

Physical Science Pacing Guide

6.8 and 6.9	Meaningful Watershed Educational Experiences: The student will investigate and understand that land and water have roles in watershed systems The student will investigate and understand that humans impact the environment and individuals can influence public policy decisions related to energy and the environment <i>These will be embedded throughout the year through the learning activities with the James River Association.</i>	10-15 days and embedded throughout the year
SOL #	NW1 - Topic/Unit	Suggested Time Frame
PS 1	Unit 1: Scientific and Engineering Practices (steps of the scientific method, graphing, independent and dependent variables, metric measurements, accuracy/precision, quantitative vs qualitative)	15 days and embedded throughout the year
PS 2a, c	Unit 2: Atomic Theory and the Kinetic Molecular Theory (composition of matter, subatomic particles, matter interactions) <i>Embed 6.6: The student will investigate and understand that water has unique physical properties and has a role in the natural and human-made environment.</i>	10 days
PS 3a, b	Unit 3: Chemical and Physical properties of Matter (physical states of matter, properties of matter, elements, compounds and mixtures, endothermic and exothermic reactions) <i>Embed 6.5: The student will investigate and understand that all matter is composed of atoms</i>	20 days
SOL #	NW 2 - Topic/Unit	Suggested Time Frame
PS 1	Unit 1: Scientific and Engineering Practices	Embedded throughout the year
PS. 4	Unit 4: Periodic Table (symbols, atomic numbers, atomic mass, groups, periods, metals, metalloids, and nonmetals)	15 days

PS 3c, d	Unit 5: Chemical Bonding and Chemical Equations (ionic and covalent bonding, balancing equations, and conservation of matter)	10 days
PS 2b	Unit 6: Physical and Chemical Properties Prediction (valence electrons, energy levels, metals, metalloids, and nonmetals)	10 days
SOL #	NW3 - Topic/Unit	Suggested Time Frame
PS 1	Unit 1: Scientific and Engineering Practices	Embedded throughout the year
PS 5	Unit 7: Forms of Energy and Transformations (potential and kinetic energy, energy transfer and transformation) <i>Embed 6.4: The student will investigate and understand that there are basic sources of energy and that energy can be transformed.</i>	15 days
PS 8	Unit 8: Force and Motion (work, position time, Newton's laws)	15 days
PS 6	Unit 9: Waves and Sound (longitudinal and transverse waves, wave interactions, wave energy)	10 days
PS 7	Unit 10: Light and Electromagnetic Spectrum (light wave characteristics, visible light, UV, infrared, radio, x-rays, gamma rays)	5 days
SOL #	NW 4 - Topic/Unit	Suggested Time Frame
PS 1	Unit 1: Scientific and Engineering Practices	Embedded throughout the year
PS 7	Unit 10: Light and Electromagnetic Spectrum (reflection, refraction, interference, diffraction and geometric optics)	5 days
PS 9	Unit 11: Electricity and Magnetism (static electricity, electric circuits, magnetic fields and effects, voltage, resistance and current)	15 days
Review & Assessment	Science SOLs & All Skills Listed Above	25 days