

Grade 2: 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*

<http://www.cde.ca.gov/ci/sc/cf/documents/scienceframework.pdf>

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.

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2nd Grade

Standard Set 1 Physical Sciences

1. **g.** *Students know* sound is made by vibrating objects and can be described by its pitch and volume.

Standard Set 2 Life Sciences

2. **e.** *Students know* light, gravity, touch, or environmental stress can affect the germination, growth, and development of plants.

Standard Set 3 Earth Sciences

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.** Make predictions based on observed patterns and not random guessing.
- 4. **b.** Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units.
- 4. **c.** Compare and sort common objects according to two or more physical attributes (e.g., color, shape, texture, size, weight).
- 4. **d.** Write or draw descriptions of a sequence of steps, events, and observations.
- 4. **e.** Construct bar graphs to record data, using appropriately labeled axes.
- 4. **f.** Use magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects.
- 4. **g.** Follow oral instructions for a scientific investigation.