Platte County School District #2

Science Standards

5th Grade

2017-2018 School Year

Quarter 1: Scientific Method and Engineering Design

3-5-ETS1-1: Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

3-5-ETS1-2: Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

3-5-ETS1-3: Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Quarter 2: Structure and Properties of Matter

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. [Clarification statement: Examples of reactions or changes could include phase changes, dissolving, and mixing that form new substances.] [Assessment boundary: Assessment does not include distinguishing mass and weight.]

5-PS1-3: Make observations and measurements to identify materials based on their properties. [Clarification statement: 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.] [Assessment boundary: Assessment does not include density or distinguishing mass and weight.]

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

Quarter 3: Matter and Energy in Organisms and Ecosystems

5-LS2-1: Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification statement: Emphasis is on the idea that matter that is not food (such as air, water, decomposed material in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment boundary: Assessment does not include molecular explanations.]

Quarter 4: Earth and Space Systems

5-ESS2-1: Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. [Clarification statement: Examples could include the influence of the ocean on ecosystems, landform shapes, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system.] [Assessment boundary: Assessment is limited to the interactions of two systems at a time.]