

LINKS TO CALIFORNIA SCIENCE STANDARDS**Grade Four****Life Sciences**

- 2.a. Students know plants are the primary source of matter and energy entering most food chains.
- 2.b. Students know producers and consumers (herbivores, carnivores, omnivores, decomposers) are related
 - in food chains and food webs and may compete with each other for resources in an ecosystem.
- 2.c. Students know decomposers, including many fungi, insects, and microorganisms, recycle matter from
 - dead plants and animals.
- 3.a. Students know ecosystems can be characterized by their living and nonliving components.
- 3.b. Students know that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all.
- 3.d. Students know that most microorganisms do not cause disease and that many are beneficial.

Investigation and Experimentation

- 6.a. Students will differentiate observation from inference (interpretation) and know scientist's explanations
 - come partly from what they observe and partly from how they interpret their observations.
- 6.b. Measure and estimate the weight, length, or volume of objects.
- 6.c. Students will formulate and justify predictions based on cause-and-effect relationships.
- 6.d. Students will conduct multiple trials to test a prediction and draw conclusions about the relationships between predictions and result.
- 6.e. Students will construct and interpret graphs for measurements.
- 6.f. Students will follow a set of written instructions for a scientific investigation.

Grade Five**Physical Sciences**

- 1.a. Students know that during chemical reactions the atoms in the reactants rearrange to form products with different properties.
- 1.f. Students know differences in chemical and physical properties of substances are used to separate mixtures and identify compounds.

Life Sciences

- 2.a. Students know many multicellular organisms have specialized structures to support the transport of materials.
- 2.c. Students know the sequential steps of digestion and the roles of teeth and the mouth, esophagus, stomach, small/large intestine, and colon in the function of the digestive system.
- 2.f. Students know plants use carbon dioxide and energy from sunlight to build molecules of sugar and release oxygen.
- 2.g. Students know plant and animal cells break down sugar to obtain energy, a process resulting in carbon
 - dioxide and water.

Earth Sciences

- 3.a. Students know most of Earth's water is present as salt water in the oceans, which cover most of Earth's surface.
- 3.d. Students know that the amount of fresh water located in rivers, lakes, and underground sources, and glaciers is limited and that its availability can be extended by recycling and decreasing water use.
- 3.e. Students know the origin of the water used by their local communities.

Investigation and Experimentation

- 6.a. Students will classify objects in accordance with appropriate criteria.
- 6.d. Student will identify the dependent and controlled variables in an investigation.

- 6.e. Students will identify a single independent variable in a scientific investigation and explain how this variable can be used to collect information to answer a question about the results of the experiment.
- 6.f. Students will select appropriate tools and make quantitative observations.
- 6.g. Students will record data by using appropriate graphic representations (including charts, graphs, and labeled diagrams) and make a specific conclusion.
- 6.h. Students will draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.