

**Theory of Action:** Academic standards represent a collective commitment around what students should learn each year. The state assessment asks students to demonstrate their knowledge, skills, and understanding related to these standards using a common measure. The resulting data allows us to see patterns in performance that should guide school and district improvement, helping identify areas of strength and opportunity.

**Role of Performance Level Descriptors in Defining Proficiency:** Performance level descriptors bridge the state assessment to classroom instruction and the systems of formative assessments that guide local instruction and choices about individual students. **Academic proficiency represents a range of observable student performance characteristics.** There are multiple pathways to proficiency, and students rely upon their strengths differently within that range of performance.

**Proficiency and Difficulty:** A student’s ability to demonstrate proficiency is influenced by the complexity of the texts or stimuli presented, tasks they’re asked to complete, and the contexts in which they are engaged. As student performance improves, students are typically able to handle more challenging texts/stimuli, tasks, and contexts, and are able to demonstrate their skills and knowledge more accurately and consistently.

Earth and Space Science <i>Student performance indicates the ability to...</i>				
ESS	Below Proficient	Approaching Proficient	Proficient	Above Proficient
4-ESS1-1	Identify different rock layers.	Describe different rock layers.	Use evidence to explain how the different rock layers allow us to see how the Earth’s environment, in general, has changed over time.	Use evidence to explain how the different rock layers allow us to see how the Earth’s environment has changed over time in a specific location.
		Identify which Earth layers are the oldest and which are the newest.	Use evidence (such as fossil evidence) to explain how we know which Earth layers are the oldest and which are the newest.	Use evidence (such as fossil evidence and patterns within them) to identify a timeline of which Earth layers are the oldest and the newest.
5-ESS1-1	Identify the sun as a star.	Describe that the sun is the brightest and largest star.	Argue, from evidence, that the sun, a star, appears larger and brighter than other stars due to its distance from the Earth.	Use evidence to argue why the sun appears larger and brighter than other stars compared to Earth.
			Use evidence to explain that other stars in the night sky look smaller and less bright because of their distance from Earth.	

ESS	Below Proficient	Approaching Proficient	Proficient	Above Proficient
<b>5-ESS1-2</b>	Recognize changes in shadows throughout the day.	Use a model to explain why shadows change size or position at different times of the day.	Use a model to explain why shadows change size and position at different times of the day.	Create a model to explain why shadows change size and position at different times of the day.
	Identify that Earth rotates on its axis.	Describe patterns that can be explained by the Earth rotating on its axis.	Use graphical evidence, such as bar graphs, pictographs, and pie charts, to describe patterns that can be explained by the Earth rotating on its axis (once a day, while its orbit around the sun takes a year).	Develop graphical evidence such as bar graphs, pictographs, and pie charts, to describe patterns that can be explained by the Earth rotating on its axis (once a day, while its orbit around the sun takes a year).
<b>4-ESS2-2</b>	Identify mountain ranges, deep ocean trenches, ocean floor structures, and volcanoes.	Use maps (or other graphical data) to identify a single pattern in the location of Earth features, such as mountain ranges, deep ocean trenches, ocean floor structures, and volcanoes.	Use maps (or other graphical data) to identify multiple patterns in the location of Earth features, such as mountain ranges, deep ocean trenches, ocean floor structures, and volcanoes.	Use maps and other graphical data to compare patterns in the location of a variety of Earth's features, such as mountain ranges, deep ocean trenches, ocean floor structures, and volcanoes.
<b>3-ESS2-1</b>	Identify patterns of the weather across different times and areas.	Represent data in bar graphs or pictographs to record patterns of the weather across different times and areas.	Represent data in bar graphs and pictographs to record patterns of the weather across different times and areas.	Represent data in multiple graphs to record patterns of the weather across different times and areas to determine climate.
	Identify patterns of the weather across different times and areas.	Analyze and interpret weather patterns within data.	Analyze and interpret patterns within data so that they can make predictions about what kind of weather might happen next.	Analyze and interpret patterns within data so that they can make predictions about what kind of weather might happen next in multiple regions.
<b>3-ESS2-2</b>	Identify and obtain a reliable source for rainfall and temperature.	Obtain and combine information (e.g., average rainfall and average temperature range) to describe a climate in a region of the world.	Obtain and combine information (e.g., average rainfall and average temperature range) to describe climates in different regions of the world.	Obtain and combine information (e.g., average rainfall and average temperature range) to relate how climate changes with geographical location.

ESS	Below Proficient	Approaching Proficient	Proficient	Above Proficient
4-ESS2-1	Identify weathering or erosion. Identify how rainfall helps to shape the land.	Make observations and/or measurements of weathering or the rate of erosion by water, ice, wind, or vegetation.  Describe how rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, living organisms, and gravity break rocks, soils, and sediments into smaller particles and move them around.	Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.  Describe how rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, living organisms, and gravity break rocks, soils, and sediments into smaller particles and move them around.  Living things affect the physical characteristics of their regions.	Make observations and/or measurements to provide evidence of the effects of weathering and the rate of erosion by water, ice, wind, or vegetation to analyze and interpret the difference between weathering and erosion.
5-ESS2-1	Identify the geosphere, biosphere, hydrosphere, and/or atmosphere.	Develop a model to describe how two of the spheres (geosphere, biosphere, hydrosphere, and/or atmosphere) interact.	Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	Develop and use a model to explain ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
5-ESS2-2	Identify where we find salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	Identify where we find salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth to make and defend a claim.
3-ESS3-1	Identify a claim about a design solution that reduces the impacts of a weather-related hazard.	Identify and utilize a claim to determine the merit of a design solution that reduces the impacts of a weather-related hazard.	Develop a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem.	Construct and explain a claim about the merit of a solution to a problem by citing multiple relevant pieces of evidence about how it meets the criteria and constraints of the problem.
4-ESS3-1	Obtain and combine information from books and other media about energy and fuels derived from natural resources.	Obtain and combine information from books and other reliable media about energy and fuels derived from natural resources and their uses.	Obtain and combine information from books and other reliable media to explain that energy and fuels are derived from natural resources and their uses affect the environment.	Obtain and combine information from books and other reliable media to explain that renewable and non-renewable energy and fuels are derived from natural resources and their uses affect the environment in multiple ways.

ESS	Below Proficient	Approaching Proficient	Proficient	Above Proficient
5-ESS3-1	Obtain and combine information from books and other media about ways to protect the Earth's resources and environment.	Obtain and combine information from books and other reliable media about ways to protect the Earth's resources and environment.	Obtain and combine information from books and other reliable media to explain ways individual communities use science ideas to protect the Earth's resources and environment.	Obtain and combine information from books and other reliable media to explain ways individual communities use science ideas to protect the Earth's resources and environment in multiple ways.
4-ESS3-2	Identify solutions to reduce the impacts of natural Earth processes on humans.	Identify and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	Generate, compare, and justify multiple solutions to reduce the impacts of natural Earth processes on humans.

Life Sciences <i>Student performance indicates the ability to...</i>				
LS	Below Proficient	Approaching Proficient	Proficient	Above Proficient
3-LS1-1	Identify a model to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.	Identify multiple models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.	Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.	Develop and compare models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.
4-LS1-1	Identify that plants and animals have internal and external structures.	Describe that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	Construct an argument with evidence that plants and animals have internal and external structures that function together to support survival, growth, behavior, and reproduction.	Engage in an argument to critique peer evidence that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction
5-LS1-1	Identify that plants get the materials they need for growth chiefly from air and water.	Develop an argument that plants get the materials they need for growth chiefly from air and water.	Support an argument with evidence that plants get the materials they need for growth chiefly from air and water.	Engage in an argument to critique peer evidence that plants get the materials they need for growth, chiefly from air and water.
4-LS1-2	Describe how animals receive different types of information from their surroundings.	Use a model to describe how animals receive different types of information through their senses.	Use a model to describe how animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	Create a model to describe how animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.
3-LS2-1	Identify types of animals that form or live in groups.	Construct an argument that describes how some animals form groups that help members survive.	Construct an argument using evidence that some animals form groups that help members survive.	Engage in an argument to critique peer evidence that some animals form groups that help members survive.

LS	Below Proficient	Approaching Proficient	Proficient	Above Proficient
<b>5-LS2-1</b>	Identify a model that shows the movement of matter within an ecosystem.	Use a model to describe the movement of matter among plants, animals, decomposers, and the environment.	Develop and use a model to describe the movement of matter among plants, animals, decomposers, and the environment.	Develop and use a model to describe the interconnected relationships among plants, animals, decomposers, and the environment to allow multiple species to meet their needs.
<b>3-LS3-1</b>	Explain that plants and animals have traits inherited from parents.	Explain data that shows plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms	Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.	Use evidence to create graphical displays to describe patterns of trait variations in a group of similar organisms.
<b>3-LS3-2</b>	Identify traits that can be influenced by the environment.	Describe traits that can be influenced by the environment.	Use evidence to support the explanation that traits can be influenced by the environment.	Use evidence to differentiate between inherited and environmental traits.
<b>3-LS4-1</b>	Explain that fossils are the remains of organisms that lived long ago.	Compare and contrast observations of fossil traits from organisms.	Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	Use evidence to create graphical displays of data from fossils to understand how environments changed over time.
<b>3-LS4-2</b>	Identify variations in characteristics among individuals of the same species.	Identify variations in characteristics among individuals of the same species that may provide advantages in surviving, finding mates, and reproducing.	Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	Use evidence to construct an explanation for how the variations in characteristics among individuals of the multiple species may provide advantages in surviving, finding mates, and reproducing.
<b>3-LS4-3</b>	Explain that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	Construct an argument that shows that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	Construct an argument with evidence that shows that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	Engage in an argument to critique peer evidence that shows that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
<b>3-LS4-4</b>	Identify a problem caused when the environment changes and the types of plants and animals that live there may change.	Identify a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.	Develop a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change by citing relevant evidence about how it meets the criteria and constraints of the problem.	Develop and defend a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change by citing multiple pieces of relevant evidence about how it meets the criteria and constraints of the problem.

**Physical Sciences** *Student performance indicates the ability to...*

PS	Below Proficient	Approaching Proficient	Proficient	Above Proficient
5-PS1-1	Explain that matter is made of particles too small to be seen.	Use a model to describe that matter is made of particles too small to be seen.	Develop and use a model to describe matter is made of particles too small to be seen.	Develop and compare models to describe that matter is made of particles too small to be seen.
5-PS1-2	Explain that matter changes when heating, cooling, or mixing substances occurs.	Measure and graph quantities of changes that occur to matter when heating, cooling, or mixing substances.	Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	Address scientific questions about the conservation of matter by measuring and graphing quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.
5-PS1-3	Identify properties of materials.	Make observations and/or measurements to identify materials based on their properties.	Make observations and/or measurements to provide data to accurately identify materials based on their properties.	Make observations and measurements to identify materials based on their properties, including mass and weight.
5-PS1-4	Identify that the mixing of two or more substances results in new substances.	Utilize evidence to determine whether the mixing of two or more substances results in new substances.	Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	Design an investigation to provide evidence to determine whether the mixing of two or more substances results in new substances.
3-PS2-1	Identify that balanced and unbalanced forces can affect the motion of an object.	Utilize evidence to determine the effects of balanced and unbalanced forces on the motion of an object.	Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	Plan, conduct, and refine an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.
5-PS2-1	Identify that the gravitational force exerted by Earth on objects is directed down.	Demonstrate that the gravitational force exerted by Earth on objects is directed down.	Support an argument with evidence that the gravitational force exerted by Earth on objects is directed down.	Develop an argument using multiple pieces of evidence that the gravitational force exerted by Earth on objects is directed down.
3-PS2-2	Identify patterns of an object's motion.	Make observations and/or measurements of an object's motion.	Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	Plan and conduct an investigation of an object's motion to provide evidence that a pattern can be used to predict future motion.
3-PS2-3	Ask a scientific question about electric or magnetic forces.	Ask questions about electric or magnetic interactions between two objects not in contact with each other.	Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.	Ask questions that can be investigated or researched to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.

PS	Below Proficient	Approaching Proficient	Proficient	Above Proficient
3-PS2-4	Identify properties of magnets and magnetic forces (attraction, repulsion, strength of force due to distance between objects, magnetic vs. non-magnetic objects).	Identify an existing problem that has been solved by applying scientific ideas about magnets. *	Define a simple design problem that can be solved by applying scientific ideas about magnets. *	Create a solution to a simple design problem that can be solved by applying scientific ideas about magnets. *
4-PS3-1	Identify that objects can have different speeds and amounts of energy.	Construct an explanation relating the speed of an object to the energy of that object.	Use evidence to construct an explanation relating the speed of an object to the energy of that object.	Use multiple pieces of evidence to construct explanations relating the speed of objects to the energy of the objects.
5-PS3-1	Identify that all living things require energy from the sun.	Describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	Create a model to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.
4-PS3-2	Explain that energy can be transferred from place to place.	Make observations of energy as it is transferred from place to place by sound, light, heat, and electric currents.	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	Plan and carry out an investigation to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
4-PS3-3	Explain that energy changes when objects collide.	Ask questions about the changes in energy that occur when objects collide.	Ask questions and predict outcomes about the changes in energy that occur when objects collide.	Plan and conduct an investigation to demonstrate changes in energy that occur when objects collide.
4-PS3-4	Explain that energy can be converted from one form to another.	Identify devices that convert energy from one form to another.	Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	Apply scientific ideas that meet specific constraints and criteria in order to design, test, and refine a device that converts energy from one form to another.
4-PS4-1	Identify and label wave properties, such as amplitude and wavelength, and explain that waves can cause objects to move.	Use a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	Develop and compare models of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.
4-PS4-2	Explain that light is required for objects to be seen.	Use a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	Develop and compare models to describe that light reflecting from objects and entering the eye allows objects to be seen.
4-PS4-3	Explain that patterns can be used to transfer information.	Compare multiple solutions that use patterns to transfer information.	Generate and compare multiple solutions that use patterns to transfer information.	Generate, compare, and justify multiple solutions that use patterns to transfer information.

**Engineering & Technology Standards** *Student performance indicates the ability to...*

ETS	Below Proficient	Approaching Proficient	Proficient	Above Proficient
<b>3-5 ETS 1-1</b>	Define a design problem, but identify little connection to a need or want, and provide minimal or no criteria and constraints.	Define a design problem with a general need or want but provide incomplete or vague criteria for success and constraints.	Define a design problem to address an identified need or want and include criteria for success and constraints such as materials, time, or cost.	Clearly define a design problem with a well-developed explanation of the need or want, explicitly include detailed criteria for success and multiple constraints, and consider trade-offs in the design process.
<b>3-5 ETS 1-2</b>	Generate a single solution with little or no connection to the design criteria and constraints.	Generate more than one possible solution but provide limited or unclear reasoning about how they meet criteria and constraints.	Propose multiple possible solutions and evaluate them based on how well they meet the design criteria and constraints.	Generate multiple creative and well-reasoned solutions, thoroughly comparing their strengths and weaknesses against criteria and constraints and suggest modifications for improvement.
<b>3-5 ETS 1-3</b>	Design a test that does not control variables effectively and does not identify failure points or suggest improvements.	Design a fair test but inconsistently control variables, identify only some failure points, and give limited improvement suggestions.	Design and conduct fair tests with controlled variables, identify failure points, and suggest ways to improve the model.	Design and conduct fair tests with careful control of variables, systematically analyze failure points, and provide clear recommendations for model improvements.