

Essential standards for Physical Science

1. Students will be able to analyze and interpret data using force, mass, and motion using mathematical representations.
HS-PS2.1 Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.
2. Students will apply Newtons 1st, 2nd, and 3rd laws while understanding motion using mathematical representations.
HS-PS2-2 Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.
3. Students will be able to demonstrate the flow of electric charges in a circuit and the processes needed to make electricity.
HS-PS2-5 Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.
4. Students will be able to analyze data and investigate the properties of waves.
HS-PS4-1
Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.
5. Students will demonstrate knowledge of the properties and structure of our understanding of the atom.
HS-PS1-2
Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, it trends in the periodic table, and knowledge of the patterns of chemical properties.
6. Students will compare and contrast elements' properties by their arrangement in the Periodic Table.
HS-PS1-1
Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.
7. Students will distinguish the characteristics and components of radioactivity.
HS-PS1-8
Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.
8. Students will be able to analyze and interpret data of renewable and non-renewable energy sources.
PS3.A: Definitions of Energy and **PS3.B:** Conservation of Energy and Energy Transfer