High School Courses Grades 9-12

Courses

- Biology
- Chemistry
- Earth/Environmental Science
- Physical Science
- Physics
- AP Science Courses

The Unifying Concepts of Science

The high school science component of the SCS focuses on the unifying concepts of science as identified by the National Science Education Standards. The unifying concepts and the strands should be integrated with the science content goals and objectives for high school. The unifying concepts of science consist of:

- Systems, Order, and Organization.
- Evidence, Models, and Explanation.
- Constancy, Change, and Measurement.
- Evolution and Equilibrium.
- Form and Function.

Strands

The strands include the following goals: Nature of Science, Science as Inquiry, Science and Technology, Science in Personal and Social Perspectives.

Nature of Science

As a result of activities in grades 9 - 12, all students should develop an understanding of:

- Science as a human endeavor.
- Nature of scientific knowledge.
- Historical perspectives.

Science as Inquiry

As a result of activities in grades 9 - 12, all students should develop.
• constructing hypotheses.
• The ability to do scientific inquiry.
• Understanding about scientific inquiry.
• Abilities to perform safe and appropriate manipulation of materials, equipment, and technologies.
• Mastery of integrated process skills.
  • constructing hypotheses.
  • acquiring, processing, and interpreting data
  • identifying variables and their relationships
  • designing investigations
  • experimenting
  • analyzing investigations
  • formulating models.

**Science and Technology**

As a result of activities in grades 9 - 12, all students should develop:

• An understanding of technology.
• The ability to perform technological design.
• An understanding of the connection between science and technology.

**Science in Personal and Social Perspectives**

As a result of activities in grades 9 - 12, all students should develop an understanding of:

• Personal and community health.
• Population growth.
• Natural resources.
• Environmental quality.
• Natural and human-induced hazards.
• Science and technology in local, national, and global challenges.
• Careers in science and technology.