

e = mission suited for extension activities	ORION'S QUEST MISSION NGSS MATRIX		Worms in Space	Silicate Gardens	Butterflies in Space	Fruit Flies in Space	MESA Mission - Wee Worms in Space	Spiders in Space	Plant Growth in Space	Managing Microbes in Space	Stem on Station	Stem Cell Studies on Station	CuRE in Space - Cancer Microgravity Research Experiment
		HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.				e							
Physical Science													
Matter and Its Interactions													
	HS-PS1-1. Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.			X									
	HS-PS1-2. Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.			X									
	HS-PS1-3. Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.			e									
	HS-PS1-5. Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.			X									
	HS-PS1-6. Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.			e									
	HS-PS1-7. Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.			X									
Motion and Instability													
	HS-PS2-6. Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.			e									
Engineering Design Process													
	HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.		e	e	e	e	e	e	e	e	e	e	e
	HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.		X	X	X	X	X	X	X	X	X	X	X
	HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.		X	X	X	X	X	X	X	X	X	X	X
DCIs MIDDLE SCHOOL - Disciplinary Core Ideas													
Earth and Space Science (basis of all missions)													
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 of lunar phases, eclipses of the sun and moon, and seasons.		e	e	e	e	e	e	e	e	e	e	e
	MS-ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.		X	X	X	X	X	X	X	X	X	X	X
Earth's Systems													
	MS-ESS2-3. Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.								e				
Earth and Human Activity													

