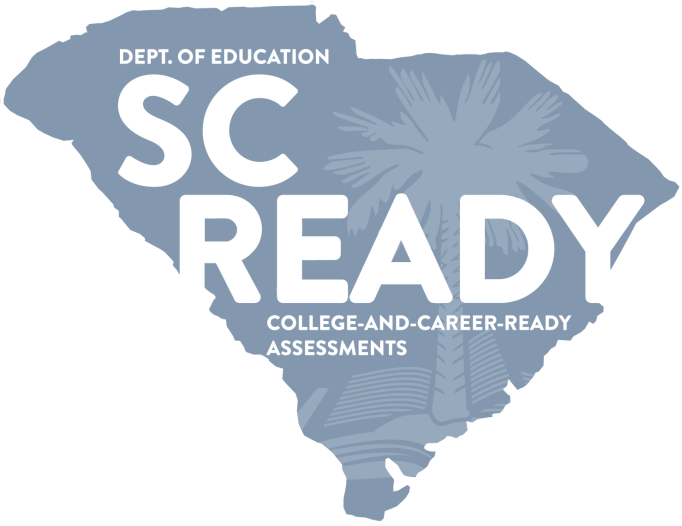
SOUTH CAROLINA
DEPARTMENT OF EDUCATION



2026 Data Review Report

Statewide Instructional Recommendations

SC READY Grade 6 Science

Office of Assessment and Standards

October 2026

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Introduction to the Grade 6 Data Review Report

The South Carolina Department of Education (SCDE) Office of Assessment and Standards (OAS) extends our deepest gratitude to the hard-working teachers across our state. We are especially thankful to the educators who dedicate their time to participate in our annual assessment meetings. Your collaboration is what makes these reports possible.

What is the Data Review Committee?

As part of our Test Development Cycle every year, the SCDE gathers educators from across South Carolina for virtual Data Review Meetings. This group of dedicated educators forms our *Data Review Committee*, a specialized team tasked with examining state-level, item-by-item test data to better understand student ability and identify where students are struggling with specific standards.

From Numbers to Strategies

For this report, the Committee focused on the Spring SC READY Science Grade 6 assessment, which measures the *South Carolina College- and Career-Ready Science Standards 2021* (*2021 SC CCR Science Standards*). While every standard is assessed on the SC READY Science Grade 6 assessment, this report selectively highlights key standards where statewide trends point to clear, actionable recommendations for the classroom.

The Committee looks closely at the *quantitative* data, how students across the entire state responded to test items. They use these numbers to produce a *qualitative* analysis. In other words, they look at the data to figure out *why* students are struggling, and then they offer actionable, instructional recommendations on how to improve student achievement on those topics.

A Redesigned Format

Based directly on feedback from teachers across the state, we have redesigned the Data Review Reports to be more useful for your daily practice. The reports are now organized by Reporting Category, then by Performance Expectation.

- **Observations:** What the data tell us about student understanding and misconceptions.
- **Historical Trends:** Years in which similar trends or observations were noted.
- **Instructional Recommendations:** Practical strategies to address learning gaps.

How to Use This Report

The goal of this report is to provide clear suggestions to improve instructional practice and inspire collaborative discussions at your school. Offered in a spirit of helpfulness and collaboration, these recommendations reflect broad, statewide trends. Because every classroom is unique, we recognize that certain identified gaps or suggestions may not align with every individual school or district.

Get Involved and Learn More

The OAS provides numerous resources for districts, schools, and teachers to help clarify the standards, understand how our assessments align with them, and make the most of test data.

Our **Assessment Quick Links for Teachers Page** includes the following resources for science educators:

- Applications for Assessment Committees: Apply to Content Review Committees, Data Review Committees, and more.
- Test Blueprints: Broadly outline the test construct in terms of content and rigor.
- Assessment Specifications for Teachers: Guidance on how standards are assessed on SC READY. (Not intended for use as an instructional guide)
- Data Review Reports: Access older reports from various content areas.
- Item Type Descriptions: Breakdown of the item formats students encounter on SC READY.
- Sample Items: Grade- and content-aligned items demonstrating SC READY formats.
- Online Tools Training (OTT): Allows students to practice interacting with sample items in the official testing environment.
- Calculator Requirements: Guidelines for use and allowable calculators.

Our Science Standards Page includes:

- Standards: The *South Carolina College- and Career-Ready Science Standards 2021*
- Instructional Resources: Support materials designed to help teachers instruct the *2021 SC CCR Science Standards*.
- Professional Learning Opportunities: District-level professional learning menus and recordings of past webinars.

Interested in Statewide Assessment Data?

State-level assessment data is published each year on our website. You can explore the 2026 SC READY Test Scores directly through our online interactive tools or download full data files from the right side of the page.

Want to make an impact?

If you are interested in joining an annual assessment committee, we invite you to apply through our website!

Statewide Trends for Grade 6 Science

The SC READY Grade 6 Science test scores are posted on the South Carolina Department of Education website. The student performance on the Spring 2026 SC READY Grade 6 Science Test shows improvement from the 2025 scores. More than half (51.9%) of the student population are in the Meets and Exceeds Expectations and 74.0% are in the Approaches, Meets, and Exceeds Expectations. This shows that the instructional efforts of Grade 6 South Carolina teachers are successful in helping students master the Grade 6 *South Carolina College- and Career-Ready Science Standards 2021*.

Strengths

Energy and Waves:

- Students understand the relationship between thermal energy and particle motion.
- Students show knowledge of energy transfer and identify design challenges involving the movement of thermal energy.

Life Science:

- Students can distinguish between living and nonliving things and understand the differences between unicellular and multicellular organisms.
- Students understand the general functions of cells and how cell structures work together to support life processes.

History of Earth:

- Students understand that Earth's surface has changed over time.
- Students can use evidence to support explanations about Earth's processes and geologic events.

Earth and the Atmosphere:

- Students demonstrate a clear understanding of the water cycle and its processes.
- Students can analyze and interpret natural hazard data and recognize how to mitigate the risks and impact of these hazards on humans.

Continued

Areas for Growth

Energy and Waves:

- Students need to strengthen their understanding of pure substances and recognize that matter is composed of particles such as atoms and molecules.
- Students need increased practice with constructing, interpreting, and revising particle models.

Life Science:

- Students are expected to compare animal and plant cells through use of models and direct observations.
- Students need to strengthen their understanding of how sensory receptors detect and respond to different stimuli.

History of Earth:

- Students need increased practice in using and applying the principles of superposition and cross-cutting relations when interpreting the sequences of events using stratigraphic columns.
- Students need support in understanding plate tectonics and the different landforms and activity that occur at plate boundaries.

Earth and the Atmosphere:

- Students are expected to understand how to use and apply the terminology, such as crystallization, cementation, metamorphism, needed to explain the multiple pathways in the rock cycle.
- Students need increased practice in interpreting weather maps and using weather data to make predictions.

Committee Observations and Recommendations

The SC READY Science Grade 6 committee reviewed operational and field test items from the Spring 2026 administration. The committee's observations and recommendations are categorized in this section. The Performance Expectations (PE) are arranged by reporting category. The reporting categories should not be considered separate units and do not represent an instructional scope or sequence.

General Observations and Recommendations

Assessment Readiness:

- ***Priority:*** Prepare students for the drop-down menus by requiring students to write out arguments, claims, and descriptions that explain a model, data, or textual information on classroom assessments.
- ***Priority:*** When developing classroom assessments, reference the *Item Type Descriptions for SC READY Grades 4 & 6 2026-2027* and *Online Tools Training (OTT)*. Using only multiple-choice items on classroom assessments and benchmarks does not reflect the state assessment.
    - Use manipulatives (e.g., paper cut-outs, analogs) to model a drag-and-drop style of item in the classroom.
- Encourage students to read the whole item, including the answer options, before answering the item. (Previously reported in 2025.)
    - The committee cited specific issues:
        - Students may not be reading the question; the answer option chosen was a true statement but did not answer the question that was asked.
    - Students may have failed to answer the item correctly because they jump down to the question and answer choices and miss important information.
- Show students the OTT and demonstrate how using the tools can help them answer test items.
    - Highlight important information.
    - Use the notepad, for example, to write out conclusions, cite data/evidence, record calculations.
    - Use the cross-off tool to mark answer choices that are incorrect.
    - Use the magnifier to zoom in on information that may be on maps or smaller parts of an image.
    - Use the calculator when necessary.
- Remind students to make sure each item is completely answered before submitting their tests. (Previously reported in 2025)
- Encourage students to use scratch paper.

Instruction:

- Use the SCDE Instructional Resources to scaffold lesson planning.
- Use a variety of phenomena/problems that range from local to regional to global, such as classic examples like tracing plate movement using the Hawai'ian Islands and inferring climates using the Gulf Stream and California Current.

Science Practices:

Claim-Evidence-Reasoning (CER) and Chains of Reasoning

- Students can successfully construct CERs. Continue to reinforce this practice in the classroom.
- Provide practice for students to rate evidence and how well it supports arguments, claims, etc.

Models

- Continue to use a variety of models (including maps) to support content.
    - Emphasize the use of the key, compass rose, directional arrows on maps.
- Require students to evaluate models.
    - Does the model support the idea, process, etc. being described?
    - If it does not, explain why and revise it so that it supports the idea, process, etc. being modeled.
- Have students complete incomplete models or revise models that are incorrect.
- Students need more practice in moving between models, writing out explanations of what models represent, and explaining the relationships between components.

Scientific Terminology

- Reinforce the difference between thermal energy and heat. (See 6-PS1-4,6-PS3-3, and 6-PS3-4 in this document.)
    - Thermal energy is the total energy of all the particles in an object.
    - Heat is the transfer of thermal energy from a warmer object to a cooler object.
- Emphasize that mass is the amount of matter in an object and is measured in grams, milligrams, or kilograms. (Supports *South Carolina College- and Career Ready Mathematics Standards* (Math): 5.MGSR.2.1 p.58)
- Students are expected to know the differences between the independent variable and the dependent variable.

Analyzing Data and Communicating Information

- Emphasize the math skills used to analyze, organize, and interpret scientific data. This could include observational data (e.g., weather patterns) or archival data (e.g., data sets related to geologic time. (Supports Math: MPS.AJ1, p. 65 ; 6.DPSR.1.1-4, p. 65)
- Practice data entry into calculators to ensure accuracy.
- Require students to provide a rationale for how and why they use certain tools to measure a variable. (See *Sixth Grade Performance Targets* (*G6PT*), p. 4).
    - For example, students are expected to understand how to use a thermometer to best measure the effectiveness of a device that maximizes or minimizes the transfer of thermal energy.

Energy and Waves

6-PS1-4

Observations:

- Students understand the relationship between thermal energy and particle motion.
- Students are expected to explain that pure substances can be composed of only one type of particle/atom/molecule and that the mass of the substance is uniform throughout.
- Students need to develop and use a variety of models that represent solids, liquids, and gases, and that represent the behaviors of these states of matter when thermal energy is added or subtracted.

Historical Trends: Models of states of matter were previously identified in 2025.

Instructional Recommendations:

- Support student knowledge of pure substances. For example:
  - Oxygen (O_2) only exists as two atoms of the same element bonded together. *It is not necessary for students to know this is called a diatomic molecule.*
  - Water (H_2O) and carbon dioxide (CO_2) are made of two different types of atoms bonded together. *It is not necessary for students to know that these are compounds or to identify the types of bonds between them.*
- Reinforce that, during changes of state, the molecules in a pure substance typically do not break apart as thermal energy is added. Instead, the molecules move faster and farther apart from each other.
- Use computer simulations that include particle models showing atoms and molecules so students can distinguish between them.

6-PS3-3

Observation: Students are expected to use tools to measure the variables when collecting accurate and objective data to conduct tests on their designs. (6GPT, p.4)

Instructional Recommendation:

- Challenge groups of students to design and build a system that maximizes or minimizes the transfer of thermal energy using the same materials. Students are expected to recognize that devices using the same materials function differently depending on how the materials are used.
  - Provide a variety of energy transfer designs beyond solar ovens.
  - Develop instructional plans that include designs that maximize and minimize energy transfer.
  - Require students to explain why certain tools, such as a thermometer, will be used to measure the efficiency of the design.
- Reinforce student understanding of the terms conductor and insulator.

6-PS3-4

Observation: Students are expected to apply their math skills when conducting investigations, such as measuring the mass of objects or substances, determining the change in temperature, or the passage of time.

Instructional Recommendation:

- Reinforce the application of terms that infer magnitude such as decrease, increase, most, least, etc. when students are describing observations or data.

6-PS4-2

Observations:

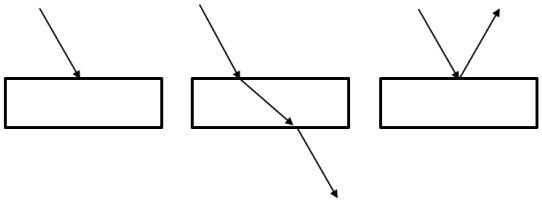
- **Priority:** Students need to be using, developing, and interpreting ray diagrams.
- Students are expected to use and apply the terms for light behaviors: absorption, reflection, refraction, and transmission.

Instructional Recommendations:

- Increase student practice in using, developing, and revising ray diagrams that model how opaque, transparent, and translucent media affect how light behaves. Examples of ray diagrams of light behavior can include but are not limited to those shown below.

Ray Diagram Examples

absorption refraction reflection



- Require students to make connections between light behavior and the medium through which the light is traveling.
- Provide opportunities for students to model how wave behaviors account for different colors.
- Emphasize how absorption and reflection of the visible light spectrum affect how color is perceived.

Life Science

6-LS1-1

Observation: Students understand the difference between living and non-living things and the differences between unicellular and multicellular organisms.
Instructional Recommendation: Continue to reinforce the differences between living and non-living things. Exposing students to the characteristics of living things would help support this PE, for example living things grow, produce waste, and reproduce.

6-LS1-2

Observation: Students can identify the general functions of the cell and how they work together.
Instructional Recommendations:

- Be sure to reference the G6PT pp. 23–25.
- Reinforce the differences between animal and plant cells.
    - Allow students to observe slides of cells under a microscope and compare the similarities and differences between animal and plant cells.
- Require students to interact with a variety of cell models such as pictures of cells, physical models, conceptual models, microscope slides, functional models, etc.

6-LS1-3

Observation: Students need to compare multiple body systems, not just two.
Historic Trend: Comparing how body systems interact with each other to support a living organism was previously noted in 2025.
Instructional Recommendations:

- Develop instructional plans that require students to describe the interactions of multiple body systems. For example:
    - Flow charts can be used to describe how different body systems interact with each other.
    - Using a station-style set up, students can represent how blood in the circulatory system interacts with a variety of body systems by transporting oxygen, carbon dioxide, nutrients, and waste. Around the room, stations can represent the body systems and students can “drop-off” or “pick-up” substances transported by blood at each station. Require students to record their interactions as they move through the body systems.
- Increase opportunities for students to use data related to the function of body systems and use the data to support a claim.

6-LS1-8

Observation: Students are expected to explain how the different stimuli (chemical, electromagnetic, mechanical) are received and interpreted by sensory receptors.

Instructional Recommendations:

- Use multiple scenarios, present models, or have students develop models that represent the pathway from stimulus to the brain. For example, flow charts combine informative writing into a comic strip, and interpretive movement.
  (Supports ELA.C.7, p. 101 and *Visual and Performing Arts Proficiency Standards* (*SC CCR VPAPS*) : D.CR.NH.2, p.3 ; MA.P.NL.2.1, p.20; MA.P.NL.3, p. 21.)
- Require students to relate the sensory receptors to the stimuli being received.

History of Earth

6-ESS1-4

Observation: Students are expected to apply superposition and crosscutting relations when interpreting stratigraphic columns.

Historical Trends: Previously noted in 2025.

Instructional Recommendations:

- Require students to construct stratigraphic columns and write out an explanation of what the column shows and require students to construct a model based on a textual description.
- Model how to interpret unconformities, faults, and intrusions.
  - At this grade level, unconformities represent missing rock that could have been removed by weathering and erosion.
  - Faults and intrusions (hardened magma) are always younger than the rock it cuts across (crosscutting relations).

6-ESS2-2

Observation: Students are expected to understand that Earth's surface changes over time and are expected and cite evidence that supports the existence of these changes.

Instructional Recommendation: Provide opportunities for students to use scenarios of how Earth's surface changed over time and use evidence from the scenario that supports an argument or claim. (Supports ELA.C.1, p.99.)

6-ESS2-3

Observations:

- Students are expected to use the key, compass rose, and components/symbols on maps to provide evidence of plate motion.
- Students are expected to correctly identify the processes and features that occur at plate boundaries.

Historic Trend: Differentiating deep-sea (ocean) trenches from mid-ocean ridges was identified as a focus in 2025.

Instructional Recommendations:

- Provide scenarios (including data/maps) that involve the classic examples of plate motion. Require students to use this information to explain the effects of plate motion on Earth's surface.
- Bundle PEs to connect this content to geologic time, the rock cycle, and the water cycle so students understand the connections and relationships among Earth processes; see *Changes in Earth Over Time* in the Bundling Guide for Grade 6 Science.
- Use graphic organizers to help students understand the features and processes found at the different types of plate boundaries.
- Emphasize the difference between deep-ocean trenches and mid-ocean ridges and the Earth processes occurring at each seafloor feature.

Earth and the Atmosphere

6-ESS2-1

Observation:

- Students are expected to use and apply the terminology related to the rock cycle.
- Students are expected to understand the multiple pathways of the rock cycle.

Historical Trends: The relationship between common rock types found at certain plate boundaries was previously noted in 2025.

Instructional Recommendations:

- Use manipulatives such as cut-outs and functional models to model the rock cycle and its pathways.
    - For example, have students pick up colored balls or cards that represent a type of rock or process. Students are expected record what happens to "their rock" as it moves through the rock cycle and explain why this happens.
- Emphasize the connection between the rock cycle and solar energy which drives weathering and erosion.
- Develop a writing challenge that asks students to explain how a rock that is on the side of a mountain in the Blue Ridge Mountains ends up as a grain of sand on Myrtle Beach. Content knowledge from 6-ESS2-1–4 can be incorporated into this exercise. (Supports ELA.C.3–7, pp. 99–101)

6-ESS2-4

Observation: Students understand the water cycle and its processes, but the committee made recommendations based on making connections and using a variety of models.

Instructional Recommendations:

- Emphasize the connection between the water cycle and 6-PS1-4, 6-ESS2-1, 6-ESS2-2, 6-ESS2-3, 6-ESS2-5, and 6-ESS2-6. (Reference G6PT to integrate the content/ targets.)
- Provide frequent practice that requires students to complete or revise models of the water cycle.
- Continue to reinforce how the removal or addition of thermal energy affects the cycling of water.

6-ESS2-5

Observations:

- Students understand that cold air sinks, whereas warm air rises. However, the knowledge of what occurs at the interface between warmer and cooler air masses needs more support.
- Students need increased practice in analyzing and interpreting weather maps.

Instructional Recommendations:

- Require students to record weather data over extended periods of time. Students are expected to:
    - use current weather maps to identify fronts, pressure systems,
    - explain how observed factors affect changes in the weather, and
    - predict what the weather conditions could be based on observed data.
- Connect PE specific content to other PEs. (See *Earth's Weather and Climate* in the *Bundling Guide for Grade 6 Science*.)

6-ESS2-6

Observation: Students are expected to identify the factors that affect climate, for example, latitude, ocean currents, jet stream, global winds, distance from ocean, etc.

Historical Trend: Factors affecting climates were previously noted in 2025.

Instructional Recommendations:

- Provide opportunities for students to compare the climates of different locations at a similar latitude (New York City and Beijing, China; Calgary, Alberta, Canada and London, England; Sydney, Australia and Cape Town, South Africa). Students then relate these climate differences to the factors that affect climate (ocean currents, jet stream, global winds, distance from the ocean, etc.).
- Have students develop their own island and describe its climate, weather patterns, geologic features, etc. Students will then determine the latitude of their island based on their descriptions. This could be extended to include other PEs such as 6-ESS1-4, 6-ESS2-1, 6-ESS2-2, 6-ESS2-6, and 6-ESS3-2. (Reference G6PT to integrate the content/ targets.)

6-ESS3-2

Observation: Students understand how to analyze and interpret data that can help mitigate the impact of natural hazards, but the committee made recommendations related to using national and South Carolina data.

Instructional Recommendation(s):

- Use historic and current data (including risk maps or maps showing tracks of hurricanes) on natural events such as earthquakes, hurricanes, and other severe weather events.
- Provide events in South Carolina's past to support how the state responds to natural hazards.