

Physical Science:

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
<p>K.PS.1.a.1: Use all senses to explore and describe different kinds of objects.</p>	<p>1.PS.1.a.1: Sort materials as solid, liquid, or gas.</p>	<p>2.PS.1.a.1: Describe properties of various materials.</p>	<p>3.PS.1.a.1: Plan an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</p> <p>3.PS.1.a.2: Conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</p>	<p>4.PS.1.a.1: Investigate transportation systems and devices that operate on/in land, water, air, and space.</p> <p>4.PS.1.a.2: Recognize the forces (lift, drag, friction, thrust, and gravity) that affect the motion of transportation systems and devices.</p>	<p>5.PS.1.a.1: Describe and measure the volume of a sample of a given material.</p> <p>5.PS.1.a.2: Describe and measure the mass of a sample of a given material.</p>
<p>K.PS.2.a.1: Identify objects based on their properties.</p>	<p>1.PS.2.a.1: Understand that solids and liquids can be separated by properties.</p>	<p>2.PS.2.a.1: Mix and observe the result of how combining solids and liquids may have different properties than the original materials.</p>	<p>3.PS.2.a.1: Identify types of simple machines and their uses.</p> <p>3.PS.2.a.2: Investigate and build simple machines to understand how they are used.</p>	<p>4.PS.2.a.1: Investigate the relationship of the speed of an object to the energy of that object.</p>	<p>5.PS.2.a.1: Demonstrate that regardless of how parts of an object are assembled the mass of the whole object is identical to the sum of the mass of the parts; however, the volume can differ from the sum of the volumes. (Law of Conservation of Mass)</p>
<p>K.PS.3.a.1: Explore the different actions of push and pull on an object.</p>	<p>1.PS.3.a.1: Explore vibrating materials and the sounds they make.</p>	<p>2.PS.3.a.1: Observe that some changes caused by heating and cooling can be reversed and some cannot.</p>	<p>3.PS.3.a.1: Generate sound energy using a variety of materials and techniques, and recognize that it passes through solids, liquids, and gases (i.e. air).</p>	<p>4.PS.3.a.1: Investigate how multiple simple machines work together to perform everyday tasks.</p>	<p>5.PS.3.a.1: Determine if matter has been added or lost by comparing mass when melting, freezing, or dissolving a sample of a substance. (Law of Conservation of Mass)</p>

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<p>K.PS.4.a.1: Explore the change of speed or direction of an object with a push or a pull.</p>	<p>1.PS.4.a.1: Make observations that objects can be seen only when illuminated.</p>	<p>2.PS.4.a.1: Identify which materials are best suited for an intended purpose based on properties.</p>	<p>3.PS.4.a.1: Investigate and recognize loudness (amplitude) of sound, as determined by the physical properties of the object making the sound.</p> <p>3.PS.4.a.2: Investigate and recognize properties of sound including pitch and vibration, as determined by the physical properties of the object making the sound.</p>	<p>4.PS.4.a.1: No changes, except maybe list the forms of energy.</p>	<p>5.PS.4.a.1: Describe the difference between weight being dependent on gravity and mass comprised of the amount of matter in a given substance or material.</p>
				<p>4.PS.5.a.1: Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.</p>	

Earth Science (Earth and Space Science – Grade 3, 4 & 5):

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
<p>K.ESS.1.a.1: Identify the effect of sunlight on Earth's surface.</p>	<p>1.ESS.1.a.1: Identify patterns of the sun and moon.</p>	<p>2.ESS.1.a.1: Record weather observations.</p>	<p>3.ESS.1.a.1: Obtain information to determine seasonal weather patterns across the different regions of the United States.</p> <p>3.ESS.1.a.2: Combine information to determine seasonal weather patterns across the different regions of the United States.</p>	<p>4.ESS.1.a.1: 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.</p>	<p>5.ESS.1.a.1: Identify and describe the components of our solar system: the sun, moon, seven other planets and their moons, and many other objects like asteroids and comets.</p> <p>5.ESS.1.a.2: Demonstrate the scale of our solar system: the sun, moon, seven other planets and their moons, and many other objects like asteroids and comets.</p>
<p>K.ESS.2.a.1: Identify objects in the sky.</p>	<p>1.ESS.2.a.1: Explore sand, clay, silt, and organic matter.</p>	<p>2.ESS.2.a.1: Understand various weather conditions within a region.</p>	<p>3.ESS.2.a.1: Develop solutions that could be implemented to reduce the impact of weather related hazards.</p>	<p>4.ESS.2.a.1: Identify forms of energy and fuels that are derived from natural resources and describe how their uses affect the environment.</p>	<p>5.ESS.2.a.1: Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows.</p> <p>5.ESS.2.a.2: Represent data in graphical displays to reveal patterns of day and night.</p> <p>5.ESS.2.a.3: Represent data in graphical displays to reveal patterns of the seasonal appearance of some stars in the night sky.</p>
<p>K.ESS.3.a.1: Investigate the local weather conditions to describe patterns over time.</p>	<p>1.ESS.3.a.1: Observe a variety of soil samples and describe the soil properties.</p>	<p>2.ESS.3.a.1: Observe how wind or water changes land formations.</p>	<p>3.ESS.3.a.1: Observe the detailed characteristics of rocks and minerals.</p> <p>3.ESS.3.a.2: Identify and classify rocks as being composed of different combinations of minerals.</p>	<p>4.ESS.3.a.1: Describe how geological forces change the shape of the land suddenly and over time.</p>	<p>5.ESS.3.a.1: Investigate ways individual communities within the United States protect the Earth's resources and environment.</p>

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<p>K.ESS.4.a.1: Name one way to reduce the impact of humans on the land, water, air, and/or other living things in the local environment.</p>	<p>1.ESS.4.a.1: Name at least two ways to reduce the impact of humans on the land, water, air, and/or other living things in the local environment.</p>	<p>2.ESS.4.a.1: Observe locations and the different states of water on earth.</p>	<p>3.ESS.4.a.1: Determine how fossils are formed and layered over time.</p> <p>3.ESS.4.a.2: Determine how fossils are discovered and used to provide evidence of the organisms and the environments in which they lived long ago.</p>	<p>4.ESS.4.a.1: Develop solutions that could be implemented to reduce the impact of humans on the natural environment.</p> <p>4.ESS.4.a.2: Develop solutions that could be implemented to reduce the impact of the natural environment on humans.</p>	<p>5.ESS.4.a.1: Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</p>

Life Science:

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
<p>K.LS.1.a.1: Observe the growth of living things.</p>	<p>1.LS.1.a.1: Understand the lifecycle of living things.</p>	<p>2.LS.1.a.1: Determine adaptations to help offspring survive.</p>	<p>3.LS.1.a.1: Analyze evidence that plants and animals have traits inherited from parents.</p> <p>3.LS.1.a.2: Analyze evidence that variation of traits exists in a group of similar organisms.</p>	<p>4.LS.1.a.1: Observe, analyze, and interpret how offspring are very much, but not exactly, like their parents or one another.</p> <p>4.LS.1.a.2: Describe how these differences in physical characteristics among individuals in a population may be advantageous for survival and reproduction.</p>	<p>5.LS.1.a.1: Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p>
<p>K.LS.2.a.1: Identify physical features of living things.</p>	<p>1.LS.2.a.1: Name plant and animal external parts that help them survive.</p>	<p>2.LS.2.a.1: Observe a variety of lifecycles.</p>	<p>3.LS.2.a.1: Plan an investigation to determine the basic needs of plants to grow, develop, and reproduce.</p> <p>3.LS.2.a.2: Conduct an investigation to determine the basic needs of plants to grow, develop, and reproduce.</p>	<p>4.LS.2.a.1: Use evidence to explain how a change in the environment can affect a plant or animal's: survival, reproduction, and habitat/relocation.</p>	<p>5.LS.2.a.1: Observe and classify common Indiana organisms as producers, consumers, decomposers, or predator and prey based on their relationships and interactions with other organisms in their Ecosystem.</p>
<p>K.LS.3.a.1: State what plants and animals need to survive.</p>	<p>1.LS.3.a.1: Make observations of plants and animals to compare the diversity of life in different habitats.</p>	<p>2.LS.3.a.1: Name a physical feature that helps an animal survive in a certain environment.</p>	<p>3.LS.3.a.1: Construct an argument that plants have internal and external structures that function to support survival, growth, behavior, and reproduction.</p> <p>3.LS.3.a.2: Construct an argument that animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</p>	<p>4.LS.3.a.1: Construct an argument that plants have internal and external structures that function to support survival, growth, behavior, and reproduction in different ecosystems.</p> <p>4.LS.3.a.2: Construct an argument that animals have internal and external structures that function to support survival, growth, behavior, and reproduction in different ecosystems.</p>	<p>5.LS.3.a.1: 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.</p>

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
	<p>1.LS.4.a.1: Identify the needs of plants and animals in different environments.</p>		<p>3.LS.4.a.1: Construct an argument that some animals form groups that help members survive.</p>		

Engineering (Science, Engineering, and Technology – Grades K – 2):

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
<p>K-2.E.1.a.1: Identify a situation people want to change.</p> <p>K-2.E.1.a.2: Use knowledge to formulate solutions.</p>	<p>K-2.E.1.a.1: Identify a situation people want to change.</p> <p>K-2.E.1.a.2: Use knowledge to formulate solutions.</p>	<p>K-2.E.1.a.1: Identify a situation people want to change.</p> <p>K-2.E.1.a.2: Use knowledge to formulate solutions.</p>	<p>3-5.E.1.a.1: 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>	<p>3-5.E.1.a.1: 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>	<p>3-5.E.1.a.1: 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>
<p>K-2.E.2.a.1: Use a tool to solve a problem.</p>	<p>K-2.E.2.a.1: Use a tool to solve a problem.</p>	<p>K-2.E.2.a.1: Use a tool to solve a problem.</p>	<p>3-5.E.2.a.1: 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>3-5.E.2.a.1: Given multiple reasonable solutions to a problem, determine which solution best meets the criteria and constraints of the problem.</p>	<p>3-5.E.2.a.1: 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>K-2.E.3.a.1: Compare two objects and identify their strengths and weaknesses.</p>	<p>K-2.E.3.a.1: Compare two objects and identify their strengths and weaknesses.</p>	<p>K-2.E.3.a.1: Compare two objects and identify their strengths and weaknesses.</p>	<p>3-5.E.3.a.1: 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>	<p>3-5.E.3.a.1: Consider results of an investigation, including failure points, and determine which variables affected the outcome.</p> <p>3-5.E.3.a.2: Based on the results of investigations, determine whether aspect(s) of a model or prototype have or can be improved.</p>	<p>3-5.E.3.a.1: 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>