

Next Generation Science Standards					
MS-PS1	Matter and Its Interactions				
MS-PS2	Motion and Stability: Forces and Interactions				
MS-PS3	Energy				
MS-PS4	Waves and their Applications in Technologies for Information Transfer				
MS-ETS1	Engineering Design				
Technology					
SMART Board, Elmo, computer, iPads, Apple TV, YouTube					
Standards	Essential Questions	Content	Skills	Assessment	Resources
Scientific Method MS-ETS1	Scientific Method How can the scientific method be used to solve a question or problem? How are formulas applied to science?	Scientific Method -Question and inferences -Hypothesis -Research and Experiment -Data -Result analysis -Conclusion -Lab safety -Formulas and practical applications	Scientific Method -Apply steps of scientific method -Demonstrate proficiency in use of formulas and units	Scientific Method -Labs -Quizzes -Tests	Scientific Method - <i>Elevate Science Physical</i> by Pearson (2019) -Lab Kit
Matter and Its Interactions MS-PS1	Matter and Its Interactions How do atomic particles interact? How do atoms behave differently in the three states of matter? How do different atoms interact?	Matter and Its Interactions -Atomic structure -Periodic table -Properties of matter -Chemical reactions -Conservation of matter -Phase changes of matter at molecular level -Thermal energy	Matter and Its Interactions -Identify and locate subatomic particles and their relationships -Understand patterns and groups located on the periodic table -Know the properties that differentiate phases of matter -Balance simple chemical equations -Distinguish between ionic and covalent bonds -Determine the difference between endothermic and exothermic energy	Matter and Its Interactions -Labs -Quizzes -Tests	Matter and Its Interactions - <i>Elevate Science Physical</i> by Pearson (2019) -Lab Kit

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Standards	Essential Questions	Content	Skills	Assessment	Resources
Motion and Stability MS-PS2	Motion and Stability How are forces and motion related?	Motion and Stability -Motion: speed, velocity, acceleration -Forces: friction, balanced vs. unbalanced -Newton's three laws of motion -Newton's law of universal gravitation -Work -Simple machines -Formulas and practical applications	Motion and Stability -Understand the relationships between types of motion -Describe force in relation to motion -Demonstrate and explain Newton's three laws of motion and law of universal gravitation -Explain work in terms of force and distance -Identify the six types of simple machines -Know the difference between work input and output -Understand the efficiency of machines -Demonstrate how machines make work easier -Demonstrate proficiency in use of formulas and units	Motion and Stability -Labs -Quizzes -Tests	Motion and Stability - <i>Elevate Science Physical</i> by Pearson (2019) -Lab Kit
Energy MS-PS3	Energy How are matter and energy related?	Energy -Kinetic and potential -Momentum -Thermal energy -Energy transformation -Magnetism: electric -Formulas and practical applications	Energy -Explain and demonstrate the differences between kinetic and potential energies -Show how kinetic energy is related to mass and speed -Construct an instrument to minimize or maximize thermal energy transfer -Know how magnetic force is related to electric energy -Demonstrate proficiency in use of formulas and units	Energy -Labs -Quizzes -Tests	Energy - <i>Elevate Science Physical</i> by Pearson (2019) -Lab Kit

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Standards	Essential Questions	Content	Skills	Assessment	Resources
Waves MS-PS4	Waves How do waves transfer energy?	Waves -Transverse and longitudinal waves -Properties: amplitude, frequency, wavelength, wave height -Sound waves -Light waves -Application of waves	Waves -Compare properties and types of waves -Discuss characteristics of sound in relation to frequency and amplitude -Discuss and give examples of the Doppler Effect -Model how light waves are reflected, absorbed, or transmitted through various materials -Examine how waves are used in daily lives	Waves -Labs -Quizzes -Tests	Waves - <i>Elevate Science Physical by Pearson (2019)</i> -Lab Kit