



ADW GRADE 6-8 PHYSICAL SCIENCE STANDARDS: PRIORITY ORDER **2017**

PS.1	Matter and It Interactions	Priority*
SC.6-8.PS.1-1	Analyze and interpret data to describe and classify matter as pure substances or mixtures based on composition.	1
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.	1
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.	1
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.	2
SC.6-8.PS.1-5	Analyze the properties of substances before and after substances interact to determine if a chemical reaction has occurred.	2
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.	2



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PS.2	Motion and Forces	Priority*
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.	1
SC.6-8.PS.2-2	Analyze and interpret data to show the relationship between force and mass and action and reaction forces.	1
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.	2
SC.6-8.PS.2-4	Describe the motion of an object graphically showing the relationship between time and position.	2
SC.6-8.PS.2-5	Create models to demonstrate the factors that affect the strength of electric and magnetic forces.	3



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PS.3	Energy and Wave	Priority*
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.	1
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.	1
SC.6-8.PS.3-3E	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	2
	*Priority of Standards: Priority 1: standards that every student is required to achieve by the end of grade 8. Priority 2: standards that students should be able to achieve by the end of grade 8, given sufficient instructional time. Priority 3: standards that support Tier 1 and 2 standards, but that may be omitted if time in the curriculum is insufficient	