

**Second Grade
2016 Science Standards Resource Guide**

Physical Science				
2016 Indiana Academic Standards	Clarifying Statements	Vocabulary	Crosscutting Concept	Disciplinary Core Idea
2.PS.1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.		-Physical Property: Characteristics that can be observed or measured. -Solid: A substance that keeps its size and shape. -Liquid: A substance that takes the shape of its container. -Gas: A substance that is like air and has no fixed shape.	Energy and Matter	PS1.A: Structure and Properties of Matter
2.PS.2 Predict the result of combining solids and liquids in pairs. Mix, observe, gather, record, and discuss evidence of whether the result may have different properties than the original materials.		-Matter: Anything that has mass and takes up space. -Physical Property: Characteristics that can be observed or measured. -Mixture: Something being combined. -Solution: Substances that have been mixed together. -Volume: The amount of space an object occupies. -Dissolve: To become broken up or absorbed by something.	Energy and Matter	PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions

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<p>2.PS.3 Construct an argument with evidence that some changes caused by heating and cooling can be reversed and some cannot.</p>		<p>-Physical Property: Characteristics that can be observed or measured. -Volume: The amount of space an object occupies. -Temperature: How hot or cold something is. -Thermometer: An instrument used for measuring temperature. -Evaporate: To change from a liquid to a gas. -Solid: A substance that keeps its size and shape. -Liquid: A substance that takes the shape of its container. -Gas: A substance that is like air and has no fixed shape.</p>	<p>Energy and Matter</p>	<p>PS3.A: Definitions of Energy</p>
<p>2.PS.4 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.</p>			<p>Energy and Matter</p>	<p>PS1.A: Structure and Properties of Matter</p>

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Earth and Space Science				
2016 Indiana Academic Standards	Clarifying Statements	Vocabulary	Crosscutting Concepts	Disciplinary Core Idea
2.ESS.1 Record detailed weather observations, including cloud cover, cloud type, and type of precipitation on a daily basis over a period of weeks and correlate observations to the time of year. Chart and graph collected data.		-Cirrus -Stratus -Cumulus -Nimbus -Precipitation	Patterns Stability and Change	ESS2.C: The Roles of Water in Earth's Surface Processes ESS2.D: Weather and Climate
2.ESS.2 Investigate the severe weather of the region and its impact on the community, looking at forecasting to prepare for, and respond to, severe weather.		-Tornado -Thunderstorm	Patterns Systems and System Models	ESS2.D: Weather and Climate ESS3.B: Natural Hazards
2.ESS.3 Investigate how wind or water change the shape of the land and design solutions for prevention.		-Erosion -Weathering	Stability and Change	ESS2.C: The Roles of Water in Earth's Surface Processes

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<p>2.ESS.4 Obtain information to identify where water is found on Earth and that it can be solid or liquid.</p>				<p>PS1.A: Structure and Properties of Matter</p> <p>ESS2.C: The Roles of Water in Earth's Surface Processes</p>
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Life Science				
2016 Indiana Academic Standards	Clarifying Statements	Vocabulary	Crosscutting Concepts	Disciplinary Core Ideas
2.LS.1 Determine patterns and behavior (adaptations) of parents and offspring which help offspring to survive.		-Adaptation	Patterns	LS3.A: Inheritance of Traits LS4.A: Evidence of Common Ancestry and Diversity LS4.C: Adaptation
2.LS.2 Compare and contrast details of body plans and structures within the life cycles of plants and animals.			Structure and Function	LS1.A: Structure and Function LS1.B: Growth and Development

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2.LS.3 Classify living organisms according to variations in specific physical features (i.e. body coverings, appendages) and describe how those features may provide an advantage for survival in different environments.		-Competition	Structure and Function	LS3.B: Variation of Traits
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Engineering				
2016 Indiana Academic Standards	Clarifying Statements	Vocabulary	Crosscutting Concepts	Disciplinary Core Ideas
K-2.E.1 Pose questions, make observations, and obtain information about a situation people want to change. Use this data to define a simple problem that can be solved through the construction of a new or improved object or tool.				ETS1.A: Defining and Delimiting an Engineering Problem
K-2.E.2 Develop a simple sketch, drawing, or physical model to illustrate and investigate how the shape of an object helps it function as needed to solve an identified problem.				ETS1.B: Developing Possible Solutions ETS1.C: Optimizing the Design Solution
K-2.E.3 Analyze data from the investigation of two objects constructed to solve the same problem to compare the strengths and weaknesses of how each performs.				ETS1.B: Developing Possible Solutions ETS1.C: Optimizing the Design Solution