Forces and Energy

Standard	Description	Common Assessment
MS-PS2-1	Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects	Phenomena Investigation
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.	Phenomena Investigation
MS-PS2-3	Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	Static Electricity Station Lab
MS-PS2-4	Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the mass of interacting objects.	Newton's Laws Skateboard Phet Activity
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.	Static Electricity Station Lab
MS-PS3-1	Construct and interpret graphical displays of data to describe the relationship of kinetic energy to the mass of an object and the speed of an object.	Newton's Laws Skateboarding 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.	Newton's Laws Skateboarding Phet Activity

MS-PS3-3	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	Chemical Reactions & Engineering Design Lesson
MS-PS3-4	Plan an 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.	Chemical Reactions & Engineering Design Lesson
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.	Newton's Laws Skateboard Phet Activity

Cells and Heredity- Life Science

Standard	Description	Common Assessment
MS- LS1-1	Cpmdict an investigation to provide evidence that living things are made up of cells; either one cell or many different number or types of cells.	Plant, Animal, Bacteria Lab
MS-LS1-2	Develop and use a model to describe the function of a cell as a whole and the ways to parts of cells contribute to the function of a whole cell	Cell Organelle Project
MS-LS3-1	Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.	DNA Paper Model Lab
MS-LS4-5	Gather and synthesize information about the	Stem Cell Station Activities

	technologies that have change the way humans influence the inheritance of desired traits in organisms.	
MS-LS4-1	Analyze and interpret data for patters in the fossil record that documents the existence, diversity, extinction, and change of life forms throughout the history of life on Earht under the assumption that natural laws operate today as in the past.	Geological Timeline Project
MS-LS4-3	Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy.	Comparative Embryology