

Chemistry

Quarter 1 Standards

1. **Essential HS.P1U1.1:** I can develop and use models to explain the relationship of the structure of atoms to patterns and properties observed within the Periodic Table and describe how these models are revised with new evidence.
2. **PlusHS.Chem.P1U1.1:** I can develop and use models to demonstrate how changes in the number of subatomic particles (protons, neutrons, electrons) affect the identity, stability, and properties of the element.
3. **PlusHS.Chem.P1U1.2:** I can obtain, evaluate, and communicate the qualitative evidence supporting claims about how atoms absorb and emit energy in the form of electromagnetic radiation.
4. **PlusHS.Chem.P1U1.3:** I can analyze and interpret data to develop and support an explanation for the relationships between kinetic molecular theory and gas laws.
5. **Incorporated Earth Science Standard: HS.E1U1.11:** Analyze and interpret data to determine how energy from the sun affects weather patterns and climate.
6. **Incorporated Earth Science Standard: HS.E1U1.13:** Evaluate explanations and theories about the role of energy and matter in geologic changes over time.
7. **Incorporated Earth Science Standard: HS.E2U1.15:** Construct an explanation based on evidence to illustrate the role of nuclear fusion in the life cycle of a star.

Quarter 2 Standards

1. **Essential HS.P1U1.2:** I can develop and use models for the transfer or sharing of electrons to predict the formation of ions, molecules, and compounds in both natural and synthetic processes.
2. **Incorporated Earth Science Standard: HS.E1U1.12:** Develop and use models of the Earth that explains the role of energy and matter in Earth's constantly changing internal and external systems. (abundance of liquid water, combination of properties)
3. **Essential HS.P1U3.4:** I can obtain, I can evaluate, and communicate information about how the use of chemistry related technologies have had positive and negative ethical, social, economic, and/or political implications.
4. **PlusHS.Chem.P1U3.8:** I can engage in argument from evidence regarding the ethical, social, economic, and/or political benefits and liabilities of fission, fusion, and radioactive decay.
5. **Incorporated Earth Science Standard: Essential HS.E1U3.14:** The composition of the Earth and its atmosphere and the natural and human processes occurring within them shape the Earth's surface and its climate.

Quarter 3 Standards

1. **Essential HS.P1U3.4:** I can obtain, I can evaluate, and communicate information about how the use of chemistry related technologies have had positive and negative ethical, social, economic, and/or political implications.
2. **PlusHS.Chem.P1U3.8:** I can engage in argument from evidence regarding the ethical, social, economic, and/or political benefits and liabilities of fission, fusion, and radioactive decay.
3. **Incorporated Earth Science Standard: HS.E1U3.14:** The composition of the Earth and its atmosphere and the natural and human processes occurring within them shape the Earth's surface and its climate.
4. **Essential HS.P1U1.3:** I can ask questions, plan, and carry out investigations to explore the cause and effect relationship between reaction rate factors.
5. **PlusHS.Chem.P1U1.4:** I can develop and use models to predict and explain forces within and between molecules.
6. **PlusHS.Chem.P1U1.5:** I can plan and carry out investigations to test predictions of the outcomes of various reactions, based on patterns of physical and chemical properties.
7. **PlusHS.Chem.P1U1.6:** I can construct an explanation, design a solution, or refine the design of a chemical system in equilibrium to maximize production.
8. **PlusHS.Chem.P1U1.7:** I can use mathematics and computational thinking to determine stoichiometric relationships between reactants and products in chemical reactions.
9. **Incorporated Earth Science Standard: Essential E1U3.14:** Engage in argument from evidence about the availability of natural resources, **occurrence of natural hazards**, changes in climate and **human activity** and how they influence each other (Carbon dioxide levels).

Quarter 4 Standards

1. **Essential HS.P1U3.4:** I can obtain, I can evaluate, and communicate information about how the use of chemistry related technologies have had positive and negative ethical, social, economic, and/or political implications.
2. **PlusHS.Chem.P1U3.8:** I can engage in argument from evidence regarding the ethical, social, economic, and/or political benefits and liabilities of fission, fusion, and radioactive decay.
3. **Incorporated Earth Science Standard: Essential HS.E1U3.14:** The composition of the Earth and its atmosphere and the natural and human processes occurring within them shape the Earth's surface and its climate.