

# Fourth Grade NGSS to 2016 IAS Correlation Guide

Physical Science	
Next Generation Science Standards	2016 Indiana Academic Standards
	<b>4.PS.1</b> Investigate transportation systems and devices that operate on or in land, water, air and space and recognize the forces (lift, drag, friction, thrust and gravity) that affect their motion.
<b>4-PS3-1</b> Investigate the relationship of the speed of an object to the energy of that object.	<b>4.PS.2</b> Investigate the relationship of the speed of an object to the energy of that object.
	<b>4.PS.3</b> Investigate how multiple simple machines work together to perform everyday tasks.
<b>4-PS3-4</b> Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	<b>4.PS.4</b> Describe and investigate the different ways in which energy can be generated and/or converted from one form of energy to another form of energy.
<b>4-PS3-2</b> Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	<b>4.PS.5</b> Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.

Earth and Space Science	
Next Generation Science Standards	2016 Indiana Academic Standards
	<b>4.ESS.1</b> Investigate how the moon appears to move through the sky and it changes day to day, emphasizing the importance of how the moon impacts the Earth, the rising and setting times, and solar and lunar eclipses.
<b>4-ESS3-1</b> Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	<b>4.ESS.2</b> Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

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<p><b>4-ESS2-1</b> Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.</p> <p><b>4-ESS2-2</b> Analyze and interpret data from maps to describe patterns of Earth’s features.</p>	<p><b>4.ESS.3</b> Describe how geological forces change the shape of the land suddenly and over time.</p>
<p><b>4-ESS3-2</b> Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.</p>	<p><b>4.ESS.4</b> Develop solutions that could be implemented to reduce the impact of humans on the natural environment and the natural environment on humans.</p>

Life Science	
Next Generation Science Standards	2016 Indiana Academic Standards
	<p><b>4.LS.1</b> Observe, analyze, and interpret how offspring are very much, but not exactly, like their parents or one another. Describe how these differences in physical characteristics among individuals in a population may be advantageous for survival and reproduction.</p>
<p><b>3-LS3-2</b> Use evidence to support the explanation that traits can be influenced by the environment.</p>	<p><b>4.LS.2</b> Use evidence to support the explanation that a change in the environment may result in a plant or animal will survive and reproduce, move to a new location, or die.</p>
<p><b>4-LS1-1</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</p>	<p><b>4.LS.3</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction in a different ecosystems.</p>

Engineering	
Next Generation Science Standards	2016 Indiana Academic Standards
<p><b>3-5.E.1</b> Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p>	<p><b>3-5.E.1</b> Identify a simple problem with the design of an object that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost.</p>

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<p><b>3-5.E.2</b> 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.</p>	<p><b>3-5.E.2</b> Construct and compare multiple plausible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p>
<p><b>3-5.E.3</b> 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.</p>	<p><b>3-5.E.3</b> Construct and perform fair investigations in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p>