



## ADW KINDERGARTEN SCIENCE STANDARDS & INSTRUCTION GUIDE

PHYSICAL SCIENCE (PS)	Standard	Core Concepts	Scientific Terms and Scientists	EdTech Resources
SC.K.PS.1	Observe and describe qualitative properties of natural and manufactured objects. Classify objects based on similar properties.	<ul style="list-style-type: none"><li>• Matter can be observed using our senses.</li><li>• Matter can be described and classified by its observable physical properties.</li><li>• Observations could include color, texture, hardness, absorbency, and flexibility, shape, and size.</li><li>• Patterns could include the similar properties that different materials share.</li><li>• Objects can be described by their uses and by whether they occur naturally or are manufactured (made by humans).</li></ul>	<ul style="list-style-type: none"><li>• matter</li><li>• physical properties</li><li>• color</li><li>• flexibility</li><li>• texture (smooth, rough)</li><li>• natural</li><li>• manufactured</li></ul>	<ul style="list-style-type: none"><li>• <a href="http://www.abcya.com/states_of_matter.htm">http://www.abcya.com/states_of_matter.htm</a></li></ul>



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<b>SC.K.PS.2</b>	Plan and conduct an investigation to compare the different strengths or different directions of pushes and pulls on the motion of an object.	<ul style="list-style-type: none"> <li>The way to change how something is moving is to give it a push or a pull.</li> <li>Pushes and pulls can have different strengths and directions.</li> <li>Gravity pulls objects to the ground unless something holds them up.</li> <li>Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.</li> <li>A bigger push or pull makes things speed up or slow down more quickly.</li> <li>When objects touch or collide, they push on one another and can change motion.</li> <li>Things change move in different ways, such as zigzag, round-and-around, back and forth, and fast and slow.</li> <li>A metric ruler/meter stick is used to make measurement observations for length or distance.</li> </ul>	<ul style="list-style-type: none"> <li>push</li> <li>pull</li> <li>strength</li> <li>direction</li> <li>motion</li> <li>collide</li> <li>gravity</li> </ul>	<ul style="list-style-type: none"> <li><a href="http://www.chem.ucsb.edu/scsp/sites/secure.lsit.ucsb.edu/chem.d7_scsp/files/sitefiles/lessons/Kindergarten%20PS2%20Push%20Pull%20Lesson%20Plans.pdf">http://www.chem.ucsb.edu/scsp/sites/secure.lsit.ucsb.edu/chem.d7_scsp/files/sitefiles/lessons/Kindergarten%20PS2%20Push%20Pull%20Lesson%20Plans.pdf</a></li> <li><a href="https://scienceandkidsactivities.com/Science_and_Kids_Activities/NGSS_Activites_Grade_K-2/Pages/NGSS_GK_PS2-1PushPull.html#2">https://scienceandkidsactivities.com/Science_and_Kids_Activities/NGSS_Activites_Grade_K-2/Pages/NGSS_GK_PS2-1PushPull.html#2</a></li> <li><a href="https://www.wareteachers.com/simple-physics-experiments-for-kids-pushing-and-pulling/">https://www.wareteachers.com/simple-physics-experiments-for-kids-pushing-and-pulling/</a></li> </ul>
<b>SC.K.PS.3E</b>	Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	<ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering.</li> <li>Such problems may have many acceptable solutions.</li> </ul>	<ul style="list-style-type: none"> <li>problem</li> <li>engineering</li> <li>solution</li> <li>design</li> </ul>	<ul style="list-style-type: none"> <li><a href="http://ngss-k-5-ausd.weebly.com/kforce-s-and-interactions-pushes-and-pulls.html">http://ngss-k-5-ausd.weebly.com/kforce-s-and-interactions-pushes-and-pulls.html</a></li> </ul>



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			<ul style="list-style-type: none"> <li>• data</li> </ul>	
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LIFE SCIENCE (LS)	Standard	Core Concepts	Scientific Terms and Scientists	EdTech Resources
<b>SC.K.LS.1</b>	Use observations to describe different organisms found in the environment and what they need to survive.	<ul style="list-style-type: none"> <li>• The environment consists of many types of living organisms and non-living materials and objects.</li> <li>• Living organisms include plants, animals, and fungi.</li> <li>• Organisms depend on the land, water, and air to live and grow.</li> <li>• Animals and fungi need to take in food in order to grow, but plants do not.</li> <li>• Plants require sunlight (energy), air, and water to make their own food.</li> <li>• Animals use different body parts to obtain food and other resources needed to grow and survive.</li> </ul>	<ul style="list-style-type: none"> <li>• energy</li> <li>• light energy</li> <li>• natural resources</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="https://kidsbiology.com/biology-basics/needs-of-living-things/">https://kidsbiology.com/biology-basics/needs-of-living-things/</a></li> </ul>
<b>SC.K.LS.2</b>	Make observations and gather evidence to support that some young plants and animals are similar to, but not exactly like, their parents.	<ul style="list-style-type: none"> <li>• Adult plants and animals can have young.</li> <li>• Some young animals have similar characteristics to their parents, but are not exactly alike.</li> <li>• Some young plants have similar characteristics to their parents, but are not exactly alike.</li> </ul>		<ul style="list-style-type: none"> <li>• <a href="https://betterlesson.com/lesson/638408/plants-secrets?from=cc_lesson">https://betterlesson.com/lesson/638408/plants-secrets?from=cc_lesson</a></li> </ul>
<b>SC.K.LS.3</b>	Use a model to represent the relationship between the needs of different organisms (including humans) and the places they live.	<ul style="list-style-type: none"> <li>• Living things live in places that have the things that they need for survival.</li> <li>• Plants, animals, other organisms, and their surroundings make up a system.</li> </ul>		<ul style="list-style-type: none"> <li>• <a href="https://betterlesson.com/browse/common_core_standard/2062/ngss-k-ess3-1-use-a-model-to-">https://betterlesson.com/browse/common_core_standard/2062/ngss-k-ess3-1-use-a-model-to-</a></li> </ul>



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		<ul style="list-style-type: none"><li>Plants and animals (including humans) can change the environment to meet their needs.</li></ul>		<a href="#">represent-the-relationship-between-the-needs-of-different-plants-or-animals-including-humans-and-th</a>
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<b>SC.K.LS.4E</b>	Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.	<ul style="list-style-type: none"><li>• Plants and animals can change their environment in ways that are helpful or harmful.</li><li>• Things that people do to live comfortably can affect the world around them.</li><li>• Humans can make choices that reduce their impacts on the land, water, air, and other living things.</li><li>• *Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.</li></ul>	<ul style="list-style-type: none"><li>• pollution</li></ul>	<ul style="list-style-type: none"><li>• <a href="http://media.ride.ri.gov/eeie/Resources/RIModelCurr/UnitsofS/k Units of Study/U of Study K 4.pdf">http://media.ride.ri.gov/eeie/Resources/RIModelCurr/UnitsofS/k Units of Study/U of Study K 4.pdf</a></li></ul>
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EARTH AND SPACE SCIENCE (ESS)	Standard	Core Concepts	Scientific Terms and Scientists	EdTech Resources
SC.K.ESS.1	Identify and describe the sun, moon, and stars.	<ul style="list-style-type: none"> <li>The moon can be seen sometimes at night and sometimes during the day.</li> <li>The Sun can only be seen during the daytime.</li> <li>Stars other than our Sun are visible at night and not during the day.</li> </ul>	<ul style="list-style-type: none"> <li>Earth</li> <li>sun</li> <li>moon</li> <li>stars</li> </ul>	<ul style="list-style-type: none"> <li><a href="http://www.bsisd.esc18.net/documents/Lesson%20Ideas/LESSONS%20&amp;%20RESOURCES/SCIENCE/KINDERGARTEN/Science_Kindergarten_Unit_06_Explor_Lesson_03_Exploring_and_Observing_the_Sun_and_Stars.pdf">http://www.bsisd.esc18.net/documents/Lesson%20Ideas/LESSONS%20&amp;%20RESOURCES/SCIENCE/KINDERGARTEN/Science_Kindergarten_Unit_06_Explor_Lesson_03_Exploring_and_Observing_the_Sun_and_Stars.pdf</a></li> </ul>
SC.K.ESS.2	Use and share observations of local weather conditions to describe daily and seasonal weather patterns.	<ul style="list-style-type: none"> <li>Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time.</li> <li>Scientists measure weather conditions to describe and record the weather and to notice patterns over time.</li> <li>Thermometers are used to measure temperature.</li> <li>Weather changes from day to day and over the seasons.</li> <li>Some kinds of severe weather are more likely than others in a given region.</li> <li>Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.</li> </ul>	<ul style="list-style-type: none"> <li>weather</li> <li>sunlight</li> <li>wind</li> <li>snow</li> <li>rain</li> <li>temperature</li> <li>thermometer</li> <li>season</li> <li>clouds</li> </ul>	<ul style="list-style-type: none"> <li><a href="http://sciencenetlinks.com/lessons/weather-1-weather-patterns/">http://sciencenetlinks.com/lessons/weather-1-weather-patterns/</a></li> <li><a href="http://interactivesites.weebly.com/seasons--weather.html">http://interactivesites.weebly.com/seasons--weather.html</a></li> </ul>



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		<ul style="list-style-type: none"><li>• Different types of clouds indicate different types of weather.</li></ul>		
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### Grades K-2 Engineering Standards (E)

**SC.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.

**SC.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.

**SC.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.