

Mendon High School 8th grade Science Curriculum Map

Timeline	NGSS And Benchmarks	Learning Targets	Vocabulary	Assessment
1 st quarter September- October	MS.PS2.1 Apply Newton's third law to design a solution to a problem involving the motion of two colliding objects.	I can apply Newton's third law to design a solution to a problem	Acceleration Charge Current Electrical charge Electromagnetic Force	Labs Projects Tests Quizzes
	MS.PS.2.2 Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	I can plan and conduct an experiment to prove that the change in an object depends on the sum of the forces on the object and the mass of the object.	Gravitational interactions Inertia Magnetic field Magnets	
	MS.PS2.3 Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	I can determine factors that affect the strength of electric and magnetic charges.		
	MS.PS2.4 Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.	I can construct and present evidence supporting the argument that gravitational interactions are attractive and depend on the masses of the interacting objects.		
	MS.PS2.5 Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.	I can conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.		

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2 nd Marking period November- January	MS.PS3.4 Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.	I can plan an investigation to determine relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.	Absorption Amplitude Crest Electromagnetic Spectrum Electromagnetic Waves Energy Frequency Infrared Medium Microwaves Radio Waves Reflection Trough Ultraviolet Wavelength X-Rays	Labs Projects Tests Quizzes
	MS.PS3.5 Construct an argument and hold a conversation to support a claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	I can construct an argument and hold a conversation to support a claim that when the kinetic energy of an object changes, energy is transferred to or from the object.		
	MS.PS4.1 Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.	I can use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.		
	MS.PS4.2 Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.	I can develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.		
	MS.PS4.3 Integrate qualitative scientific and technical	I can integrate qualitative scientific and technical information to support the		

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	information to support the claim that digital signals are a more reliable way to encode and transmit information than analog signals.	claim that digital signals are a more reliable way to encode and transmit information than analog signals.		
3 rd Marking Period/January - March	MS.LS4.1 Analyze and interpret patterns within data from the fossil record that demonstrate the existence, diversity, extinction, and change of life forms throughout Earth's history with the assumption that natural laws operate today as in the past.	I can analyze and interpret patterns within data from the fossil record that demonstrate the existence, diversity, extinction, and change of life forms throughout Earth's history with the assumption that natural laws operate today as in the past.	Charles Darwin Evolution Extinction Fossil record Geologic time Gradualism law of superposition relative dating Natural selection adaptation Scale Species Vestigial structure	Labs Projects Tests Quizzes
	MS.LS4.2 Apply scientific ideas to explain the anatomical similarities and differences among modern organisms and between modern and fossil organisms so I CAN make inferences about evolutionary relationships.	I can apply scientific ideas to explain the anatomical similarities and differences among modern organisms and between modern and fossil organisms so I CAN make inferences about evolutionary relationships.		
	MS.LS4.3 Analyze pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy.	I can analyze pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy.		

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	<p>MS.LS4.4 Devise an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.</p>	<p>I can devise an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.</p>		
	<p>MS.LS4.4 Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.</p>	<p>I can use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.</p>		
4 th Marking Period/March - June	<p>MS.ESS1.1 Develop and use a model of the Earth-sun moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.</p>	<p>I can develop and use a model of the Earth-sun moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.</p>	<p>Astronomy Crescent Cyclic Patterns Galaxy Galileo Galilei Gibbous Gravity Lunar Eclipse Lunar Phases Model Revolve Rotate Seasons Solar Eclipse Solar System Universe Waning Waxing</p>	<p>Labs Projects Tests Quizzes</p>
	<p>MS.ESS1.2 Develop and use a model to describe the role of gravity in the motions within the galaxies and the solar system.</p>	<p>I can develop and use a model to describe the role of gravity in the motions within the galaxies and the solar system.</p>		
	<p>MS.ESS1.3 Analyze and interpret data to determine skill properties of objects in the solar system.</p>	<p>I can analyze and interpret data to determine skill properties of objects in the solar system.</p>		