

SC READY Science Grade 6 User's Guide and Performance Level Descriptors

Office of Assessment and Standards

July 2025

South Carolina Department of Education

**Performance Level Descriptors
User Guide
July 2025**

Introduction not the User Guide

Performance Level Descriptors (PLDs) serve as a foundational resource in the development process for the South Carolina College- and Career Ready tests. These descriptors help convey information about South Carolina’s goals for students (i.e., level of knowledge and skills required of students at each level of performance) and give meaning and context to the total test score (scale score). This document was created to help educators and parents better understand the use of PLDs.

1. What are Performance Level Descriptors?

PLDs are descriptions that provide the knowledge, skills, and abilities expected of students in each performance level as defined by [the South Carolina College- and Career-Ready Science Standards 2021](#) (SCCCRSSci 2021). The South Carolina Department of Education (SCDE) has two classifications of PLDs: Policy PLDs and Range PLDs.

2. What are the differences between SCDE’s Policy PLDs and Range PLDs?

- A. *Policy PLDs*** summarize the state’s definition for each performance level, providing information to stakeholders on the state’s suggested interpretation of each level. These are typically not specific to any given grade or content area.
- B. *Range PLDs*** summarize the knowledge, skills, and abilities as informed by the state content standards, expected of students in each performance level on a specific test. These PLDs translate the policy definitions into specific expectations about student knowledge and skills in a particular content area, at each performance level, for each subject and grade.

3. What are performance levels? How many are there for SC READY Science tests?

Performance levels are the broad, categorical levels used to report student performance on an assessment. There are four performance levels for the South Carolina SC READY Science tests which are organized in a manner that assumes students performing in higher levels have mastered the concepts and skills within the preceding levels. The general meaning of each of the four levels is provided on the next page.

Performance Level Descriptors

	Does not Meet Expectations	Minimally Meets Expectations	Meets Expectations	Exceeds Expectations
Policy	The student Does Not Meet the Expectations of the course content standards.	The student Minimally Meets the Expectations of the course content standards.	The student Meets the Expectations of the course content standards.	The student Exceeds the Expectations of the course content standards.

4. Do the performance levels align to the classifications used for reporting categories?

No, the process used to create the Low, Middle, and High classifications for the reporting categories differs from the process used to create the performance levels for the total test score. Each reporting category classifies a student's performance as "Low," "Middle," or "High." This classification is based on the subset of items that assess the reporting category. The PLDs are intended to describe the overall student performance and should only be used in conjunction with the total test score. These classifications within the reporting categories are found on South Carolina SC READY Science Individual Student Reports that districts send to students.

5. What is the purpose of the PLDs?

The purpose of content-specific, Range PLDS is to provide

- guidelines to assess the level of student performance,
- an indication of how demanding the standards should be,
- specific expectation about student knowledge and skills in a particular content area at each performance level, and
- a progression of knowledge and skills that students are expected to have mastered across the performance levels.

Both the scale score and the PLDs provide information that helps guide educators and assist parents in understanding the level of student performance required at each performance level.

6. How are PLDs used in conjunction with the SC READY SCIENCE tests?

PLDs provide a link among the raw score, scale score, and performance level, while also adding insight into student knowledge and performance. These statements are the basis for test score reporting and interpretation of student scores on the SC READY Science tests. PLDs are developed, revised, and expanded prior to and during the Standard Setting process for SC READY Science and are used by the standard-setting committee as a guide to make recommendations for "cut scores" that mark the threshold of performance from one level to the next.

7. What process is used to develop Range PLDs?

The PLDs are written using a multi-step process. State agency content experts and the state testing contractors/subcontractors start with the policy definitions and expand the definitions in terms of specific knowledge, skills, and abilities required at each level within a content area to create an initial draft. A committee of South Carolina educators and curriculum experts are selected to review and revise the drafts to articulate the SCCCRSSci 2021 expectations of the SC READY Science standards. Participants are

- required to have an affiliation with a South Carolina public school,
- mostly content-specific classroom teachers and teachers serving special populations, and
- representative of the demographic characteristics of South Carolina in terms of sex, race and ethnicity, region (education districts), and community type (urban, suburban, rural).

The final version is adopted by the SCDE and released to the field.

8. How can teachers use the PLDs in the classroom?

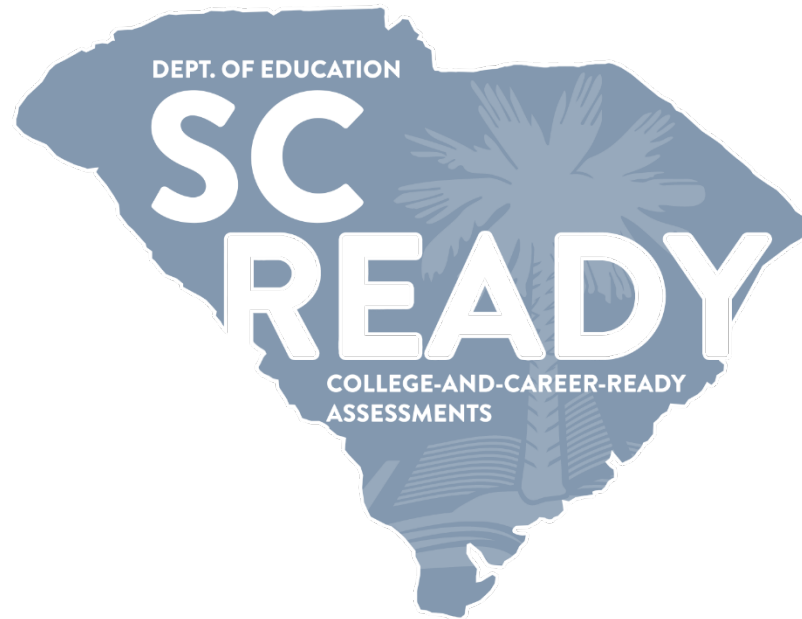
In addition to being used in the standard setting process, PLDs may serve several purposes. By using the PLDs to better understand students' total test scores, classroom teachers will have a better understanding of what their students were generally able to do within a performance level. PLDs help to further clarify the relationship between the standards and expectations of the SC READY Science tests, which can inform the development of classroom expectations to ensure these expectations meet the rigor of the standards.

Teachers may leverage this understanding of the previous year's students' performances to better inform instruction for the coming year in the same content area. Teachers can further use this information to help understand the knowledge, skills, and abilities that current students have from the previous year's instruction by

- tracking student growth along the expectation continuum as described in the PLDs,
- differentiating instruction to support achievement of all students,
- develop formative classroom assessments, and
- creating rubrics to gauge student learning against the expectations of the SC READY Science tests.

9. Where is a copy of the PLDs found?

A copy of the PLDs is attached in the subsequent pages of this document. PLDs are updated as standards are revised.



Grade 6 Performance Level Descriptors

May 2025

Columbia, SC

Performance Levels and Performance Level Descriptors

For the SC READY program, educators have developed four performance levels to describe student mastery and command of the knowledge and skills outlined in South Carolina's College- and Career-Ready Science Standards 2021. Most students have at least some knowledge of the information described in the content standards; however, performance levels succinctly describe the extent to which students have demonstrated mastery of the knowledge and skills expressed in the college- and career-ready standards. Performance levels give meaning and context to scale scores by describing the knowledge and skills students must demonstrate to achieve each level.

The four performance levels on SC READY are *Does Not Meet Expectations*, *Approaches Expectations*, *Meets Expectations*, and *Exceeds Expectations*. The general meaning of each of the four levels is provided below:

The student **does not meet the expectations** of the course content standards.

The student **approaches the expectations** of the course content standards.

The student **meets the expectations** of the course content standards.

The student **exceeds the expectations** of the course content standards.

More-detailed descriptions of the specific concepts and skills are provided for each course in the **Performance Level Descriptors** (PLDs). PLDs are descriptions of the knowledge and skills expected at each of the four performance levels and were developed by committees of South Carolina educators in October 2023. The PLDs are based on the state-adopted content standards.

PLDs show a progression of knowledge and skills that students are expected to have mastered across the performance levels. It is important to understand that a student should demonstrate mastery of the knowledge and skills within the student's performance level *as well as all content and skills in any performance levels that precede the student's own, if any*. For example, a student who Meets Expectations should also possess the knowledge and skills described at the Approaches Expectations and Does Not Meet Expectations performance levels.

Performance Expectation	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
	The student Does Not Meet the Expectations of the course content standards.	The student Approaches the Expectations of the course content standards.	The student Meets the Expectations of the course content standards.	The student Exceeds the Expectations of the course content standards.
	The student needs substantial academic support to be on track for college and career readiness.	The student needs additional academic support to be on track for college and career readiness.	The student is prepared to be on track for college and career readiness.	The student is well prepared to be on track for college and career readiness.
6-PS1-4 <i>Develop and use a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.</i>	Can recognize models of particle motion in different states of pure substances.	Can use a model to describe how changes in temperature result in changes in particle motion.	Can develop and use a model to predict how the addition or removal of thermal energy will affect the state of matter of pure substances.	Can apply a model of the relationship between thermal and kinetic energy to explain a phenomenon or observation.
6-PS3-3 <i>Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.</i>	Can identify that some materials speed or slow the amount of thermal energy retained or released by substances.	Can describe a device that alters the transfer of thermal energy.	Can design, construct, and test a device to alter the transfer of thermal energy.	Can evaluate the success of devices developed to alter the transfer of thermal energy.
6-PS3-4 <i>Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.</i>	Can identify the state of matter of a sample by comparing the average kinetic energy of the particles with thermal data.	Can describe how changing the amount of thermal energy affects the physical properties of a sample, such as the type of matter, the mass, or the change in the average kinetic energy by measuring temperature.	Can plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy by measuring temperature of a sample.	Can draw a conclusion or make a claim using data collected from an investigation designed to analyze the kinetic energy of a sample in different environments.

Performance Expectation	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
6-PS4-2 <i>Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.</i>	Can recognize the difference between mechanical waves and light waves.	Can identify that when mechanical waves and/or light waves hit various materials, they can be reflected, absorbed, or transmitted.	Can develop and use a model to demonstrate and/or describe that mechanical and/or light waves can be reflected, transmitted through, or absorbed by various materials.	Can predict how reflection, refraction (bending), transmission, and absorption affect wave properties.
6-LS1-1 <i>Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.</i>	Can distinguish between living and nonliving things.	Can describe that organisms are composed of one cell or many cells.	Can produce evidence through investigation that organisms are composed of cells and can be unicellular or multicellular.	Can revise an investigation that identifies organisms as unicellular or multicellular and provide evidence of characteristics organisms share.
6-LS1-2 <i>Develop and use a model to describe the function of a cell as a whole and ways the parts of cells contribute to the function.</i>	Can identify that cells contain organelles.	Can recognize the nucleus, chloroplasts, mitochondria, cell membrane, and cell wall and can identify which of these parts are found in plant cells and/or animal cells.	Can develop and/or use an animal and/or plant cell model that 1. identifies the nucleus, chloroplasts, mitochondria, cell membrane, and cell wall, and 2. describes how these organelles function to maintain the cell.	Can predict how a change in the function of one or more of the organelles affects the function of the cell as a whole
6-LS1-3 <i>Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.</i>	Can identify the levels of organization in the human body (i.e., cells, tissues, organs, organ systems, organism).	Can identify the purpose of the organ systems in the human body.	Can use evidence to explain how the different body systems interact with and depend on each other.	Can predict the impact of changes in one or more body systems on the function of the human body as a whole.

Performance Expectation	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
6-LS1-8 <i>Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.</i>	Can identify the five main senses.	Can relate the type of sensory receptors and stimuli to each type of behavior or response.	Can synthesize information to explain how sensory receptors take in stimuli and transmit that information to the brain for storage and/or a reaction to each stimulus.	Can use a given scenario to describe the stimulus, sensory receptor, and response.
6-ESS1-4 <i>Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.</i>	Can recall that some rock is deposited in layers.	Can recognize that rock strata contain evidence of Earth's history.	Can explain how evidence from rock strata is used to organize major events in Earth's history.	Can develop a model that predicts how current Earth processes will affect rock strata.
6-ESS2-1 <i>Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.</i>	Can recall the three basic rock types (i.e., sedimentary, igneous, metamorphic).	Can describe how the three basic rock types are produced.	Can develop a model to describe the cycling of Earth's materials and the flow of energy throughout these pathways/ processes.	Can develop, use, or revise a model to explain the underlying Earth pathways/ processes in the cycling of Earth's materials.
6-ESS2-2 <i>Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.</i>	Can recall Earth's geologic processes.	Can describe Earth's geologic processes.	Can use evidence to explain and support how geologic processes change the surface of Earth.	Can predict how the surface features of Earth will most likely be altered over time by geologic processes.

Performance Expectation	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
6-ESS2-3 <i>Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.</i>	Can recall that Earth's surface is made up of moving tectonic plates.	Can identify geologic data to suggest that Earth's tectonic plates have moved over time.	Can analyze and interpret geologic data to provide evidence of past tectonic plate motion.	Can predict how the current movement of tectonic plates will result in changing geologic features in the future.
6-ESS2-4 <i>Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.</i>	Can recall that water cycles through Earth's systems.	Can identify a basic water cycle model and label the processes.	Can develop a model to describe the effects of gravity and solar energy on the cycling of water through Earth's systems.	Can predict how changes in thermal energy and the force of gravity affect the cycling of water through Earth's systems.
6-ESS2-5 <i>Analyze and interpret data to provide evidence for how the motions and complex interactions of air masses result in changes in weather conditions.</i>	Can recall the types of air masses and air pressure systems.	Can describe weather conditions based on collected data from a variety of sources for a specific area.	Can analyze and interpret data to provide evidence of how interactions of air masses and air pressure result in changing weather conditions.	Can predict the effects of specified weather conditions for a specific location.
6-ESS2-6 <i>Develop and use models to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.</i>	Can recall that different areas of Earth receive different amounts of direct sunlight.	Can describe atmospheric and oceanic circulation and how sunlight affects the climate of areas.	Can develop and use models to describe how unequal heating and rotation of Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.	Can predict changes in climate based on changes in oceanic and atmospheric circulation across the globe.

Performance Expectation	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
6-ESS3-2 <i>Analyze and interpret data on natural hazards to identify patterns, which help forecast future catastrophic events and inform the development of technologies to mitigate their effects.</i>	Can identify natural hazards that affect humans and the environment.	Can describe how different natural hazards affect humans and the environment and identify mitigating technologies to reduce the impact.	Can analyze and interpret natural hazards data and suggest technologies that will mitigate the impact on humans and the environment.	Can analyze and compare proposed technologies to mitigate the impact of natural hazards.