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## **SC READY Science Grade 4 User's Guide and Performance Level Descriptors**

Office of Assessment and Standards

Updated July 2025

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*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
<b>Policy</b>	The student <b>Does Not Meet the Expectations</b> of the course content standards.	The student <b>Minimally Meets the Expectations</b> of the course content standards.	The student <b>Meets the Expectations</b> of the course content standards.	The student <b>Exceeds the Expectations</b> 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?**

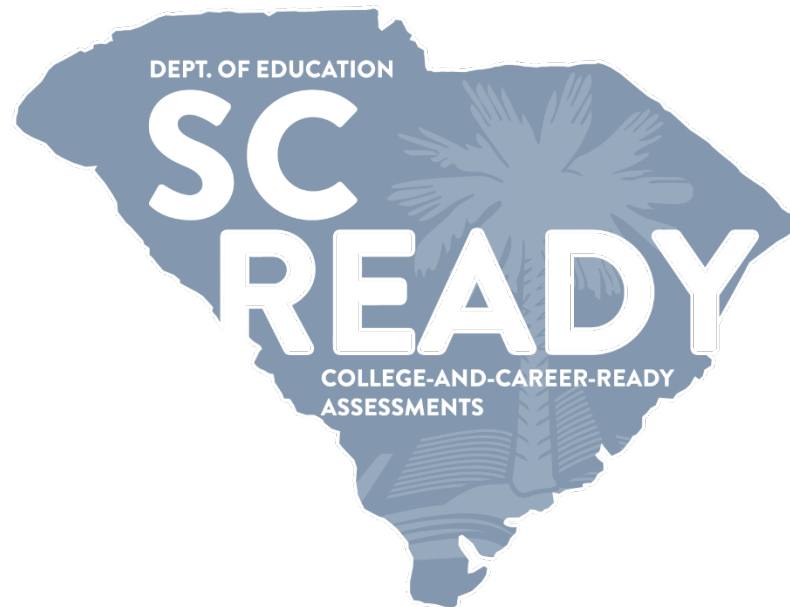
In addition to being used in the standard setting process, PLDs may serve several purposes. By using the PLDs to better understand students' total test scores, classroom teachers will have a better understanding of what their students were generally able to do within a performance level. PLDs help to 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 4 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 <b>Does Not Meet the Expectations</b> of the course content standards.	The student <b>Approaches the Expectations</b> of the course content standards.	The student <b>Meets the Expectations</b> of the course content standards.	The student <b>Exceeds the Expectations</b> of the course content standards.
	The student <b>needs substantial academic support</b> to be on track for college and career readiness.	The student <b>needs additional academic support</b> to be on track for college and career readiness.	The student <b>is prepared</b> to be on track for college and career readiness.	The student <b>is well prepared</b> to be on track for college and career readiness.
<b>4-PS3-1</b> <i>Use evidence to construct an explanation relating the speed of an object to the energy of that object.</i>	Can identify and record the distance an object has travelled in a specified amount of time (speed).	Can compare and describe the speeds of two or more objects using appropriate units.	Can use data to explain the relationship between the speed and energy of one or more objects using appropriate units and terms.  Can compare the speeds and amounts of energy of two or more objects and explain which has more energy.	Can predict the relationship between the speed and relative energy of one or more objects based on scientific data.
<b>4-PS3-2</b> <i>Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.</i>	Can identify that sound, light, heat, and electricity are all forms of energy.	Can describe that energy is transferred through an environment in different ways.	Can use observations to provide evidence that energy can be transferred by sound, light, heat, and electricity.	Can predict how energy will be transferred from one location to another.
<b>4-PS3-3</b> <i>Ask questions and predict outcomes about the changes in energy that occur when objects collide.</i>	Can recognize that energy is transferred when two objects collide.	Can describe that energy is transferred from one object to another during a collision through sound, light, heat, and/or a change in speed or direction.	Can ask questions about the changes in energy when two objects collide.  Can predict how the energy changes and how energy is transferred when two objects collide.	Can use evidence to support or refute a prediction about how energy changes and is transferred when two objects collide.

Performance Expectation	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
<b>4-PS3-4</b> <i>Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.</i>	Can recognize that a device converts energy from one form to another.	Can describe how a given device converts energy from one form to another.	Can design and test a device or solution intended to convert energy from one form to another based on how well the device meets the defined criteria and needs.	Can compare and evaluate two or more devices or solutions designed to convert energy from one form to another based on how well each one meets the defined criteria and needs.
<b>4-PS4-1</b> <i>Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.</i>	Can recognize that a wave is a repeating pattern caused by a disturbance.	Can describe that waves transfer energy and have properties called amplitude and wavelength.  Can use a given model to identify the amplitude and wavelength of a wave.	Can develop a model to illustrate that waves can have different amplitudes and/or wavelengths.  Can develop a model to explain the relationship between the energy, amplitude, and wavelength of a wave.  Can develop a model to explain how the energy of a wave causes objects to move.	Can analyze, compare, or develop new models that connect the amplitudes and wavelengths of different waves to the energy of the waves.
<b>4-PS4-2</b> <i>Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.</i>	Can recognize that light is essential to the visibility of objects.	Can use a given model to describe that light can be reflected from the surface of objects.	Can develop a model to show that light reflecting from objects and entering the eye allows objects to become visible.  Can develop a model to demonstrate that different materials can affect the visibility of an object.	Can revise a model to make an object more visible or less visible.  Can make predictions about the visibility of an object based on the materials used in a model and explain that some materials reflect or absorb light waves.



Performance Expectation	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
<b>4-PS4-3</b> <i>Generate and compare multiple solutions that use patterns to transmit information.</i>	Can identify different methods of communication.	Can describe a communication solution by which communication over distance is dependent on either visual or auditory patterns.	Can compare multiple communication solutions that depend on patterns to transmit information.	Can evaluate different communication solutions, predict which meets given criteria, and identify possible limitations.
<b>4-LS1-1</b> <i>Construct an argument that plants and animals have internal and external structures that function together in a system to support survival, growth, behavior, and reproduction.</i>	Can recognize that plants and animals have unique structures.	Can describe specific internal and external structures essential to the survival of plants and animals within their environment.	Can argue that specific structures of plants and animals that help these organisms survive, grow, reproduce, and respond to their environment.	Can compare how the structures of plants and animals that live in different environments help them survive, grow, reproduce, and respond within those environments.
<b>4-LS1-2</b> <i>Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.</i>	Can recognize that organisms have senses that process different types of information.	Can describe how organisms respond to information in their environment.	Can use a model to explain the process of how living organisms receive information from their environment and how they are able to respond to that information in different ways.	Can compare, develop, or evaluate models that explain how organisms process information from their environment in different ways.
<b>4-ESS1-1</b> <i>Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.</i>	Can recognize that there are different rock layers in a given area.	Can identify what a fossil is and identify that rock is deposited in layers, with the oldest rock usually being the bottom layer.	Can identify evidence that shows there are patterns in rock formations and fossils that support an explanation for landscape changes over time.	Can use evidence to describe and explain how Earth processes affected the geologic and environmental changes in the landscape of an area over time.

Performance Expectation	Does Not Meet Expectations	Approaches Expectations	Meets Expectations	Exceeds Expectations
<b>4-ESS2-1</b> <i>Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.</i>	Can identify changes on Earth's surface caused by water, ice, or wind.	Can describe how water, ice, or wind causes weathering and erosion.	Can measure and explain how the rate of water, ice, and wind cause weathering and erosion and describe the effects on rock layers.  Can describe how the presence of vegetation impacts those same rock layers.	Can predict how water, ice, wind, and vegetation will affect weathering and the rate of weathering and erosion of rock layers.
<b>4-ESS2-2</b> <i>Analyze and interpret data from maps to describe patterns of Earth's features.</i>	Can identify surface features found on Earth.	Can describe Earth's features by observing maps of land and ocean floors.	Can analyze and interpret map data to describe patterns of Earth's features.	Can collect and summarize data from multiple maps to explain the presence of Earth's features.
<b>4-ESS3-1</b> <i>Obtain and combine information to describe that energy and fuels are derived from natural resources and how their uses affect the environment.</i>	Can identify various natural resources.	Can describe whether natural resources are renewable or nonrenewable and how humans use these natural resources.	Can obtain and combine information to explain how natural resources are obtained and how their use affects the environment.	Can predict the impact on the environment if a given resource is used at a constant rate or is no longer available.
<b>4-ESS3-2</b> <i>Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.</i>	Can identify natural Earth processes that affect humans.	Can describe how different natural Earth processes can affect humans.	Can generate and compare different solutions to reduce the impact of natural Earth processes on humans.	Can evaluate or propose new solutions designed to reduce the impacts of natural Earth processes on humans.