

MAINE SCIENCE AND ENGINEERING STANDARDS

5-PS1 Matter and Its Interactions

5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.

Further Explanation: Examples of evidence could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water. Investigate the science behind creating Maine maple sugar.

Developing and Using Models, Structure and Properties of Matter, Scale, Proportion, and Quantity

5-PS1-2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.

Further Explanation: Examples of reactions or changes could include phase changes, dissolving, and mixing that form new substances. Investigate the conservation of mass when making fake snow and how the crystals form.

Using Mathematics and Computational Thinking, Structure and Properties of Matter, Chemical Reactions, Cause and Effect

5-PS1-3 Make observations and measurements to identify materials based on their properties.

Further Explanation: Examples of materials to be identified could include baking soda and other powders, metals, minerals, and liquids. Examples of properties could include color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility; density is not intended as an identifiable property. Possibly examine Maine minerals.

Planning and Carrying out Investigations, Structure and Properties of Matter, Scale, Proportion and Quantity

5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

Planning and Carrying out Investigations, Chemical Reactions, Cause and Effect