

**ADW Grades 6-8  
Physical Science Standards  
2017**

<b>Matter and its Interactions</b>	<b>Standards</b>
<b>SC.6-8.PS.1-1</b>	Analyze and interpret data to describe and classify matter as pure substances or mixtures based on composition.
<b>SC.6-8.PS.1-2</b>	Develop and use simple atomic models to illustrate the relative position and charge of protons, neutrons, and electrons in elements.
<b>SC.6-8.PS.1-3</b>	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.
<b>SC.6-8.PS.1-4</b>	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.
<b>SC.6-8.PS.1-5</b>	Analyze the properties of substances before and after substances interact to determine if a chemical reaction has occurred.
<b>SC.6-8.PS.1-6</b>	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.
<b>Motions and Forces</b>	<b>Standards</b>
<b>SC.6-8.PS.2-1</b>	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.
<b>SC.6-8.PS.2-2</b>	Analyze and interpret data to show the relationship between force and mass and action and reaction forces.
<b>SC.6-8.PS.2-3E</b>	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.
<b>SC.6-8.PS.2-4</b>	Describe the motion of an object graphically showing the relationship between time and position.
<b>SC.6-8.PS.2-5</b>	Create models to demonstrate the factors that affect the strength of electric and magnetic forces.
<b>Energy and Waves</b>	<b>Standards</b>
<b>SC.MS.PS.3-1</b>	Investigate a process in which energy is changed from one form to another; provide evidence that the total amount of energy does not change.
<b>SC.6-8.PS.3-2</b>	Investigate the properties of light, sound, and other energy waves and how they are reflected, absorbed, and transmitted through materials and space.
<b>SC.6-8.PS.3-3E</b>	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.