

Color-coded Georgia Standards of Excellence

Each standard in K-12 science courses begin with “Obtain, evaluate, and communicate...” The common language was intended by writers to provide consistency throughout courses, highlight the science practices, and incorporate scientific literacy. Simply put, it is what scientists do.

Science and engineering practices:

- Asking questions (science) and defining problems (engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics, information and computer technology, and computational thinking
- Constructing explanations (science) and designing solutions (engineering)
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

The color-coded standards are a visual of how the specific elements of science standards engage *students* in obtaining, evaluating, and communicating information.

	Obtain	• Obtain Information • Ask Questions/Define Problems • Plan & Carry Out Investigations • Use Models to Gather Data • Use Mathematics and Computational Thinking
	Evaluate	• Evaluate Information • Analyze Data • Use Mathematics and Computational Thinking • Construct Explanations/Solve Problems • Developing Arguments from Evidence • Use Models to Predict & Develop Evidence
	Communicate	• Communicate Information • Using Argue from Evidence (written/oral) • Use Models to Communicate

Various practices require students to obtain, evaluate, and communicate information simultaneously; see the following example of 7th grade life science:

S7L4c. Analyze and interpret data to provide evidence for how resource availability, disease, climate, and human activity affect individual organisms, populations, communities, and ecosystems.

The first part of the science practice involves *evaluating* information as students analyze and interpret data; in addition, since they are providing evidence, this practice also requires students to *communicate* their findings and analysis.

Earth and Space Science

S1E1. Obtain, evaluate, and communicate weather data to identify weather patterns.

- Represent data** in tables and/or graphs to identify and describe different types of weather and the characteristics of each type.
- Ask questions** to identify forms of precipitation such as rain, snow, sleet, and hailstones as either solid (ice) or liquid (water).
- Plan and carry out investigations** on 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, on a calendar, and graphically.
- Analyze data** to identify seasonal patterns of change.
(*Clarification statement:* Examples could include temperature, rainfall/snowfall, and changes to the environment.)

Physical Science

S1P1. Obtain, evaluate, and communicate information to investigate light and sound.

- Use observations to construct an explanation** of how light is required to make objects visible.
- Ask questions** to identify and compare sources of light.
- Plan and carry out an investigation** of shadows by placing objects at various points from a source of light.
- Construct an explanation** supported by evidence that vibrating materials can make sound and that sound can make materials vibrate.
- Design a signal** that can serve as an emergency alert using light and/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.

- 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.)
- 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.

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