

**Science Standard  
Catalina Foothills School District  
Grade 1**

The first grade science program emphasizes the skills of scientific inquiry and builds on the processes of observation and data gathering. 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. First grade science continues the excitement of learning about the natural world, and explores concepts and questions in areas such as life cycles, earth materials, natural resources, and sun, moon, and stars.

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**SCIENTIFIC INQUIRY**

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**SCIENTIFIC INQUIRY: GENERATING SCIENTIFIC QUESTIONS**

SC1.1a.1 Generates questions based on experiences with objects, organisms, and events related to a topic (for example: what will happen if...? or I wonder what would happen if I change...?).

**SCIENTIFIC INQUIRY: PREDICTING AND HYPOTHESIZING**

SC1.1b.1 Predicts possible results of an investigation (for example: animal life cycles, physical properties, earth materials).

**SCIENTIFIC INQUIRY: DESIGNING INVESTIGATIONS**

SC1.1c.1 Explains the process of an investigation, and sequentially records the major steps after its conclusion (for example: gather materials, set up the experiment, collect data, record the results).

**SCIENTIFIC INQUIRY: OBSERVATION AND DATA COLLECTION**

SC1.1d.1 Describes observation(s) using senses rather than feelings (for example: The snail has a hard shell with wavy, brown lines, rather than the snail is awesome).

SC1.1d.2 Records data (for example: table, labeled drawing) generated from the use of standard and nonstandard measurement tools/equipment (for example: rulers, thermometers, magnifiers, balances, scales, and measuring cups).

**SCIENTIFIC INQUIRY: ANALYSIS AND CONCLUSION**

SC1.1e.1 Compares results of the investigation to prediction(s) and communicates the results (for example: pictures, graphs, models, or words).

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**INTERACTION OF SCIENCE AND SOCIETY**

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SC1.2.1 Describes how different people (for example: surveyors, beekeepers, miners) use science in daily life.

SC1.2.2 Describes how diverse people and/or cultures, past and present, have made important contributions to scientific innovation (for example: Neil Armstrong, Sally Ride, Galileo, George Washington Carver).

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## **SYSTEMS THINKING (CFSD Deep Learning Proficiency – DLP)**

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### **SYSTEMS THINKING: BIG PICTURE**

SC1.3a.1 Describes how parts work together to make a whole (required: sun is part of solar system; soil is made up of rocks and decaying organic matter).

### **SYSTEMS THINKING: CHANGE OVER TIME**

SC1.3b.1 Describes elements of a system that change over time to produce a particular pattern of behavior (required: moon phases, life cycles).

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## **LIFE SCIENCE**

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### **CHARACTERISTICS OF LIVING THINGS**

SC1.4.1 Compares living and non-living things based on various characteristics (required: response to stimuli).

SC1.4.2 Describes changes animals and plants undergo during the lifecycle (for example: animals – changes in color, body covering, size; plants – size, presence of leaves and branches, ability to produce flowers).

SC1.4.3 Compares the life cycle stages of various organisms (required: insects, mammals, plants).

### **INTERDEPENDENCE OF LIVING THINGS AND THEIR ENVIRONMENT**

SC1.5.1 Describes how organisms are dependent on the environment to live and grow (required: food, air, water, light, space).

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## **PHYSICAL SCIENCE**

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### **STRUCTURE AND PROPERTIES OF MATTER**

SC1.6.1 Compares physical properties (required: color, texture, capacity to retain water) of basic earth materials (required: rocks, soil, water).

### **INTERACTIONS OF MATTER**

Not assessed at this grade level.

### **CONSERVATION AND TRANSFORMATION OF ENERGY**

SC1.8.1 Provides evidence that the sun is the natural source of energy (heat and light) on the Earth (for example: warm surfaces, shadows, shade).

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## **EARTH AND SPACE SCIENCE**

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### **STRUCTURE AND PROCESSES OF THE EARTH**

SC1.9.1 Describes common uses (for example: construction, decoration) of basic earth materials (for example: rocks, water, soil).

SC1.9.2 Describes natural resources (for example: air, water, soil, plants, animals).

SC1.9.3 Compares ways to conserve natural resources (for example: reduce, reuse, recycle, find alternative resources).

### **STRUCTURE AND PROCESSES OF OBJECTS IN SPACE**

SC1.10.1 Compares celestial objects (for example: size and position of sun, moon, stars) and transient objects (for example: clouds, birds, airplanes) in the sky.

SC1.10.2 Describes observable changes in celestial objects (for example: position and *phases of the moon*).