7	INTRODUCTION TO CHEMISTRY			FORCES AND ENERGY				THE NATURE OF LIFE	
Standard	Description	Common Assessment	Standard	Description		Common Assessment	Standard	Description	Common Assessment
MS. PS1-1	Develop models to describe the atomic composition of simple molecules and extended structures.	States of Matter Model Activity	MS. PS2-1	Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.	Forces	Phenomena Investigation	MS. LS1-4	Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively	Flower Seeking Polinators Lab
MS. PS1-2	Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	What is a Chemical Reaction Lesson 6.1	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.	Forces	Phenomena Investigation	MS. LS1-5	Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.	Environmental vs. Genetic Factors Claim-Evidence-Reasoning Prompts
MS. PS1-3	Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.	Synthetic Materials Brochure	MS. PS2-3	Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	Forces	Static Electricy Station Lab	MS. LS2-1	Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem	Won't you be my urchin? Activity
MS. PS1-4	Develop a model that predicts and describes changes in particle motion, temperature,and state of a pure substance when thermal energy is added or removed.	State of Matter Model Activity	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.	Forces	Newton's Laws Skateboard Phet Activity	MS. LS2-2	Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	Won't you be my urchin? Activity
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.	What is a Chemical Reaction Lesson 6.1	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.	Forces	Static Electricy Station Lab			
MS. PS1-6	Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.	Chemical Reactions & Engineering Design Lesson 6.11	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.	Energy	Newton's Laws Skateboard Phet Activity			
			MS. PS3-2	Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.	Energy	Newton's Laws Skateboard Phet Activity			
			MS. PS3-3	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer	Energy	Chemical Reactions & Engineering Design Lesson 6.11			
			MS. PS3-4	Plan and investigation to determine the relationship 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.	Energy	Chemical Reactions & Engineering Design Lesson 6.11			
			MS. PS3-5	Construct, use and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	Energy	Newton's Laws Skateboard Phet Activity			