



California Content Standards for Discovery School Activity

Kindergarten

Earth Sciences

- 3 Earth is composed of land, air, and water. As a basis for understanding this concept:
- Students know changes in weather occur from day to day and across seasons, affecting Earth and its inhabitants.

First Grade

Physical Sciences

- 1 Materials come in different forms (states), including solids, liquids, and gases. As a basis for understanding this concept:
- Students know solids, liquids, and gases have different properties.
 - Students know the properties of substances can change when the substances are mixed, cooled, or heated.

Earth Sciences

- 3 Weather can be observed, measured, and described. As a basis for understanding this concept:
- Students know how to use simple tools (e.g., thermometer, wind vane) to measure weather conditions and record changes from day to day and across the seasons.
 - Students know the sun warms the land, air, and water.

Investigation and Experimentation

- 4 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:
- Draw pictures that portray some features of the thing being described.
 - Record observations and data with pictures, numbers, or written statements.
 - Record observations on a bar graph.
 - Describe the relative position of objects by using two references (e.g., above and next to, below and left of).
 - Make new observations when discrepancies exist between two descriptions of the same object or phenomenon.

Second Grade

Investigation and Experimentation

- 4 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:
- Make predictions based on observed patterns and not random guessing.
 - Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units.
 - Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight).

- d. Write or draw descriptions of a sequence of steps, events, and observations.
- e. Construct bar graphs to record data, using appropriately labeled axes.
- g. Follow oral instructions for a scientific investigation.

Third Grade

Physical Sciences

- 1 Energy and matter have multiple forms and can be changed from one form to another. As a basis for understanding this concept:
 - a. Students know energy comes from the Sun to Earth in the form of light.
 - e. Students know matter has three forms: solid, liquid, and gas.
 - f. Students know evaporation and melting are changes that occur when the objects are heated.

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. Students will:
 - a. 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.
 - b. 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.
 - c. Use numerical data in describing and comparing objects, events, and measurements.
 - d. Predict the outcome of a simple investigation and compare the result with the prediction.
 - e. Collect data in an investigation and analyze those data to develop a logical conclusion.

Fourth Grade

Investigation and Experimentation

- 6 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. Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations.
 - b. Measure and estimate the weight, length, or volume of objects.
 - c. Formulate and justify predictions based on cause-and-effect relationships.
 - d. Conduct multiple trials to test a prediction and draw conclusions about the relationships between predictions and results.
 - e. Construct and interpret graphs from measurements.
 - f. Follow a set of written instructions for a scientific investigation.

Fifth Grade

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.