Main Criteria: Next Generation Science Standards (NGSS)
Secondary Criteria: California Content Standards, Pennsylvania Core and Academic Standards
Subject: Science
Grade: 4

Correlation Options: Show All

Main Criteria Standards	California Content Standards	Pennsylvania Core and Academic Standards
Science		
Grade 4		
PERFORMANCE EXPECTATION: **4-PS3-1.** - Use evidence to construct an explanation relating the speed of an object to the energy of that object.	**4-PS3-1.** - Use evidence to construct an explanation relating the speed of an object to the energy of that object.	**3.2.4.B1.** - Explain how an object's change in motion can be observed and measured.
PERFORMANCE EXPECTATION: **4-PS3-2.** - Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	**4-PS3-2.** - Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	**3.2.4.B2.** - Identify types of energy and their ability to be stored and changed from one form to another.
PERFORMANCE EXPECTATION: **4-PS3-3.** - Ask questions and predict outcomes about the changes in energy that occur when objects collide.	**4-PS3-3.** - Ask questions and predict outcomes about the changes in energy that occur when objects collide.	
PERFORMANCE EXPECTATION: **4-PS3-4.** - Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	**4-PS3-4.** - Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	**3.2.4.B2.** - Identify types of energy and their ability to be stored and changed from one form to another. **3.2.4.B6.** - (ENERGY) Give examples of how energy can be transformed from one form to another. **4.2.4.A.2.** - Identify water systems and their components as either lotic or lentic. **4.4.4.B.1.** - Identify Pennsylvania's important agricultural products.
PERFORMANCE EXPECTATION: **4-PS4-1.** - Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	**4-PS4-1.** - Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	

PERFORMANCE EXPECTATION: **4-PS4-2.** - Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	**4-LS1-2.** - 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. **4-PS4-2.** - Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	
PERFORMANCE EXPECTATION: **4-PS4-3.** - Generate and compare multiple solutions that use patterns to transfer information.	**4-PS4-3.** - Generate and compare multiple solutions that use patterns to transfer information.	
PERFORMANCE EXPECTATION: **4-LS1-1.** - Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	**4-LS1-1.** - Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	
PERFORMANCE EXPECTATION: **4-LS1-2.** - 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.	**4-LS1-2.** - Use a model to describe that animals' receive different types of information through their senses, process the information in their **4-PS4-2.** - Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	
PERFORMANCE EXPECTATION: **4-ESS1-1.** - Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	**4-ESS1-1.** - Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	
PERFORMANCE EXPECTATION: **4-ESS2-1.** - Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	**4-ESS2-1.** - Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	**3.3.4.A1c.** - Recognize that the surface of the earth changes due to slow processes and rapid processes. **3.3.4.A6b.** - (CONSTANCY/CHANGE) Identify simple changes in the earth system as air, water, soil and rock interact.
PERFORMANCE EXPECTATION: **4-ESS2-2.** - Analyze and interpret data from maps to describe patterns of Earth's features.	**4-ESS2-2.** - Analyze and interpret data from maps to describe patterns of Earth's features.	
PERFORMANCE EXPECTATION: **4-ESS3-1.** -	**4-ESS3-1.** - Obtain and combine information to	**3.4.4.E3.** - Identify types of energy and the

Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	describe that energy and fuels are derived from natural resources and their uses affect the environment.	**4.5.4.A.** - Identify how people use natural resources in sustainable and non-sustainable ways.
PERFORMANCE EXPECTATION: **4-ESS3-2.** - Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	**4-ESS3-2.** - Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	**3.3.4.A5b.** - Identify weather patterns over time.
PERFORMANCE EXPECTATION: **3-5-ETS1-1.** - Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	**3-5-ETS1-1.** - Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-2.** - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	**3.4.4.A2.** - Understand that systems have parts and components that work together. **3.4.4.C2.2.** - Generate ideas. **3.4.4.C2.6** - Communicate the solution with others. **3.4.4.C2.7.** - Present the results. **3.4.4.D1.** - Investigate how things are made and how they can be improved.
PERFORMANCE EXPECTATION: **3-5-ETS1-2.** - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	**3-5-ETS1-1.** - Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-2.** - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. **3-5-ETS1-3.** - Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	**3.4.4.A2.** - Understand that systems have parts and components that work together. **3.4.4.C2.2.** - Generate ideas. **3.4.4.C2.3.** - Select a solution and test it. **3.4.4.C2.5.** - Evaluate the item. **3.4.4.C2.6** - Communicate the solution with others. **3.4.4.C2.7.** - Present the results.

		3.4.4.D1. - Investigate how things are made and how they can be improved.
PERFORMANCE EXPECTATION: **3-5-ETS1-3.** - Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	**3-5-ETS1-2.** - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. **3-5-ETS1-3.** - Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	**3.4.4.C2.3.** - Select a solution and test it. **3.4.4.C2.5.** - Evaluate the item. **SI.4.** - Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.