

ADW Grades 6-8
Physical Science Standards
2017

Matter and its Interactions	Standards
SC.6-8.PS.1-1	Analyze and interpret data to describe and classify matter as pure substances or mixtures based on composition.
SC.6-8.PS.1-2	Develop and use simple atomic models to illustrate the relative position and charge of protons, neutrons, and electrons in elements.
SC.6-8.PS.1-3	Obtain and use information about elements (including chemical symbol, atomic number, atomic mass, and group or family) to describe the organization of the Periodic Table.
SC.6-8.PS.1-4	Develop models that predict and describe changes in particle motion, density, temperature, and state of a pure substance when thermal energy is added or removed or when changes in pressure occur.
SC.6-8.PS.1-5	Analyze the properties of substances before and after substances interact to determine if a chemical reaction has occurred.
SC.6-8.PS.1-6	Balance chemical equations to show how the total number of atoms for each element does not change in chemical reactions and as a result, mass is always conserved in a closed system.
Motions and Forces	Standards
SC.6-8.PS.2-1	Plan and conduct controlled investigations to explore Newton's first law of motion (Law of Inertia) and how different forces (gravity, friction, push and pull) affect the velocity of an object.
SC.6-8.PS.2-2	Analyze and interpret data to show the relationship between force and mass and action and reaction forces.
SC.6-8.PS.2-3E	Construct a device that uses one or more of Newton's laws of motion and use mathematics and computational thinking to explain how motion, acceleration, force, and mass are affecting the device.
SC.6-8.PS.2-4	Describe the motion of an object graphically showing the relationship between time and position.
SC.6-8.PS.2-5	Create models to demonstrate the factors that affect the strength of electric and magnetic forces.
Energy and Waves	Standards
SC.MS.PS.3-1	Investigate a process in which energy is changed from one form to another; provide evidence that the total amount of energy does not change.
SC.6-8.PS.3-2	Investigate the properties of light, sound, and other energy waves and how they are reflected, absorbed, and transmitted through materials and space.
SC.6-8.PS.3-3E	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.