

Grade 8 Science Pacing Guide 1st & 2nd Nine Weeks

Unit & Timeline:	Unit 1 (Week 1)	Unit 2 (Weeks 2-3)	Unit 3 (Weeks 3-4)
Genre:	Matter and Its Interactions	Matter and Its Interactions	Matter and Its Interactions
Big Idea:	Identifying Physical & Chemical Properties of Matter	Particle Motion	Atomic Structure & Periodic Table Organization
Standards:	Priority: ALCOS 1: Plan and carry out investigations to support the claim that pure substances can be described and defined by their properties, including solubility, electrical conductivity, and density.	Priority: ALCOS 2: Develop and manipulate models to explain changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed from a system.	Priority: ALCOS 4: Obtain and communicate information from the periodic table, including atomic number, number of electrons and neutrons, average atomic mass, groups and periods, to illustrate the structure and composition of different elements.
			Supporting: ALCOS 4a: Analyze and interpret data to differentiate among elements based on their properties and classify the elements as metals, nonmetals, or metalloids.

Grade 8 Science Pacing Guide 3rd & 4th Nine Weeks				
Unit & Timeline:	Unit 4 (Week 4-5)	Unit 5 (Weeks 5-6)	Unit 6 (Weeks 6-7)	Unit 7 (Weeks 8-9)
Genre:	Motion & Stability: Forces and Interactions	Energy	Energy	Waves and Their Applications in Informational Technology Transfer
Big Idea:	Newton's Laws	Kinetic and Potential Energy	Energy Conservation & Transformations	Waves Properties & Information Transfer
Standards:	Priority: ALCOS 11: Use models to demonstrate each of Newton's laws of motion and explain the effect of net force acting on objects.	Priority: ALCOS13: Analyze graphical displays of data to describe the relationship of mass and velocity of an object to its kinetic energy (KE). ALCOS 14: Use models to construct an explanation of how a system of objects may contain varying amounts of potential energy, including gravitational, elastic, and chemical.	Priority: ALCOS 15: Use models to construct an explanation of how energy is transformed but still conserved. ALCOS 16: Develop and use a model to construct an explanation of how electrical energy is transferred and transformed.	Priority: ALCOS 17: Use models of mechanical and electromagnetic waves to qualitatively describe the relationships among wave properties, including amplitude, wavelength, and frequency. ALCOS 18: Construct an argument from evidence that digital and analog signals encode and transmit information differently.
	Supporting: ALCOS 11a: Use mathematical representations to explain how the sum of external forces on an object and the object's mass affect its acceleration.			Supporting: ALCOS 17a: Use models to compare and contrast light and sound wave behaviors, including reflections, refraction, diffraction, and speed as waves propagate and interact with matter.