

Reporting Category Statements Grade 5 Science

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Introduction

Students who participate in one or more of Florida's statewide, standardized assessments in grades 3–10 and/or end-of-course (EOC) assessments in Algebra 1, Geometry, Civic, U.S. History, and Biology 1 will receive a detailed score report that is unique to computer-adaptive assessments for each assessment. Each report will contain detailed information about the student's performance, narratives regarding strengths and weaknesses, and suggestions as to steps parents/guardians can take to help students progress in their learning. The information in each report is intended primarily for students and families and is not intended to replace classroom instruction.

The most detailed narrative is provided at the *reporting category* level. Reporting categories refer to major groupings of content and skills, such as Reading Informational Text or Reading Prose and Poetry in English Language Arts (ELA); Number Sense and Operations with Whole Numbers or Algebraic Reasoning in Mathematics; Nature of Science in Science; and Roles, Rights, and Responsibilities in Social Studies; among others. For each of the reporting categories, three tiers of text have been created based on state academic standards and informed by the Achievement Level Descriptors (ALDs) that were written by Florida educators. These tiers include *Below Expectations*, *At/Near Expectations* or *On Grade Level*, and *Above Expectations*. These reports classify student performance into one of the three tiers based on student responses to items that measure the benchmarks associated with that reporting category. Individual benchmark codes can be found in a report beneath the name of the correlated reporting category. Each student's report is tailored to provide specific information based on which of the three tiers that each reporting category score falls into. This document provides the complete set of narratives so that stakeholders can see expectation progressions within a reporting category and, if appropriate, across grades.

Each description included in these reports and the accompanying next steps were drafted by panels of Florida educators and reviewed by larger Florida educator committees facilitated by EdCount, LLC, and consisting of Florida educators, specialists from the Bureau of Standards and Instructional Support and other Florida Department of Education personnel.

It is important to keep in mind that a student's overall score provides the most valid and reliable evidence of what the student knows and can do with respect to the state academic standards. Due to the relatively small size of each reporting category, neither individual nor combined reporting category performance should be used to infer overall performance.

For more information on Florida's statewide, standardized assessments, please see the [Statewide Assessments Guide](#). Please direct questions and comments about these reports to Assessment@fldoe.org.

Additional Resources

The following resources are available to support understanding of the test design for Florida’s statewide, standardized assessments and the skills outlined in the state academic standards.

[Grade 5 Science Achievement Level Descriptions](#)

[Grade 8 Science Achievement Level Descriptions](#)

[Biology 1 EOC Achievement Level Descriptions](#)

[Florida’s Academic Standards for Science](#)

[Science Test Design Summary](#)

Grade 5 Science Reporting Category Statements

Nature of Science			
See Florida State Academic Standards SC.5.N.1.1 [SC.3.N.1.1, SC.4.N.1.1, SC.4.N.1.6, SC.5.N.1.2, SC.5.N.1.4]; SC.5.N.2.1 [SC.3.N.1.7, SC.4.N.1.3, SC.4.N.1.7, SC.5.N.1.5, SC.5.N.1.6]; and SC.5.N.2.2 [SC.3.N.1.2, SC.3.N.1.5, SC.4.N.1.2, SC.4.N.1.5, SC.5.N.1.3].			
Indicator	Below Expectations	On Grade Level	Above Expectations
What These Results Mean	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Identify some elements of a written procedure or experimental setup. Identify some elements of a scientific investigation such as a testable question, control group, data, and conclusion. Recognize the difference between opinion and observation. Recognize basic differences in data across trials and/or groups. 	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Design a scientific investigation using a written procedure to form explanations based on evidence. Explain the need for replication of scientific investigations. Compare experiments and other types of scientific investigations. Review an experiment to identify differences in data across trials and/or groups. 	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Evaluate a written procedure and results of a scientific investigation to form explanations based on evidence. Evaluate a conclusion using multiple sets of data. Justify the need for scientific investigations to be replicable by others. Analyze the reasons for differences in data across trials and/or groups.
Next Steps	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Practice developing a testable scientific question related to something happening in your home or community (questions that can be answered through an experiment or observation). List the steps one would follow to test this question. Explain that evidence from scientific investigations should be replicable by others. Make observations, inferences, and predictions. Collect data through careful observation and explain why data is used to support an explanation. 	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Practice designing scientific investigations that are based on testable questions related to something happening in your home or community. Use written procedures in order to form explanations based on evidence. Collect and synthesize data from an experiment to support explanations and identify areas of improvement. Repeat a scientific investigation to determine if the evidence is replicable. Explain differences in data across trials and/or groups. 	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Design scientific investigations that can be replicated by other scientists (e.g., formulate testable questions, procedures, and collect and synthesize data). Generate explanations using multiple sets of data. Critique a conclusion using multiple sets of data.

Note: Parent benchmarks are bolded with associated benchmarks in brackets.

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Earth and Space Science			
See Florida State Academic Standards SC.5.E.5.1 [SC.3.E.5.1, SC.3.E.5.2, SC.3.E.5.3]; SC.5.E.5.3 [SC.5.E.5.2]; SC.4.E.5.4 [SC.4.E.5.1, SC.4.E.5.2, SC.4.E.5.3]; SC.4.E.6.2 [SC.4.E.6.1]; SC.4.E.6.3 [SC.4.E.6.6]; SC.4.E.6.4 ; SC.5.E.7.1 [SC.5.E.7.2]; and SC.5.E.7.3 [SC.5.E.7.4, SC.5.E.7.5, SC.5.E.7.6].			
Indicator	Below Expectations	On Grade Level	Above Expectations
What These Results Mean	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Recognize objects in space (Earth, Moon, Sun, other stars) and their basic movements. Identify an example of a physical property of a rock or mineral. Recognize the concept of physical weathering and/or erosion. Identify the states (phases) of water and/or the changes water undergoes as it moves through the water cycle. Identify some conditions that determine the weather in a particular place and time. Recognize common characteristics of different climate zones. 	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Distinguish objects in space and interpret the movement, patterns, and relationships among the Moon, Earth, Sun, stars, and other objects in space. Describe the common physical properties of rocks and minerals. Describe how the three categories of rocks are formed. Describe the differences between physical weathering and erosion. Describe how water changes state (phase) as it moves through the water cycle and the ocean's role in the process. Recognize how conditions determine the weather in a particular place and time. Relate characteristics of the three main climate zones. 	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Differentiate objects in space and analyze the movement, patterns, and relationships among the Moon, Earth, Sun, stars, and other objects in space. Interpret a system for classifying mineral and/or rock samples. Differentiate physical weathering and erosion and identify examples of each. Evaluate and/or revise a model of the water cycle. Analyze weather-related data from different sources.
Next Steps	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Create a model using household items to represent the Moon, Earth, Sun, and stars. Identify the movements, patterns, and relationships among these objects, including rotation and revolution. Find examples of how Earth's surface changes in your community. 	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Create a model using household items to represent the Moon, Earth, Sun, and stars in the solar system. Identify and describe patterns of movement among these objects, including rotation and revolution. Find examples and describe how the Earth's surface changes in your 	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Develop a model to demonstrate the movement, patterns, and relationships among objects in space. Develop a model to demonstrate the effects of physical weathering (breaking down of rock) and erosion (movement of rock). Identify real-world examples of erosion and the resulting impact on the environment

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Earth and Space Science			
See Florida State Academic Standards SC.5.E.5.1 [SC.3.E.5.1, SC.3.E.5.2, SC.3.E.5.3]; SC.5.E.5.3 [SC.5.E.5.2]; SC.4.E.5.4 [SC.4.E.5.1, SC.4.E.5.2, SC.4.E.5.3]; SC.4.E.6.2 [SC.4.E.6.1]; SC.4.E.6.3 [SC.4.E.6.6]; SC.4.E.6.4 ; SC.5.E.7.1 [SC.5.E.7.2]; and SC.5.E.7.3 [SC.5.E.7.4, SC.5.E.7.5, SC.5.E.7.6].			
Indicator	Below Expectations	On Grade Level	Above Expectations
	<ul style="list-style-type: none"> • Create a model to show how water changes states (phases) and connect it to the water cycle. • Use maps and other tools to explore weather components in local areas and other environments (swamps, deserts, mountains, grasslands, rainforests, tundra, and wetlands). 	<p>community. Explain why water changes state (phase) as it moves through the water cycle and the ocean's role in the process.</p> <ul style="list-style-type: none"> • Use maps and other tools to predict and measure the weather in local and non-local areas. 	<p>(e.g., coastal erosion, where the gradual wearing away of beaches can threaten wildlife habitats).</p> <ul style="list-style-type: none"> • Use maps and other tools to predict weather patterns in local and non-local areas.

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Physical Science			
See Florida State Academic Standards SC.5.P.8.1 [SC.3.P.8.1, SC.3.P.8.2, SC.3.P.8.3, SC.4.P.8.1]; SC.5.P.8.3 [SC.5.P.8.2]; SC.5.P.9.1 [SC.3.P.9.1, SC.4.P.9.1]; SC.5.P.10.1 [SC.3.P.10.1, SC.3.P.10.3, SC.3.P.10.4, SC.3.P.11.1, SC.3.P.11.2, SC.4.P.10.1, SC.4.P.10.3]; SC.5.P.10.2 [SC.3.P.10.2, SC.4.P.10.2, SC.4.P.10.4]; SC.5.P.10.4 [SC.3.E.6.1, SC.4.P.11.1, SC.4.P.11.2, SC.5.P.10.3, SC.5.P.11.1, SC.5.P.11.2]; SC.5.P.13.1 [SC.3.E.5.4, SC.4.P.8.4]; and SC.5.P.13.2 [SC.4.P.12.1, SC.4.P.12.2, SC.5.P.13.3, SC.5.P.13.4].			
Indicator	Below Expectations	On Grade Level	Above Expectations
What These Results Mean	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Identify a physical property of a solid, liquid, and/or gas. Identify that temperature can cause a physical or chemical change. Recognize that there are different forms of energy (light, heat, sound, electrical, chemical, and mechanical). Identify an example of a familiar force. Identify that mass or force can influence the motion of an object. 	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Compare and contrast the physical properties of solids, liquids, and gases. Identify physical and/or chemical changes that result from changes in temperature. Identify and describe the basic forms of energy (light, heat, sound, electrical, chemical, and mechanical) based on their properties and behaviors. Identify familiar forces and how they affect the movement of objects. 	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Differentiate the physical properties of solids, liquids, and gases. Analyze how physical and chemical changes are affected by temperature. Analyze forms of energy (light, heat, sound, electrical, chemical, and mechanical) including their properties and behaviors. Analyze how familiar forces affect the movement of objects. Analyze data related to the motion of an object.
Next Steps	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Investigate ways to separate mixtures based on their observable properties (particle size, shape, color, and magnetic attraction). Use common household materials to identify items that dissolve and items that do not dissolve in water. Identify physical and chemical changes that happen naturally in the world (e.g., ice melting into water) and investigate how temperature affects the change. Explore the properties of basic forms of energy (light, heat, sound, 	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Explore various ways and tools used to separate mixtures (e.g., magnets, dissolving, forceps, strainers). Conduct safe at-home investigations, with adult supervision, to determine factors that speed up or slow down the dissolving process (temperature, stirring, and/or surface area). Explore and discuss how temperature affects physical and chemical changes that happen naturally in the world. Analyze data or use observations to describe how an unbalanced force 	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Design a procedure to separate a mixture of solids and liquids. Evaluate data related to energy causing motion and/or creating change. Design an investigation to collect and evaluate data related to the effects of familiar forces (e.g., pushes and pulls) on the motion of objects. Compare data related to the speed and motion of various objects.

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Physical Science			
See Florida State Academic Standards SC.5.P.8.1 [SC.3.P.8.1, SC.3.P.8.2, SC.3.P.8.3, SC.4.P.8.1]; SC.5.P.8.3 [SC.5.P.8.2]; SC.5.P.9.1 [SC.3.P.9.1, SC.4.P.9.1]; SC.5.P.10.1 [SC.3.P.10.1, SC.3.P.10.3, SC.3.P.10.4, SC.3.P.11.1, SC.3.P.11.2, SC.4.P.10.1, SC.4.P.10.3]; SC.5.P.10.2 [SC.3.P.10.2, SC.4.P.10.2, SC.4.P.10.4]; SC.5.P.10.4 [SC.3.E.6.1, SC.4.P.11.1, SC.4.P.11.2, SC.5.P.10.3, SC.5.P.11.1, SC.5.P.11.2]; SC.5.P.13.1 [SC.3.E.5.4, SC.4.P.8.4]; and SC.5.P.13.2 [SC.4.P.12.1, SC.4.P.12.2, SC.5.P.13.3, SC.5.P.13.4].			
Indicator	Below Expectations	On Grade Level	Above Expectations
	electrical, chemical, and mechanical). <ul style="list-style-type: none"> Investigate and discuss examples of familiar forces (e.g., pushes and pulls) through simple activities such as testing which objects a magnet attracts, playing tug of war, or flying paper airplanes. 	acting on an object changes its motion.	

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Life Science			
See Florida State Academic Standards SC.3.L.14.1 [SC.3.L.14.2, SC.4.L.16.1]; SC.5.L.14.1 ; SC.5.L.14.2 [SC.3.L.15.1, SC.3.L.15.2]; SC.4.L.16.4 ; SC.5.L.17.1 [SC.3.L.17.1, SC.4.L.16.2, SC.4.L.16.3, SC.4.L.17.1, SC.4.L.17.4, SC.5.L.15.1]; SC.4.L.17.3 [SC.3.L.17.2, SC.4.L.17.2].			
Indicator	Below Expectations	On Grade Level	Above Expectations
What These Results Mean	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Identify the basic structures of a plant (stem, leaf/needle, root, flower, seed, and fruit) or animal (human organs). Identify a basic pattern and/or a stage in the life cycle of a Florida plant or animal. Recognize that plants and animals respond to seasonal changes. Recognize that plants make their own food and that animals cannot make their own food. Recognize that energy flows through a food chain. 	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Identify and compare the function of organs and other physical structures of plants and animals. Classify animals into major groups (mammals, birds, reptiles, amphibians, fish, arthropods; vertebrates and invertebrates; those having live births and those which lay eggs) based on physical characteristics or behaviors. Classify flowering and nonflowering plants based on physical characteristics. Compare the life cycles of Florida plants and animals, including complete and incomplete metamorphosis. Identify adaptations of plants and animals that enable them to survive in different environments and seasons. Explain how energy flows through a food chain. 	<p>For example, your learner may be able to:</p> <ul style="list-style-type: none"> Connect structures of plants to their functions, including those involved in sexual reproduction of flowering plants (stamen, pistil, ovary, petal, sperm, and egg). Relate the common functions of physical structures in plants and animals. Compare groups of animals according to physical characteristics and behaviors. Compare groups of flowering and nonflowering plants based on physical characteristics. Compare the life cycle stages of plants to those of animals. Differentiate plant or animal characteristics that are inherited from those that are affected by the environment. Predict the impact that environmental changes may have on the survival and reproduction of plants and animals. Analyze various food chain models.
Next Steps	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Grow plants from seeds to experience, discuss, and gain an understanding of plant structures (stem, leaf/needle, root, 	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Observe animals in your community or use online zoo or wildlife cameras to explore and compare different groups 	<p>For example, have your learner:</p> <ul style="list-style-type: none"> Research some unknown plants and animals and explain how they are alike and different from local plants and animals.

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Life Science			
See Florida State Academic Standards SC.3.L.14.1 [SC.3.L.14.2, SC.4.L.16.1]; SC.5.L.14.1 ; SC.5.L.14.2 [SC.3.L.15.1, SC.3.L.15.2]; SC.4.L.16.4 ; SC.5.L.17.1 [SC.3.L.17.1, SC.4.L.16.2, SC.4.L.16.3, SC.4.L.17.1, SC.4.L.17.4, SC.5.L.15.1]; SC.4.L.17.3 [SC.3.L.17.2, SC.4.L.17.2].			
Indicator	Below Expectations	On Grade Level	Above Expectations
	<p>flower, seed, and fruit) and the plant life cycle.</p> <ul style="list-style-type: none"> • Use models and/or research to explore the functions of the organs in the human body. • Sort physical characteristics and behaviors of animals to correctly place them in the appropriate group (mammals, birds, reptiles, amphibians, fish, arthropods; vertebrates and invertebrates; those having live births and those which lay eggs). • Sort physical characteristics of plants (flowering and nonflowering) to correctly place them in the appropriate grouping (e.g., those that produce seeds, or those that produce spores, like ferns and mosses). • List examples of changes in Florida plants and animals through the seasons. • Create a food chain diagram and trace the flow of energy as it is transferred along the chain through the producers to the consumers. 	<p>of animals based on their physical characteristics and behaviors.</p> <ul style="list-style-type: none"> • Observe the distinct physical characteristics of both flowering and nonflowering plants to identify and compare how they are grouped. • Investigate how and/or why plants and animals respond to seasonal changes in Florida and other regions of the country. • Describe the role of producers (organisms that make their own food) and consumers (organisms that obtain nutrients from producers or other consumers) in a food chain. 	<ul style="list-style-type: none"> • Dissect flowers to observe the reproductive structures (stamen, pistil, ovary, petal, sperm, and egg). • Design an investigation to observe how plants respond to stimuli such as heat, light, or gravity. • Analyze data related to the impact seasonal changes can have on plants and animals.

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