

**Grade Three:**

***Science Content Standards***

*Life Sciences*

3. Adaptations in physical structure or behavior may improve an organism's chance for survival. As a basis for understanding this concept:

- a. Students know plants and animals have structures that serve different functions in growth, survival, and reproduction.
- b. Students know examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands.
- c. Students know living things cause changes in the environment in which they live: some of these changes are detrimental to the organism or other organisms, and some are beneficial.
- d. Students know when the environment changes, some plants and animals survive and reproduce; others die or move to new locations.
- e. Students know that some kinds of organisms that once lived on Earth have completely disappeared and that some of those resembled others that are alive today.

*Earth Sciences*

4. Objects in the sky move in regular and predictable patterns. As a basis for understanding this concept:

- b. Students know the way in which the Moon's appearance changes during the four-week lunar cycle.
- d. Students know that Earth is one of several planets that orbit the Sun and that the Moon orbits Earth.
- e. Students know the position of the Sun in the Sky changes during the course of the day and from season to season.

***History-Social Science Content Standards***

3.1 Students describe the physical and human geography and use maps, tables, graphs, photographs, and charts to organize information about people, places, and environments in a spatial context.

- 1. Identify geographical features in their local region (e.g., deserts, mountains, valleys, hills, coastal areas, oceans, lakes).

2. Trace the ways in which people have used the resources of the local region and modified the physical environment (e.g., a dam constructed upstream changed a river or coastline).

3.2 Students describe the American Indian nations in their local region long ago and in the recent past.

1. Describe national identities, religious beliefs, customs, and various folklore traditions.

2. Discuss the ways in which physical geography, including climate, influenced how the local Indian nations adapted to their natural environment (e.g., how they obtained food, clothing, tools).

4. Discuss the interaction of new settlers with the already established Indians of the region.

3.3 Students draw from historical and community resources to organize the sequence of local historical events and describe how each period of settlement left its mark on the land.

1. Research the explorers who visited here, the newcomers who settled here, and the people who continue to come to the region, including their cultural and religious traditions and contributions.

2. Describe the economies established by settlers and their influence on the present-day economy, with emphasis on the importance of private property and entrepreneurship.

3. Trace why their community was established, how individuals and families contributed to its founding and development, and how the community has changed over time, drawing on maps, photographs, oral histories, letters, newspapers, and other primary sources.

3.5 Students demonstrate basic economic reasoning skills and an understanding of the economy of the local region.

1. Describe the ways in which local producers have used and are using natural resources, human resources, and capital resources to produce goods and services in the past and the present.

#### **4<sup>th</sup> Grade Standards:**

#### **Science Content Standards**

#### *Life Sciences*

2. All organisms need energy and matter to live and grow. As a basis for understanding this concept:

- a. Students know plants are the primary source of matter and energy entering most food chains.
- b. Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem.
- c. Students know decomposers, including many fungi, insects, and microorganisms, recycle matter from dead plants and animals.

3. Living organisms depend on one another and on their environment for survival. As a basis for understanding this concept:

- a. Students know ecosystems can be characterized by their living and nonliving components.
- 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.
- c. Students know many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter.
- d. Students know that most microorganisms do not cause disease and that many are beneficial

### *Earth Sciences*

5. Waves, wind, water, and ice shape and reshape Earth's land surface. As a basis for understanding this concept:

- a. Students know some changes in the earth are due to slow processes, such as erosion, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.
- b. Students know natural processes, including freezing and thawing and the growth of roots, cause rocks to break down into smaller pieces.
- c. Students know moving water erodes landforms, reshaping the land by taking it away from some places and depositing it as pebbles, sand, silt, and mud in other places (weathering, transport, and deposition).

### *History-Social Science Content Standards*

4.1 Students demonstrate an understanding of the physical and human geographic features that define places and regions in California.

4. Identify the locations of the Pacific Ocean, rivers, valleys, and mountain passes and explain their effects on the growth of towns.

5. Use maps, charts, and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation.

4.2 Students describe the social, political, cultural, and economic life and interactions among people of California from the pre-Columbian societies to the Spanish mission and Mexican rancho periods.

1. Discuss the major nations of California Indians, including their geographic distribution, economic activities, legends, and religious beliefs; and describe how they depended on, adapted to, and modified the physical environment by cultivation of land and use of sea resources.

### **5<sup>th</sup> Grade Standards:**

#### ***Science Content Standards***

##### *Life Sciences*

2. Plants and animals have structures for respiration, digestion, waste disposal, and transport of materials. As a basis for understanding this concept:

f. Students know plants use carbon dioxide (CO<sub>2</sub>) and energy from sunlight to build molecules of sugar and release oxygen.

g. Students know plant and animal cells break down sugar to obtain energy, a process resulting in carbon dioxide (CO<sub>2</sub>) and water (respiration).

##### *Earth Sciences*

3. Water on Earth moves between the oceans and land through the processes of evaporation and condensation. As a basis for understanding this concept:

a. Students know most of Earth's water is present as salt water in the oceans, which cover most of Earth's surface.

b. Students know when liquid water evaporates, it turns into water vapor in the air and can reappear as a liquid when cooled or as a solid if cooled below the freezing point of water.

- c. Students know water vapor in the air moves from one place to another and can form fog or clouds, which are tiny droplets of water or ice, and can fall to Earth as rain, hail, sleet, or snow.
- d. Students know that the amount of fresh water located in rivers, lakes, underground sources, and glaciers is limited and that its availability can be extended by recycling and decreasing the use of water.
- e. Students know the origin of the water used by their local communities.

### ***History-Social Science Content Standards***

5.1 Students describe the major pre-Columbian settlements, including the cliff dwellers and pueblo people of the desert Southwest, the American Indians of the Pacific Northwest, the nomadic nations of the Great Plains, and the woodland peoples east of the Mississippi River.

- 1. Describe how geography and climate influenced the way various nations lived and adjusted to the natural environment, including locations of villages, the distinct structures that they built, and how they obtained food, clothing, tools, and utensils.
- 2. Describe their varied customs and folklore traditions.

### **6<sup>th</sup> Grade Standards:**

#### ***Science Content Standards***

##### *Earth Sciences*

- 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.
  - 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.

##### *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.