

**Science Standard
Catalina Foothills School District
Grade 2**

The second grade science program emphasizes the skills of scientific inquiry by building on the processes of observation, experimenting, and conclusions. Through a rich, inquiry-based program of study, students will demonstrate scientific literacy and the use of applicable CFSD deep learning proficiencies in the physical, life, earth, and space sciences. Content is taught through an integrated approach with an emphasis on science themes and systems thinking. Students will engage in active inquiries and investigations to develop conceptual understanding and research/laboratory skills. Second grade science explores science-related career opportunities and provides opportunities for developmental and academic growth in areas such as states of matter, weather, human body systems, and habitats.

SCIENTIFIC INQUIRY

SCIENTIFIC INQUIRY: GENERATING SCIENTIFIC QUESTIONS

SC2.1a.1 Generates questions that compare objects, organisms, and events in terms of attributes (for example: Does more rain fall in the desert or in the forest?).

SC2.1a.2 Generates new questions that can be explored at the end of an investigation.

SCIENTIFIC INQUIRY: PREDICTING AND HYPOTHESIZING

SC2.1b.1 Predicts logical results of an investigation based on prior knowledge or experience.

SCIENTIFIC INQUIRY: DESIGNING INVESTIGATIONS

SC2.1c.1 Writes a simple plan to answer a question that includes (1) what the experimenter will do, and (2) what will be observed, measured, and/or compared.

SCIENTIFIC INQUIRY: OBSERVATION AND DATA COLLECTION

SC2.1d.1 Records data using attributes (for example: color, size, length) and values (for example: red/yellow/blue, tall/short).

SC2.1d.2 Measures data using a suitable tool (for example: rulers, thermometer, clock, calendar, rain gauge, dry and liquid measuring devices).

SCIENTIFIC INQUIRY: ANALYSIS AND CONCLUSION

SC2.1e.1 Communicates results of observations through data displays (for example: labeled drawings, pictographs, tables/charts).

SC2.1e.2 Explains collected data (for example: from journal, lab book, log, chart paper) and conclusions (for example: I found out... Does this make sense? Could this really happen?).

INTERACTION OF SCIENCE AND SOCIETY

SC2.2.1 Describes how diverse people and/or cultures, past and present, have made important contributions to scientific innovation (for example: Elizabeth Blackwell, Charles Drew, Daniel Gabriel Fahrenheit).

SC2.2.2 Describes science-related career opportunities (for example: meteorologist, physician, surgeon-general).

SC2.2.3 Describes important technological contributions made by people, past and present (for example: automobile–Henry Ford; airplane–Wilbur and Orville Wright; telephone–Alexander G. Bell) and how they impact aspects of people’s lives (for example: transportation, communication, entertainment, medicine).

SYSTEMS THINKING (CFSD Deep Learning Proficiency – DLP)

SYSTEMS THINKING: BIG PICTURE

SC2.3a.1 Describes how parts work together to make a whole (required: how plants and animals within a habitat are dependent on each other, body systems).

SYSTEMS THINKING: CHANGE OVER TIME

SC2.3b.1 Describes elements of a system that change over time to produce a particular pattern of behavior (required: seasonal weather patterns).

LIFE SCIENCE

CHARACTERISTICS OF LIVING THINGS

SC2.4.1 Describes the basic functions (required: breakdown and absorption of food, disposal of waste) and component parts (required: mouth, esophagus, stomach, small and large intestines) of the digestive system.

SC2.4.2 Describes the basic functions (required: exchange of oxygen and carbon dioxide) and component parts (required: nose, trachea, lungs, diaphragm) of the respiratory system.

SC2.4.3 Describes the basic functions (required: transportation of nutrients and oxygen throughout the body) and component parts (required: heart, arteries, veins, blood) of the circulatory system.

SC2.4.4 Classifies a variety plants and animals found in the local environment.

INTERDEPENDENCE OF LIVING THINGS AND THEIR ENVIRONMENT

SC2.5.1 Compares different kinds of habitats (for example: desert, forest, prairie, aquatic, subterranean) in which plants and animals live.

SC2.5.2 Describes how plants and animals within a habitat are dependent on each other.

SC2.5.3 Explains how specific adaptations of plants and animals allow them to live in specific habitats (for example: responses of plants and animals to weather and seasonal changes).

PHYSICAL SCIENCE

STRUCTURE AND PROPERTIES OF MATTER

SC2.6.1 Classifies materials as solids, liquids, and gases.

SC2.6.2 Demonstrates that solids have a definite shape and liquids and gases take the shape of their container (for example: a gas will expand to fill its container; a liquid will take the shape of its container; a solid has a definite shape within its container).

SC2.6.3 Describes the transformation of matter from one state to another (for example: solid water [ice] to liquid [water] to gas [steam]).

INTERACTIONS OF MATTER

Not assessed at this level.

CONSERVATION AND TRANSFORMATION OF ENERGY

Not assessed at this level.

EARTH AND SPACE SCIENCE

STRUCTURE AND PROCESSES OF THE EARTH

SC2.9.1 Describes how the earth's axial tilt causes seasonal changes.

SC2.9.2 Describes the relationship between cloud types (cumulus, stratus, cirrus), temperature, and weather patterns.

SC2.9.3 Compares weather conditions in various locations (for example: regions of Arizona, various U.S. cities, coastal vs. interior geographical regions).

STRUCTURE AND PROCESSES OF OBJECTS IN SPACE

Not assessed at this level.