



Waste Reduction & Recycling

Resources

6. Sources of energy and materials differ in amounts, distribution, usefulness, and the time required for their formation. As a basis for understanding this concept:
 - a. Students know the utility of energy sources is determined by factors that are involved in converting these sources to useful forms and the consequences of the conversion process.
 - b. Students know different natural energy and material resources, including air, soil, rocks, minerals, petroleum, fresh water, wildlife, and forests, and know how to classify them as renewable or nonrenewable.
 - c. Students know the natural origin of the materials used to make common objects.

Composting

Ecology (Life Sciences)

5. Organisms in ecosystems exchange energy and nutrients among themselves and with the environment. As a basis for understanding this concept:
 - a. Students know energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis and then from organism to organism through food webs.
 - b. Students know matter is transferred over time from one organism to others in the food web and between organisms and the physical environment.
 - c. Students know populations of organisms can be categorized by the functions they serve in an ecosystem.
 - d. Students know different kinds of organisms may play similar ecological roles in similar biomes.
 - e. Students know the number and types of organisms an ecosystem can support depends on the resources available and on abiotic factors, such as quantities of light and water, a range of temperatures, and soil composition.

Stormwater Urban Runoff

Shaping Earth's Surface

2. Topography is reshaped by the weathering of rock and soil and by the transportation and deposition of sediment. As a basis for understanding this concept:
 - a. Students know water running downhill is the dominant process in shaping the landscape, including California's landscape.
 - b. Students know rivers and streams are dynamic systems that erode, transport sediment, change course, and flood their banks in natural and recurring patterns.



California Science Standards linked with Generation Earth Service Learning Projects: 6th Grade Science

- c. Students know beaches are dynamic systems in which the sand is supplied by rivers and moved along the coast by the action of waves.
- d. Students know earthquakes, volcanic eruptions, landslides, and floods change human and wildlife habitats.

Heat (Thermal Energy) (Physical Science)

- 3. Heat moves in a predictable flow from warmer objects to cooler objects until all the objects are at the same temperature. As a basis for understanding this concept:
 - a. Students know energy can be carried from one place to another by heat flow or by waves, including water, light and sound waves, or by moving objects.

ALL GENERATION EARTH PROJECTS CAN ALSO BE LINKED TO THE GRADE 6 INVESTIGATION AND EXPERIMENTATION SCIENCE STANDARDS (Section 7).

- 7. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
 - a. Develop a hypothesis.
 - b. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.
 - c. Construct appropriate graphs from data and develop qualitative statements about the relationships between variables.
 - d. Communicate the steps and results from an investigation in written reports and oral presentations.
 - e. Recognize whether evidence is consistent with a proposed explanation.
 - f. Read a topographic map and a geologic map for evidence provided on the maps and construct and interpret a simple scale map.
 - g. Interpret events by sequence and time from natural phenomena (e.g., the relative ages of rocks and intrusions).
 - h. Identify changes in natural phenomena over time without manipulating the phenomena (e.g., a tree limb, a grove of trees, a stream, a hill slope).