



High School Chemistry Essential Standards

Essential Standards Quick Guide

Essential standards are explicitly taught, assessed more than once, and targeted for intervention if students have not yet reached proficiency. Assessments can be both formative and summative. Interventions are implemented within the classroom to support students who are not yet proficient.

All Idaho Content Standards are detailed in the Essential Standards Extended Guide. For the complete standards booklets and for further clarification on supporting content, explanations of standards, and assessment limits please utilize the Idaho Content Standards page. [Idaho Content Science Standards](#)

Essential Standards
Structure and Properties of Matter
HS-PSC-1.1 Develop models to describe the atomic composition of simple molecules and extended structures.
HS-PSC-1.2 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.
HS-PSC-1.3 Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrostatic forces between particles.
HS-PSC- 1.4 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 the various modes of radioactive decay.
Chemical Reactions
PS-PSC-2.1 Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.
HS-PSC-2.3 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.
HS-PSC-2.4 Use mathematical representations to support the claim that the number and type of atoms, and therefore mass, are conserved during a chemical reaction.
Energy
HS-PSC-3.1 Ask questions to clarify the idea that electromagnetic radiation can be described either by a wave model or a particle model.

Essential Standards
HS-PSC-3.2 Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.
HS-PC-3.5 Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).

For Questions Contact

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