Garbology

Performance Expectations	Connections Between EP&Cs, CCCs, and SEPS	Clarifications for DCIs	Relevant EEI Units
K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. **2-PS1-1** Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. **2-PS1-2** Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. **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. **5-PS1-3** Make observations and measurements to identify	**Targeted Environmental Principles & Concept(s)** **Principle IV: There are no Permanent or Impermeable Boundaries that Prevent Matter from Flowing Between Systems** The exchange of matter between natural systems and human societies affects the long-term functioning of both. Concept A. The effects of human activities on natural systems are directly related to the quantities of resources consumed and to the quantity and characteristics of the resulting byproducts. Concept B. The byproducts of human activity are not readily prevented from entering natural systems and may be beneficial, neutral, or detrimental in their effect. Concept C. The capacity of natural systems to adjust to human-caused alterations depends on the nature of the system as well as the scope, scale,	**Targeted Disciplinary Core Idea(s)** **K-ESS3-3 Human Impacts on Earth Systems** Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. **2-PS1-1 Structure and Properties of Matter** Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. **2-PS1-2 Structure and Properties of Matter** Different properties are suited to different purposes. **5-PS1-2 Structure and Properties of Matter; Chemical Reactions** The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish; No matter what reaction or change in properties occurs, the total weight of the substances does not change. (Boundary: Mass and weight are not distinguished at this grade level.) **5-PS1-3 Structure and Properties of Matter** Measurements of a variety of properties can be	K: A Day in My Life; The World Around Me 1: People and Places 2: The Earth Rocks; From Field to Table; The Dollars and Sense of Food Production 4: Plants: The Ultimate Energy Resource; The Flow of Energy Through Ecosystems; Life and Death with Decomposers; Microorganisms and the Human World For Elementary EEI units K-5

One Cool Earth (OCE) supports the integration of Next Generation Science Standards (NGSS) three dimensional learning and the Environmental Principles & Concepts (EP&Cs) in their lesson planning. In recognition of A Blueprint for Environmental Literacy and the California State Board of Education, OCE uses the *CA Science Framework*.

materials based on their properties. **5-LS2-1** Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	and duration of the activity and the nature of its byproducts. **Targeted Crosscutting Concept(s)** Energy and Matter Stability & Change Patterns **Targeted Science and Engineering Practice(s)** Asking Questions Defining Problems Construct Explanations and Designing Solutions Planning and Carrying out Investigations Analyzing and Interpreting Data Using Mathematics and Computational Thinking	used to identify materials. (Boundary: At this grade level, mass and weight are not distinguished, and no attempt is made to define the unseen particles or explain the atomic-scale mechanism of evaporation and condensation.) **5-LS2-1 Interdependent Relationships in Ecosystems; Cycles of Matter and Energy Transfer in Ecosystems** The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as "decomposers." Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem; Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment.	