Science 9	
1st Semester Priorities	2nd Semester Priorities
HS-PS2-1: Forces & Motion ● Collect, graph, & analyze data to show the relationship between mass and acceleration when force is applied. Use F = ma	HS-ESS1-5: Plate Tectonics ● Use plate tectonics to help explain the ages of ocean crust and continental crust rocks.
HS-PS2-3: Forces & Motion ● Design a device that minimizes the force on an object during a collision.	HS-ESS2-1: Plate Tectonics ● Develop a model to show how Earth's processes create continental and ocean-floor features such as mountains, valleys, trenches, and ridges.
HS-PS3-1: Energy ● Describe how energy cannot be created or destroyed but it can change forms.	HS-ESS2-4: Earth Systems ● Use a model to show how changes in Earth's systems can create changes in climate.
HS-PS3-3: Energy ● Model energy being converted from one form to another. (Ex. gravitational potential energy to kinetic energy)	HS-ESS2-6: Model of the Carbon Cycle ● Develop a model to show how carbon cycles between the hydrosphere, atmosphere, geosphere, and biosphere.
HS-PS2-5: Electricity & Magnetism ● Create simple series and parallel circuits. ● Investigate how an electric current can create a magnetic field and a magnetic field can create an electric current.	HS-ESS3-1: Natural Resources ● Describe how the availability of natural resources has been impacted by human activity. ● Evaluate solutions for managing natural resources.
HS-PS1-1 Element Project ● Understand how atoms are made of protons, neutrons, and electrons, and how these particles are arranged in the atom. ● Observe the patterns of the periodic table.	HS-ESS3-4: Human Impacts ● Create and evaluate a solution that reduces human impact on natural systems.
HS-ESS1-3: Stars ● Describe how stars create energy through nuclear fusion. ● Communicate how stars produce different elements on the periodic table.	HS-PS3-5: Climate Change ● Analyze data to create an evidence-based prediction of future global climate change and its impacts.

Chemistry	
1st Semester Priorities	2nd Semester Priorities
HS-PS1-1: Atoms & The Periodic Table ● Understand how atoms are made of protons, neutrons, and electrons, and how these particles are arranged in the atom. ● Learn about how atoms bond together to form molecules through ionic, covalent, and metallic bonds.	HS-PS1-5: Reaction Rates ● Explain how changing the temperature or amount of reactants affects how quickly a reaction can happen
HS-PS1-2: Chemical Reactions ● Explore how substances interact and change to form new substances in chemical reactions.	HS-PS1-6: Equilibrium ● Learn about equilibrium in chemical reactions and how it relates to the forward and reverse reactions reaching a balance.
HS PS1-4: Energy of Chemical Reactions ● Model how the energy released or absorbed in a chemical reaction depends on the total energy stored in the bonds of the substances involved.	HS-PS1-7: Conservation of Mass ● Balance chemical reactions. ● Describe atoms, moles, and molar mass of components of a chemical reaction. ● Use math to show that mass is unchanged in a chemical reaction.
HS-PS1-8: Nuclear Chemistry ● Understand the structure of the nucleus, types of nuclear decay, and applications of nuclear chemistry, such as nuclear energy and radioactive dating.	HS-PS2-6: Molecular Structure ● Communicate why molecular structure is important in the use of everyday materials.
	HSPS 3-4: Thermodynamics ● Plan and carry out an investigation to show that when two components with different temperatures are mixed together, the heat spreads out evenly between them.

Physics	
1st Semester Priorities	2nd Semester Priorities
HS-PS2-1: Forces & Motion ● Analyze data that supports the claim of Newton's second law of motion. ● Use F = ma	HS-PS2-4: Gravity & Electricity ● Predict how objects are pulled together by gravity or pushed apart by electric charges. ● Use $F_g = -G\frac{m1m2}{d^2}$ ● $F_e = k\frac{q1q2}{d^2}$
HS-PS2-2: Forces & Motion ● Use math to support the claim that total momentum of a system is conserved. ● Use p = mv	HS-PS2-5: Electricity & Magnetism ● Investigate how an electric current can create a magnetic field and a magnetic field can create an electric current.
HS-PS2-3: Forces & Motion ● Design, evaluate, and improve a device that minimizes the force on an object during a collision. ● Use FΔt = mΔv	HS-PS3-5: Electricity & Magnetism ● Create a model to show how two objects can affect each other with electricity or magnets, to observe how they push or pull on each other.
HS-PS3-1: Energy ● Calculate the change in energy of a system when inputs and outputs are known. ● Use PE = mgh ● Use KE = $\frac{1}{2}mv^2$	HS-PS4-1: Waves ● Use math to show the relationship between frequency, wavelength, and speed of waves traveling through different mediums. ● Use v = fλ
HS PS3-3: Energy ● Design, evaluate, and improve a device that converts one form of energy to another form of energy.	HS-PS4-2: Waves ● Evaluate information that displays electromagnetic radiation as a wave model or as a particle model.