



# M/J Physical Science (Course #2003010 Advanced #2003020)



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Quarter	Big Idea	Benchmark Description	Suggested Pacing Days*	Assessments
First Quarter (39 days)	Properties of Matter	1 <a href="#">SC.8.P.8.7</a> - Explore the atomic theory by recognizing that atoms are the smallest unit of an element and are composed of subatomic particles (electrons surrounding a nucleus containing protons and neutrons).	4	<a href="#">Exemplar 1A</a> <a href="#">Exemplar 1B</a>
		2 <a href="#">SC.8.P.8.5</a> , <a href="#">SC.8.P.8.6</a> - There are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter. Elements are grouped in the periodic table according to similarities of their properties.	4	
		3 <a href="#">SC.8.P.8.5</a> , <a href="#">SC.8.P.8.9</a> - Mixtures (including solutions) and pure substances.	4	<a href="#">Exemplar 2A</a> <a href="#">Exemplar 2B</a>
		4 <a href="#">SC.8.P.8.8</a> - Properties of compounds, including acids, bases, and salts	4	
		5 <a href="#">SC.8.P.8.4</a> , <a href="#">SC.8.P.8.1</a> - Characteristic physical properties that can be demonstrated or measured: for example, density; thermal or electrical conductivity; solubility; magnetic properties; melting and boiling points; and know that these properties are independent of the amount of the sample. Motion of particles in solids, liquids, and gasses.	4 (19 days)	
Second Quarter (36 days)	Changes in Matter	6 <a href="#">SC.8.P.8.4</a> , <a href="#">SC.8.P.8.9</a> Characteristic physical properties that can be demonstrated or measured: for example, density; thermal or electrical conductivity; solubility; magnetic properties; melting and boiling points; and know that these properties are independent of the amount of the sample.	3	<a href="#">Exemplar 3A</a> <a href="#">Exemplar 3B</a>
		7 <a href="#">SC.8.P.8.2</a> , <a href="#">SC.8.P.8.3</a> Weight and mass, recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass. Densities of various materials through measurement of their masses and volumes.	4	
	Energy Transfer and Transformations	8 <a href="#">SC.8.P.9.2</a> , <a href="#">SC.8.P.9.1</a> , <a href="#">SC.8.P.9.3</a> - Physical changes and chemical changes. Law of Conservation of Mass - demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes including how temperature influences chemical changes.	4	<a href="#">Exemplar 4A</a> <a href="#">Exemplar 4B</a>  <a href="#">Exemplar 5A</a> <a href="#">Exemplar 5B</a>
		9 <a href="#">SC.7.P.11.2</a> , <a href="#">SC.6.P.11.1</a> , <a href="#">SC.7.P.11.3</a> - Transformation of energy from one form to another. Law of Conservation of Energy - differentiating between potential and kinetic energy and kinetic energy is transformed into potential energy and vice versa. Energy cannot be created nor destroyed, only changed from one form to another	4	
		10 <a href="#">SC.7.P.11.4</a> , <a href="#">SC.7.P.11.1</a> - Heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature. Adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.	3 (18 days)	
Third Quarter (34 days)	Forms of Energy	11 <a href="#">SC.7.P.10.3</a> , <a href="#">SC.7.P.10.2</a> - Light waves, sound waves, and other waves move at different speeds in different materials.	4	<a href="#">Exemplar 6A</a> <a href="#">Exemplar 6B</a>
		12 <a href="#">SC.7.P.10.1</a> , <a href="#">SC.8.E.5.11</a> - Light can be reflected, refracted, and/or absorbed. Identify and compare characteristics of the electromagnetic spectrum, such as wavelength, frequency, use, and hazards, and recognize its application to an understanding of planetary images and satellite photographs.	3	
	Forces and Changes in Motion	13 <a href="#">SC.6.P.13.1</a> - Types of forces, including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.	3	<a href="#">Exemplar 7A</a> <a href="#">Exemplar 7B</a>
		14 <a href="#">SC.6.P.13.2</a> , <a href="#">SC.8.P.8.2</a> Law of Gravity - recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are. Weight and mass, recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.	3	
15 <a href="#">SC.6.P.13.3</a> - Unbalanced force acting on an object changes its speed, or direction of motion, or both.		3		
Motion of Objects	16 <a href="#">SC.6.P.12.1</a> - Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship	4 (17 days)		
Fourth	SSA Prep	17 <a href="#">SSA Prep- Just in Time/ Drill Down</a>		



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Quarter (27 days)**	After SSA	18	<a href="#">Bridge to Biology</a>
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*\*The days provided for each unit/topic is an estimate that may be adjusted by subject-level PLCs based on student achievement data. The days are based upon **every other day scheduling** and should be adjusted, if necessary, based upon a daily format. The recommended days shown are less than the actual days for each quarter to allow for additional time for routines, testing, absences, remediation and outside considerations.*

*\*\* This does not include the days in May or June due to testing schedules and end of year events.*

