Grade 1: Physical Sciences, Earth Sciences, Investigation and Experimentation

California State Science Content Standards

Covered in:
Hands-on science labs, demonstrations, & activities. Investigation and Experimentation. Lesson Plans.
Presented by Climate Change Education .org during

Mobile Climate Science Labs

• Professional development for teachers
  • In school presentations
  • Climate science and hands-on education specialists presenting alongside teachers and teaching assistants
  • Presentations at CSTA, NSTA, AAAS conferences
• For school field trips, as presented at local science museums

As aligned with existing science content standards, adopted 1997
Referencing: Science Framework for California Public Schools
  Adopted by the California State Board of Education
  Published by the California Department of Education

Enabling teachers and schools to provide outstanding education called for in the standards under Investigation and Experimentation sections. Requirements for a minimum of 20-25% hands-on education in science.

Index of Standards Alignment—other grades, courses and standards:
http://climatechangeeducation.org/labs/k12_standards/index.html

Themes: http://climatechangeeducation.org/labs/themes/index.html

In the following, sections of standards noted are part of one or more lab theme. Sections highlighted in green are a primary focus of one or more hands-on science lab.

Updated April 27, 2011
1st Grade

Standard Set 1 Physical Sciences

1. Materials come in different forms (states), including solids, liquids, and gases. As a basis for understanding this concept: a. Students know solids, liquids, and gases have different properties.

   1. b. Students know the properties of substances can change when the substances are mixed, cooled, or heated

Standard Set 2 Life Sciences

2. Plants and animals meet their needs in different ways. As a basis for understanding this concept:

   2. b. Students know both plants and animals need water, animals need food, and plants need light.

   2. e. Students know roots are associated with the intake of water and soil nutrients and green leaves are associated with making food from sunlight.

Standard Set 3 Earth Sciences

3. Weather can be observed, measured, and described. As a basis for understanding this concept:

   3. a. 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.

   3. b. Students know that the weather changes from day to day but that trends in temperature or rain (or snow) tend to be predictable during a season.

   3. c. Students know the sun warms the land, air, and water.

Standard Set 4 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:

   4. a. Draw pictures that portray some features of the thing being described.
4.  **b. Record observations** and data with pictures, numbers, or written statements.

4.  c. Record observations on a **bar graph**.

4.  d. **Describe the relative position of objects** by using two references (e.g., above and next to, below and left of).

4.  e. **Make new observations when discrepancies exist between two descriptions of the same object or phenomenon.**