecosystems" Unit		
NOTES	7th grade covered some of plate tectonics in 6th grade already (just the different types of plate boundaries so maybe just a review on that part)			All information for both units is located in the "Chemistry Binder"						

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<b>Component</b>	Power of the Universe			Power of Innovation			Power of a Life Form			
<b>Topic</b>	Nature of Science	Earth's Systems: Atmosphere, Hydrosphere (review), Geosphere (review and extension of plate tectonics, rocks and fossils) Human Impact: Natural Resources and Synthetic Products Distribution		Atoms	Chemistry		Photosynthesis and Cellular Respiration	Ecology		Science Review
<b>Topic Description</b>	Review of the scientific method, lab procedures and writing scientifically Learning CER (Claim, Evidence, Reasoning)	Plate Tectonics, Seafloor Spreading, Continental Drift Soil, Minerals, Rocks and Fossil basics (just fossil types found in sedimentary rocks- dinos covered in 8th Earth Science) Natural Resources and Synthetic Products, Resource Distribution		History of the Atom Atomic Structure Periodic Table of Elements	Elements, Mixtures, Compounds Chemical Bonding Chemical Reactions Chem Equations Types of Reactions		Photosynthesis and Cellular Respiration	Review of ecology definition Feeding and Energy Flow Ecological Roles and Relationships Nutrient Cycling Biomes and Aquatic Ecosystems Environmental Changes Biodiversity		Review of Science Engineering Concepts from the school year
<b>Essential Questions</b>	How do the materials in and on the Earth's crust change over time? How does the movement of tectonic plates impact the surface of Earth? What are renewable and nonrenewable resources and how can humans use them?			How do scientists build on previous work when developing theories?	What role does chemistry play in the world around us?		How does structure relate to function in living systems from the cellular to the organismic level?	How does a system of living and non-living things operate to meet the needs of the organisms in an ecosystem?		

**Curriculum Map  
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8th Grade	September	October/November	December	January	February	March	April	May	June
<b>Component</b>	Power of the Universe			Power of Innovation			Power of a Life Form		
<b>Topic</b>	Start with a week or two of Scientific Method (use docs sent via email, there isn't a binder for 8th grade) Unit 1: Astronomy Unit 2: Earth's History		Unit 3: Human Impact	Unit 4: Roller Coaster Physics (may extend into February)	Unit 5: Sound Waves and Light Optics	Unit 6: Electricity and Magnetism	Unit 7: Genetics and Heredity	Unit 8: Evolution, Natural Selection, and Adaptation	Summer Science STEM Olympics
<b>Topic Description</b>	(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	<b>Start with Energy:</b> 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
<b>NGSS AND CCSS ALIGNMENT</b>	NGSS: MS-ESS1-1, MS-ESS1-2, MS-ESS1-3, MS-ESS1-4, MS-PS2-4 CCSS: SL.8.5, RST.6-8.1, RST.6-8.7		NGSS: MS-ESS3-2, MS-ESS3-4, MS-ESS3-5 CCSS: RST.6-8.1, WHST.6-8.2, WHST.6-8.1, WHST.6-8.9	NGSS: MS-PS2-1, MS-PS2-2, MS-PS3-1, MS-PS3-2, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4 CCSS: RST.6-8.1, RST.6-8.3, RST.6-8.7, WHST.6-8.7, SL.8.5, 8.33.A.1, 8.EE.A.2, 8.F.A.3	NGSS: MS-PS4-1, MS-PS4-2, MS-PS4-3 CCSS: RST.6-8.1, RST.6-8.3, WHST.6-8.1, WHST.6-8.7	NGSS: MS-PS2-3, MS-PS2-4, MS-PS2-5 CCSS: RST.6-8.1, RST.6-8.3, WHST.6-8.1, WHST.6-8.7	NGSS: MS-LS3-1, MS-LS4-5 CCSS: RST.6-8.1, RST.6-8.9, WHST.6-8.7, WHST.6-8.8, WHST.6-8.9	NGSS: MS-LS4-1, MS-LS4-2, MS-LS4-3, MS-LS4-4, MS-LS4-5, MS-LS4-6 CCSS: RST.6-8.1, RST.6-8.7, RST.6-8.9, WHST.6-8.2, WHST.6-8.8, WHST.6-8.9, SL.8.1, SL.8.4	Review of standards
<b>Essential Questions</b>	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?	
<b>Phenomenon Anticipatory</b>	"Satellite Blocks our Star" phenomenon Dung Beetles Use Snapshots of Milky Way as GPS phenomenon		Greetings, crew. As you know, our space mission was to find a place that was habitable to humans and set up a self-sustaining and resilient community in that location... warm up	Roller Coasters Phenomenon	Siren phenomena Helium Changes Our Voice	Shark Tracking	photo of variation of eyes between species.	Large population of drought tolerant plants in a given environment Bird of Paradise Dance phenomenon	
<b>Cross Curriculum Integration/Field Trips</b>	Math- solar system distance Writing- Constellation Myths, Adopt a constellation Art- Create models of solar system components- lunar phases, ems, and seasons Technology- Celestial Bodies ppt		Writing- Issues research Technology- Local Environmental Issues ppt Guest Speaker- Conscious Consumption Presentation	Math-speed, distance calculations Art- sketching roller coaster models, electromagnetic spectrums Technology- online Roller coaster simulations		Math- voltage calculations Art- circuit foldables Writing- Lab writing, reflections	Math- Graphing, calculating data Presentations Art- Foldables and graphic organizers	Math- Graphing, calculating data Writing- lab reports Art- Foldables and graphic organizers	
<b>Assessment Strategies Formative &amp; Summative</b>	Formative-Exit Tickets Summative-Vocab Quiz Authentic-Constellation Power Point Presentations		Formative-Exit Tickets Authentic-PSA presentations	Formative-Exit Tickets Summative-Quizzes/Test Authentic- Roller Coaster Building Contest		Formative-Exit Tickets Summative-Quizzes/Test Authentic- Cards	Formative-Exit Tickets Summative- Genetic Mutations Quiz Genetic Mutations Electronic Brochures	Formative - Exit Tickets Summative- Quizzes Authentic- Building Beasts Evolutionary Activity	
<b>Primary Sources</b>	CPO Science Tpt Resources Starquest		Better Lesson Unit- Design A Resilient, Self-sustaining community	Paper roller coasting building materials CPO Science Labs			CPO Science TpT resources DSM Science	Better Lesson "Geologic Time" Unit, "Evolution" Unit Core Knowledge Activities	
<b>NOTES</b>								Take out absolute/radioactive dating information and place in first unit	

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<b>Component</b>	Power of the Universe			Power of Innovation			Power of a Life Form		
<b>Topic</b>	Structure of the Universe and Earth's History		Human Impact	Roller Coaster Physics	Sound Waves and Light Optics	Electricity and Magnetism	Genetics and Heredity	Evolution and Adaptations	End of Year
<b>Topic Description</b>	(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	<b>Start with Energy:</b> 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
<b>Essential Questions</b>	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?	