



# 1st Grade Science





1<sup>st</sup> Grade Science Teaching & Learning Framework

Quarter 1		Quarter 2		Quarter 3		Quarter 4		
Unit 1 4 Weeks	Unit 2 4 weeks	Weather and Seasons	Unit 3 4 weeks	Unit 4 4 weeks	Weather and Seasons	Unit 5 6 weeks	Weather and Seasons	Unit 6 6 weeks
Weather and Seasons	Magnets		Light	Sound		Animals		Plants
<p><b>S1E1. Obtain, evaluate, &amp; communicate weather data to identify weather patterns.</b></p> <p>a. Represent data in tables &amp;/or graphs to identify &amp; describe different types of weather &amp; characteristics of each type.</p> <p>b. Ask questions to identify forms of precipitation such as rain, snow, sleet &amp; hailstones as either solid (ice) or liquid (water).</p> <p>c. Investigate current weather conditions by observing, measuring with simple weather instruments (thermometer, wind vane, rain gauge), and recording weather data (temperature, precipitation, sky conditions, and weather events) in a periodic journal or on a calendar seasonally &amp; graphically.</p> <p>d. Analyze data to identify seasonal patterns of change.</p>	<p><b>S1P2. Obtain, evaluate, &amp; communicate information to demonstrate the effects of magnets on other magnets &amp; other objects.</b></p> <p>a. Construct an explanation of how magnets are used in everyday life. <i>(Clarification statement: Everyday life uses could include refrigerator magnets, toys, magnetic latches, and name tags.)</i></p> <p>b. Plan and carry out an investigation to demonstrate how magnets attract and repel each other and the effect of magnets on common objects</p>	<p><b>S1P1. Obtain, evaluate, &amp; investigate light and sound.</b></p> <p>a. Use observations to construct an explanation of how light is required to make objects visible</p> <p>b. Ask questions to identify &amp; compare sources of light.</p> <p>c. Plan &amp; carry out an investigation of shadows by placing objects at various points from source of light.</p>	<p><b>S1P1. Obtain, evaluate, &amp; investigate light and sound.</b></p> <p>d. Construct an explanation to observe and provide evidence that vibrating materials can make sound &amp; that sound can make materials vibrate.</p> <p>e. Design a signal that can serve as an emergency alert using light &amp; sound.</p>	<p><b>S1L1. Obtain, evaluate, &amp; communicate information about the basic needs of plants &amp; animals.</b></p> <p>b. Ask questions to compare &amp; contrast basic needs of plants &amp; animals-</p> <ol style="list-style-type: none"> <li>1.air/air</li> <li>2.water/water</li> <li>3.light/food</li> <li>4.nutrients/shelter</li> </ol> <p>c. Design a solution to ensure a plant or animal’s needs are met.</p>	<p><b>S1L1. Obtain, evaluate, &amp; communicate information about the basic needs of plants &amp; animals.</b></p> <p>a. Develop models to identify the parts of a plant— root, stem, leaf, and flower.</p> <p>b. Ask questions to compare &amp; contrast basic needs of plants &amp; animals-</p> <ol style="list-style-type: none"> <li>1.air/air</li> <li>2.water/water</li> <li>3.light/food</li> <li>4.nutrients/shelter</li> </ol> <p>c. Design a solution to ensure a plant or animal’s needs are met.</p>			



## First Grade Science Standards

The Cobb Teaching and Learning Standards (CT & LS) for science are designed to provide foundational knowledge and skills for all students to develop proficiency in science. The Project 2061's *Benchmarks for Science Literacy* and the follow up work, *A Framework for K-12 Science Education* were used as the core of the standards to determine appropriate content and process skills for students. The Science Georgia Standards of Excellence focus on a limited number of core disciplinary ideas and crosscutting concepts which build from Kindergarten to high school. The standards are written with the core knowledge to be mastered integrated with the science and engineering practices needed to engage in scientific inquiry and engineering design.

The Cobb Teaching and Learning Standards drive instruction. Hands-on, student-centered, and inquiry-based approaches should be the emphasis of instruction. The standards are a required minimum set of expectations that show proficiency in science. However, instruction can extend beyond these minimum expectations to meet student needs. At the same time, these standards set a maximum expectation on what will be assessed by the Georgia Milestones Assessment System.

Science consists of a way of thinking and investigating, as well a growing body of knowledge about the natural world. To become literate in science, students need to possess sufficient understanding of fundamental science content knowledge, the ability to engage in the science and engineering practices, and to use scientific and technological information correctly. Technology should be infused into the curriculum and the safety of the student should always be foremost in instruction.

The First Grade, Cobb Teaching and Learning Standards for science engage students in raising questions about the world around them and seeking answers by making observations. First graders use whole numbers to analyze scientific data. They identify how magnets pull on all things made of iron and either attract or repel other magnets. First graders create drawings that correctly depict something being described. The students are asked to plan and carry out simple investigations to understand patterns (shadows, sound, weather, and daily needs of plants and animals) observed in the world around them and make predictions based on these investigations. They follow safety rules.



## Earth Science

### **S1E1. Obtain, evaluate & communicate weather data to identify weather patterns.**

- a. Represent data in tables &/or graphs to identify & describe different types of weather & the characteristics of each type.
- b. Ask questions to identify forms of precipitation such as rain, snow, sleet, and hailstones as either solid (ice) or liquid (water)
- c. Plan & carry out investigations on current weather conditions by observing, measuring with simple weather instruments (thermometer, wind vane, rain gauge), & recording weather data (temperature, precipitation, sky conditions, & weather events) in a periodic journal, on a calendar seasonally, & geographically.
- d. Analyze data to identify seasonal patterns of change.

*(Clarification statement:* Examples could include temperature, rainfall/snowfall, & changes to the environment)

## Physical Science

### **S1P1. Obtain, evaluate & communicate information to investigate light & sound.**

- a. Use observations to construct an explanation of how light is required to make objects visible.
- b. Ask questions to identify & compare sources of light.
- c. Plan & carry out an investigation of shadows by placing objects at various points from a source of light.
- d. Construct an explanation to observe & provide evidence that vibrating materials can make sound & that sound can make materials vibrate.
- e. Design a signal that can serve as an emergency alert using light &/or sound to communicate over a distance.

### **S1P2. Obtain, evaluate, and communicate information to demonstrate the effects of magnets on other magnets and other objects.**

- a. Construct an explanation of how magnets are used in everyday life.  
*(Clarification statement:* Everyday life uses could include refrigerator magnets, toys, magnetic latches, and name tags.)
- b. Plan and carry out an investigation to demonstrate how magnets attract and repel each other and the effect of magnets on common objects.



## Life Science

### **S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals.**

- a. Develop models to identify the parts of a plant—root, stem, leaf, and flower.
- b. Ask questions to compare and contrast the basic needs of plants (air, water, light, & nutrients) & animal (air, water, food, & shelter).
- c. Design a solution to ensure that a plant or animal has all of its needs met.