

COURSE AT A GLANCE - Sheltered Physical Science

There are 12 components of our Sheltered Physical Science curriculum. They are numbered below (and in no particular order).

Semester 1		Semester 2	
Unit 1: Matter	Standards	Unit 1: Motion	Standards
Students will be able to explain how the particles behave in the different states of matter. Students will analyze a phase change diagram as thermal energy is added or removed.	HS-PS1-5	Students will be able to distinguish the difference between speed and velocity. Students will calculate momentum, and understand the Law of conservation of momentum.	MS-PS2-2 HS-PS2-2
Unit 2: History and Structure of the Atom	Standards	Unit 2: Forces	Standards
Students will be able to explain how the model of the atom has changed over time. They will build a model of the structure of the atom and model isotopes of different atoms.	MS-PS1-1	Students will be able to distinguish between Newton's Laws of Motions, as well as understand the relationship between force, mass, and acceleration	HS-PS2-1
Unit 3: Periodic Table	Standards	Unit 3: Work and Energy	Standards
Students will be able to explain how the periodic table is organized, describe the properties of metals, nonmetals, and metalloids, and give examples of elements in different families.	HS-PS1-1	Students will know the difference between Kinetic Energy and Potential Energy, and be able to calculate both forms.	MS-PS3-2 HS-PS3-2
Unit 4: Periodic Table Trends	Standards	Unit 4: Thermal Energy	Standards
Students will use the Periodic Table to determine the similarities between families. Students will be able to explain how atomic size changes within a group, and how the reactivity of the elements changes within a group.	HS-PS1-2	Students will calculate changes in thermal energy, and recognize the differences between types of heat transfer.	HS-PS3-4
Unit 5: Chemical Reactions	Standards	Unit 5: Magnets	Standards
Students will be able to identify the reactants and the products in a chemical reaction and determine how a chemical reaction satisfies the law of conservation of mass.	HS-PS1-7	Students will understand how magnetic poles interact. Students will learn why some materials are magnetic but others are not.	HS-PS3-5
		Unit 6: Waves	Standards

		Students will explain how transverse waves differ from longitudinal waves. Students will be able to explain how wavelength and period are related, as well as the relationship between frequency and wavelength.	HS-PS4-1
		Unit 7: Sound	Standards
		Students will be able to explain how sound travels through different mediums and name things that affect the speed of sound.	HS-PS4-1