

Next Generation Science Standards Alignment

Matter and Its Interactions (Physical Sciences)

- **MS-PS1-1:** Develop models to describe the atomic composition of simple molecules and extended structures.
- **MS-PS1-2:** Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.
- **MS-PS1-4:** Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.
- **MS-PS1-5:** Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.

Earth and Human Activity

- **MS-ESS3-3:** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
- **MS-ESS3-4:** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

Engineering Design

- **MS-ETS1-1:** Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution.
- **MS-ETS1-2:** Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

Science and Engineering Practices (SEPs)

- Asking Questions and Defining Problems
- Developing and Using Models
- Planning and Carrying Out Investigations
- Analyzing and Interpreting Data
- Obtaining, Evaluating, and Communicating Information