California Pacific Charter Schools • Community Collaborative Schools

California Standards Grade Three Science

Physical Sciences

1. Energy and matter have multiple forms and can be changed from one form to another.

Does your student

□ know energy comes from the Sun to Earth in the form of light.
□ know sources of stored energy take many forms, such as food, fuel, and batteries.
□ know machines and living things convert stored energy to motion and heat.
□ know energy can be carried from one place to another by waves, such as water waves and sound waves, by electric current, and by moving objects.
□ know matter has three forms: solid, liquid, and gas.
□ know evaporation and melting are changes that occur when the objects are heated.
□ know that when two or more substances are combined, a new substance may be formed with properties that are different from those of the original materials.
□ know all matter is made of small particles called atoms, too small to see with the naked eye.
□ know people once thought that earth, wind, fire, and water were the basic elements that made up all matter.Science experiments show that there are more than 100 different types of atoms, which are presented on the periodic table of the elements.

2. Light has a source and travels in a direction.

Does your student

□ know sunlight can be blocked to create shadows.
□ know light is reflected from mirrors and other surfaces.
□ know the color of light striking an object affects the way the object is seen.
□ know an object is seen when light traveling from the object enters the eye.

Life Sciences

3. Adaptations in physical structure or behavior may improve an organism's chance for survival.

Does your student

□ know plants and animals have structures that serve different functions in growth, survival, and reproduction.
□ know examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands.
□ 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.
□ know when the environment changes, some plants and animals survive and reproduce; others die or move to new locations.
□ 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.

Does your student

□ know the patterns of stars stay the same, although they appear to move across the sky nightly, and different stars can be seen in different seasons.
□ know the way in which the Moon's appearance changes during the four week lunar cycle.
□ know telescopes magnify the appearance of some distant objects in the sky, including the Moon and the planets. The number of stars that can be seen through telescopes is dramatically greater than the number that can be seen by the unaided eye.
□ know that Earth is one of several planets that orbit the Sun and that the Moon orbits Earth.
□ know the position of the Sun in the sky changes during the course of the day and from season to season.

Investigation and Experimentation

5. 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.

Does your student

□ Repeat observations to improve accuracy and know that the results of similar scientific investigations seldom turn out exactly the same because of differences in the things being investigated, methods being used, or uncertainty in the observation.
□ Differentiate evidence from opinion and know that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed.
□ Use numerical data in describing and comparing objects, events, and measurements.

□ Predict the outcome of a simple investigation and compare the result with the prediction.
□ Collect data in an investigation and analyze those data to develop a logical conclusion.