

Unit Title	Standard	Disciplinary Core Idea	RSU #38 Outcomes
PHYSICAL SCIENCE	Physical Science, 6-8	PS1 Matter and its Interactions	MS.PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures
			MS.PS1-5 Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved
		PS-2 Motion & Stability: Forces and Interactions	MS.PS2-1 Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects
			MS.PS2-2 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
		PS3 Energy	MS.PS3-1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.
			MS.PS3-3 Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer
		PS4 Waves and their Applications in Technologies for Information	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
LIFE SCIENCE	Life Science, 6-8	LS1 From Molecules to Organisms: Structures and Processes	MS.LS1-3 Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells
			MS.LS1-5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms
		LS2 Ecosystems: Interactions, Energy, and Dynamics	MS.LS1-7 Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism
			MS.LS2-3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem
		LS 3 Heredity: Inheritance and Variation of Traits	MS.LS2-4 Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations
			MS-LS 4-4 Construct 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
		LS4 Biological Evolution: Unity and Diversity	MS-LS 4-6 Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.

EARTH & SPACE SCIENCE	Earth and Space Science, 6-8	ESS1 Earth's Place in the Universe	MS.ESS1-1 Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns and seasons.
		ESS2 Earth's Systems	MS.ESS1-2 Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.
			MS.ESS1-3 Analyze and interpret data to determine scale properties of objects in the solar system
			MS.ESS2-1 Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process
			MS.ESS2-2 Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.
		ESS3 Earth and Human Activity	MS.ESS2-4 Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity
			MS.ESS2-6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates
			MS.ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes
			MS.ESS3-2 Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects