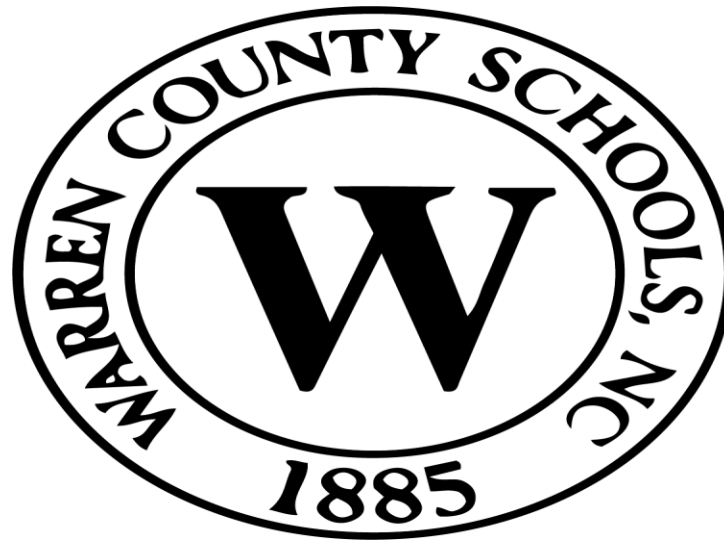


# Warren County Pacing Guide



First Grade Science

NC Standards	Vocabulary	Timeframe
<p style="text-align: center;"><b>Unit of Study: Forces and Motion</b></p> <p><b>1.P.1 Understand how forces (pushes or pulls) affect the motion of an object.</b></p> <ul style="list-style-type: none"> <li>1.P.1.1 Explain the importance of a push or pull to changing the motion of an object.</li> <li>1.P.1.2 Explain how some forces (pushes and pulls) can be used to make things move without touching them, such as magnets.</li> <li>1.P.1.3 Predict the effect of a given force on the motion of an object, including balanced forces.</li> </ul> <p style="text-align: center;"><b>Essential Questions</b></p> <p>What is a force?  How do forces affect objects?  How do objects move? What affects motion?  Why do objects move, change direction, or stop?  What is gravity? How does gravity 'work'?  How does gravity affect things on or near the earth?  How are motion and gravity connected?  Why do objects fall? How is gravity related to mass?  What would happen if there were no force of gravity?</p> <p><b>NewHaven Force and Motion 1st grade</b>  <a href="http://www.newhavenscience.org/12forcesmotion.pdf">http://www.newhavenscience.org/12forcesmotion.pdf</a>  A first-grade unit about force and motion.</p> <p><b>Force and Motion 1st grade unit</b>  <a href="http://www.rss.k12.nc.us/sites/rss.k12.nc.us/files/1forcesandmotion.pdf">http://www.rss.k12.nc.us/sites/rss.k12.nc.us/files/1forcesandmotion.pdf</a>  In this Forces and Motion Unit, first graders will explore how forces affect the motion of objects. Experiments are included in which students discover whether a force is a push or pull and how to create a push or pull. Students will also discover how forces like wind, gravity, and magnets can be used to move objects without touching them. Students will learn how to balance objects according to weight. Finally, first graders will also "race" cars to experiment with changing the speed of objects and changing the motion of an object. This unit includes a fun literacy integration with The Three Little Pigs and building a house that the Big Bad Wolf can't blow down!</p>	<p>gravity      force  push  pull  motion  speed  position  magnet  pole</p>	<p>8/17-  10/6/2020</p>

### I3 Grade 1 Force and Motion Unit

[https://www.ncsmt.org/i3laser\\_pdfs/Grade1SupplementaryUnitPushandPull1P1.pdf](https://www.ncsmt.org/i3laser_pdfs/Grade1SupplementaryUnitPushandPull1P1.pdf)

Rigorous curriculum design unit developed to address force and motion in grade 1.

#### Marveling in Magnets

[http://web.archive.org/web/20061008101447/http://www.coreknowledge.org/CK/resrcs/lessons/04\\_2\\_MarvelingMagnets.pdf](http://web.archive.org/web/20061008101447/http://www.coreknowledge.org/CK/resrcs/lessons/04_2_MarvelingMagnets.pdf)

This unit is an interactive, hands-on approach to learning all about magnets and magnetism. It looks at the origin of magnets along with the important properties of magnetism. Students will participate in activities and experiments that are specifically designed to help them understand magnetism and the laws of magnetic attraction.

#### Interactive Sites for Education: Force and Motion

[http://www.bbc.co.uk/schools/scienceclips/ages/6\\_7/forces\\_movement.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/6_7/forces_movement.shtml)

[http://www.bbc.co.uk/schools/scienceclips/ages/5\\_6/pushes\\_pulls.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/5_6/pushes_pulls.shtml)

[http://www.bbc.co.uk/schools/scienceclips/ages/7\\_8/magnets\\_springs\\_fs.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/7_8/magnets_springs_fs.shtml)

#### Video Resources:

Bill Nye – Gravity

<http://www.schooltube.com/video/9d2282cbc5684091a143/Bill%20Nye%20Gravity>

Bill Nye – Motion

<https://www.schooltube.com/video/c74a9a495e7544dba30a/bill%20nye%20-%20motion>

#### Text Resources:

Magnets

<http://www.myschoolhouse.com/courses/O/1/33.asp?Back=Off>

A Push or a Pull

<https://www.youtube.com/watch?v=FOcY37oGhj8>

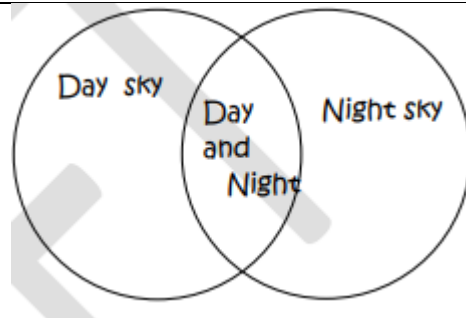
#### Writing Prompts:

1. Imagine instead of living in one place, everyone had houses that moved from one place to another each day. Write about what this house might look like.

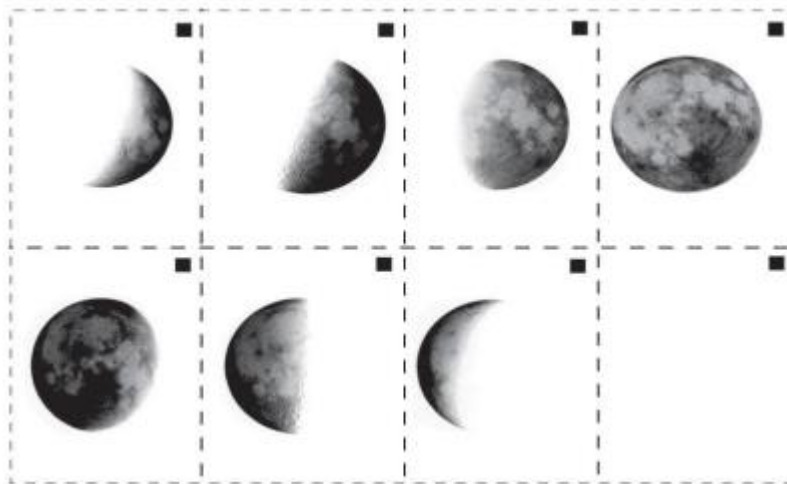
<p>2. If you ran for a year, how far do you think you could travel?</p> <p>3. Write a poem about how things move in a game of kickball.</p> <p>4. Create a pamphlet describing three kinds of balls and how they move.</p> <p>5. How would the wheels on a wagon work if they were square? What would it be like to use a wagon with square wheels?</p> <p><b>Literature Connection</b></p> <p><a href="https://www.whatihavelearnedteaching.com/12-force-motion-picture-books-engage-young-learners/">https://www.whatihavelearnedteaching.com/12-force-motion-picture-books-engage-young-learners/</a></p> <p>Experiments &amp; Activities</p> <p><a href="#">Force and Motion Experiments</a></p> <p><a href="#">Force and Motion Activities</a></p> <p><b>Assessment Prototypes</b></p> <p>1.P.1.1 Use playground and classroom equipment and structures to demonstrate and investigate a push, pull, or change in motion. Discuss scenarios with student groups and ask the students to make predictions (for example: What will happen if I push a ball that is resting on the floor?).</p> <p>1. P.1.2 Teacher guided inquiry: have students observe and investigate which types of materials can be moved by magnets and which materials can not.</p> <p>1. P.1.3 Guide students to manipulate blocks on a balance and predict the motion of the balance (up or down) when items of different masses are placed on each side.</p>		
<p><b>Unit of Study: Earth in the Universe</b></p> <p><b>1.E.1 Recognize the features and patterns of the earth/moon/sun system as observed from Earth.</b></p> <p>1.E.1.1 Recognize differences in the features of the day and night sky and apparent movement of objects across the sky as observed from Earth.</p> <p>1.E.1.2 Recognize patterns of observable changes in the Moon's appearance from day to day.</p> <p><b>Essential Questions</b></p> <p>How can we become better readers and writers when learning about science?</p> <p>What do you know about the solar system? What do you want to learn about the solar</p>	<p>recognize (P)</p> <p>observe (P)</p> <p>differences</p> <p>sun</p> <p>star</p> <p>moon</p> <p>features</p> <p>day sky</p> <p>night sky</p> <p>Earth</p>	<p>10/7- 12/2/2020</p>

<p>system?</p> <p>What are the positions of the planets?</p> <p>How is the Earth special? What are the layers of the Earth?</p> <p>How is the moon special? What is the lunar cycle?</p> <p>What are the four seasons?</p> <p>What is special about spring?</p> <p>What is special about summer?</p> <p>What is special about fall?</p> <p>What is special about winter?</p> <p>How do the trees change during the seasons?</p> <p>How can we observe how much light is shining during a particular day?</p> <p>What did you learn about the solar system?</p> <p>How can the sun help you if you are lost?</p> <p>Moon observations during the day</p> <p><a href="http://www.lpi.usra.edu/education/space_days/activities/moon/documents/Moon_Investigator_Guide.pdf">http://www.lpi.usra.edu/education/space_days/activities/moon/documents/Moon_Investigator_Guide.pdf</a></p> <p>Sun, Moon and Stars books</p> <p><a href="http://beyondpenguins.ehe.osu.edu/issue/polar-patterns-day-night-and-seasons/polar-patterns-virtual-bookshelf">http://beyondpenguins.ehe.osu.edu/issue/polar-patterns-day-night-and-seasons/polar-patterns-virtual-bookshelf</a></p> <p>Graphing Monthly Lunar Cycle</p> <p><a href="http://sciencenetlinks.com/lessons/sky-4-the-moon/">http://sciencenetlinks.com/lessons/sky-4-the-moon/</a></p> <p>Comparing the day and night sky</p> <p><a href="http://sciencenetlinks.com/lessons/sky-1-objects-in-the-sky/">http://sciencenetlinks.com/lessons/sky-1-objects-in-the-sky/</a></p> <p>Moon information and kids pictures</p> <p><a href="http://solarsystem.nasa.gov/kids/moon_kids.cfm">http://solarsystem.nasa.gov/kids/moon_kids.cfm</a></p> <p>Sun information and kids pictures</p> <p><a href="http://solarsystem.nasa.gov/kids/sun_kids.cfm">http://solarsystem.nasa.gov/kids/sun_kids.cfm</a></p> <p>The Moon at Enchanted Learning</p>	<p>planet*</p> <p>space*</p> <p>shadow*</p> <p>daytime</p> <p>brightness</p> <p>color</p> <p>scatter</p> <p>apparent</p> <p>movement</p> <p>objects</p> <p>recognize (P)</p> <p>observe (P)</p> <p>patterns</p> <p>week</p> <p>observable</p> <p>changes</p> <p>appearance</p> <p>day to day</p>	
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<p><a href="http://www.enchantedlearning.com/subjects/astronomy/moon/Moonweblinks.shtml">http://www.enchantedlearning.com/subjects/astronomy/moon/Moonweblinks.shtml</a></p> <p>Moon Song video  <a href="https://www.youtube.com/watch?v=GvkrC4HSLkM">https://www.youtube.com/watch?v=GvkrC4HSLkM</a></p> <p>Grade 1 - 1-ESS1 Earth's Place in the Universe  <a href="https://www.exploringnature.org/db/view/Grade-1-1-ESS1-Earthrsquos-Place-in-the-Universe">https://www.exploringnature.org/db/view/Grade-1-1-ESS1-Earthrsquos-Place-in-the-Universe</a></p> <p>Grade 1: Earth's Place in the Universe  <a href="https://www.bcsberlin.org/cms/lib/NJ01001442/Centricity/domain/11/august%202017/Unit%204%20Earths%20Place%20in%20the%20Universe%2020170729201551.pdf">https://www.bcsberlin.org/cms/lib/NJ01001442/Centricity/domain/11/august%202017/Unit Unit 4 Earths Place in the Universe 20170729201551.pdf</a></p> <p>The Predictable Patterns of the Sun and the Seasons  <a href="https://betterlesson.com/lesson/635856/the-predictable-patterns-of-the-sun-and-the-seasons?from=cc_lesson">https://betterlesson.com/lesson/635856/the-predictable-patterns-of-the-sun-and-the-seasons?from=cc_lesson</a></p> <p><b>Literature Connection</b></p> <p>Lily and the Moon <a href="https://www.youtube.com/watch?v=nvZz823LyXU">https://www.youtube.com/watch?v=nvZz823LyXU</a>  When I met the Moon <a href="https://www.youtube.com/watch?v=fudoeIg0C0E">https://www.youtube.com/watch?v=fudoeIg0C0E</a></p> <p>The Moon Book by Gail Gibbons</p> <p><b>Writing Prompts</b></p> <ol style="list-style-type: none"> <li>1) Write an informative text that supplies some facts about objects in the sky.</li> <li>2) With guidance and support from adults create a graphic organizer for differences in the day and night sky.</li> <li>3) Use digital tools to create a class book showing changes in the moons appearance over time.</li> <li>4) Draw a picture and write about what you did when you observed the sky.</li> <li>5) Write a narrative about the changes in the sky. Use temporal words to signal event order.</li> </ol> <p><b>Assessment Prototype</b></p> <p>1.E.1.1 After monitoring the day and night sky for several days and nights, lead students to complete a Venn diagram showing objects that are visible at night, day or day/night.</p>		
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1.E.1.2 Ask students to prepare a sequence of drawings representing the different ways the moon appears over a period of time.



**Unit of Study: Earth Systems, Structures and Processes**

**1.E.2 Understand the physical properties of Earth materials that make them useful in different ways.**

1.E.2.1 Summarize the physical properties of Earth materials, including rocks, minerals, soils and water that make them useful in different ways.

1.E.2.2 Compare the properties of soil samples from different places relating their capacity to retain water, nourish and support the growth of certain plants

**Essential and Guiding Questions:**

summarize (P)  
describe  
observe (P)  
classify (P)  
relate (P)  
Earth material  
properties  
rocks

12/3-  
2/8/2021

<p>What is Earth made of?  How is an Earth material defined?  Why are rocks described as non-living materials?  How can rock and sand be classified?  How is water classified?  How can different soils be described using properties?  How can soils be sorted and classified by their properties?  How can rocks be classified?  What earth materials are necessary for plants to grow?  How are Earth materials used for growing plants?  What characteristics of Earth materials help plants to grow?</p> <p><b>TEACHING Resources:</b>  <b>NCES 1st grade Earth Systems LiveBinder</b>  A livebinder dedicated to the 1E2 standard.  <a href="http://www.livebinders.com/play/play?id=478295">http://www.livebinders.com/play/play?id=478295</a></p> <p><b>Utah Education Network Unit</b>  This site includes units and lesson plans that may be useful to teachers teaching the objectives of this resource pack.  <a href="http://www.uen.org/core/displayLessonPlans.do?courseNumber=3010&amp;standardId=38828&amp;objectiveId=38829">http://www.uen.org/core/displayLessonPlans.do?courseNumber=3010&amp;standardId=38828&amp;objectiveId=38829</a></p> <p><a href="http://www.uen.org/Lessonplan/preview?LPid=1232">http://www.uen.org/Lessonplan/preview?LPid=1232</a></p> <p><a href="http://www.uen.org/Lessonplan/preview?LPid=5676">http://www.uen.org/Lessonplan/preview?LPid=5676</a></p> <p><a href="http://www.uen.org/Lessonplan/preview?LPid=28147">http://www.uen.org/Lessonplan/preview?LPid=28147</a></p> <p><a href="http://www.uen.org/Lessonplan/preview?LPid=1221">http://www.uen.org/Lessonplan/preview?LPid=1221</a></p> <p><b>Grade 1 Science Earth Unit</b>  This unit proposal includes lessons ideas that are sequenced to address NCES 1.E.2.  Teachers may find the lesson ideas useful as they develop their own plans.</p>	minerals soils water matter physical properties -color -size -shape -weight -texture -flexibility -attraction to magnets -float -sink retain solids shape occupy liquid useful 1.E.2.2 compare (P) relate (P) samples location/places capacity nourish sustain	
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<http://www.wheretomorrowbegins.org/climb/wp-content/uploads/2013/02/1E2-Earth-science-Unit.pdf>

#### **Properties of Earth Materials Interactivities**

These web interactivities are focused on properties of Earth Materials in grades K-4.

<http://www.learningscience.org/esc1aearthmaterials.htm>

#### **Rocks and more**

In this unit, students pursue their natural interest in the world around them. In this unit, students will look and compare rocks and other earth materials by their physical attributes.

<https://www.georgiastandards.org/Frameworks/GSO%20Frameworks/KK%20Science%20Framework%20Rocks%20and%20Soil.pdf>

#### **Investigating Soil**

This lesson is one approach to teaching young students about soil.

<http://www.bsisd.esc18.net/documents/Lesson%20Ideas/LESSONS%20&%20RESOURCES/SCIENCE/1st%20Gr/Science Grade 01 Unit 04 Exemplar Lesson 01 Investigating Soil.pdf>

#### **Getting down and dirty with soils Learn NC**

In this lesson, we will explore different kinds of soil (humus, sand, clay). The students will plant seeds in the different soils as part of further exploration.

<http://www.learnnc.org/lp/pages/3532>

#### **Learning about rocks Learn NC**

In this lesson, students will be engaged in hands-on experiences while they explore rocks.

<http://www.learnnc.org/lp/pages/3245>

#### **Grocery Store Matter Learn NC**

Adapt this lesson! Change this to EARTH MATERIALS MATTER - Substitute rocks, soils, water, and other earth materials (for groceries) and have students explore them over several days.

<http://www.learnnc.org/lp/pages/3100>

#### **Building Things with Earth Materials**

<p>This is a week-long lesson that follows the STEM (science, technology, engineering, and math) design cycle. For the first two days, students learn about mud daubers and termites, both of which build nests from Earth materials. Then, they plan how they could make their own model of a wall using similar materials.</p> <p><a href="http://betterlesson.com/lesson/635674/stem-lab-building-models-with-earth-materials">http://betterlesson.com/lesson/635674/stem-lab-building-models-with-earth-materials</a></p> <p><b>Engineering and the Three little Pigs</b></p> <p>The purpose of this activity is to demonstrate the importance of rocks, soils and minerals in engineering and how using the right material for the right job is important. The students build three different sand castles and test them for strength and resistance to weathering. Then, they discuss how the buildings are different and what engineers need to think about when using rocks, soils and minerals for construction.</p> <p><a href="https://www.teachengineering.org/activities/view/cub_earth_lesson1_activity1">https://www.teachengineering.org/activities/view/cub_earth_lesson1_activity1</a></p> <p><b>Three Little pigs STEM design challenge</b></p> <p>Google the title above to find another Design Challenge with the 3 Little Pigs that is especially designed to address language acquisition. From the Mid-Columbia STEM Education Collaboratory</p> <p><a href="http://www.sweetsoundsofkindergarten.com/2015/06/the-3-little-pigs-stem-challenge.html">http://www.sweetsoundsofkindergarten.com/2015/06/the-3-little-pigs-stem-challenge.html</a></p> <p><b>Video Resources:</b></p> <p><a href="http://www.watchknowlearn.org/SearchResults.aspx?SearchText=Rocks+and+soil">http://www.watchknowlearn.org/SearchResults.aspx?SearchText=Rocks+and+soil</a></p> <p><b>Assessment Prototype</b></p> <p>1.E.2.1 Ask students to sort a collection of earth materials based on observable properties and ways they are useful. Explain the rules used for sorting.</p> <p>Guide students to compare the results of using different natural earth materials – to build a tower (tallest, most stable in wind, holds largest weight, etc.).</p> <p>Investigate the properties of solids and liquids in containers of different sizes and shapes. Communicate findings to teacher, &amp; peers.</p> <p>1.E.2.2 In a teacher guided experiment, lead students to investigate the ability of different types of soils to grow plants and elicit from the students</p>		
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<p>correspondences that they perceive among the different types of soils and plants.</p> <p>Guide students to investigate, observe, and describe how different types of soil 'clump' or hold together when water is added to them.</p>		
<p><b>Unit of Study: Ecosystems</b></p> <p>1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.</p> <p>1.L.1.1 Recognize that plants and animals need air, water, light (plants only), space, food and shelter and that these may be found in their environment.</p> <p>1.L.1.2 Give examples of how the needs of different plants and animals can be met by their environments in North Carolina or different places throughout the world.</p> <p><b>Essential Questions:</b></p> <p>What are the basic characteristics of environments?</p> <p>What are the basic needs of plants and animals?</p> <p>How do environments in North Carolina meet the needs of the organisms that live there?</p> <p>How can humans protect the environment?</p> <p>How can humans improve the conditions for the growth of plants and animals in a particular environment?</p> <p>Instructional Resources:</p> <p><b>Earth Day and the Environment</b></p> <p>Lessons and activities for Earth Day and beyond that help students build awareness of our planet's needs and develop ways to meet them.</p> <p><a href="http://www.scholastic.com/teachers/unit/earth-day-and-environment-everything-you-need">http://www.scholastic.com/teachers/unit/earth-day-and-environment-everything-you-need</a></p> <p><b>Eeko World</b></p> <p>EekoWorld features fifteen lesson plans. There are three lessons for each grade level from kindergarten through grade four. The lesson plans contain the following components: overviews, grade level, learning objectives, building background activities, learning activities, extension activities, and standards. The educational standards for all the lessons are compiled by grade ranges from K-2 and 3-5.</p> <p><a href="http://pbskids.org/eeoworld//parentsteachers/lessons.html">http://pbskids.org/eeoworld//parentsteachers/lessons.html</a></p> <p><b>The Needs of Living Things</b></p>	<p>Soil</p> <p>Topsoil</p> <p>Subsoil</p> <p>Bedrock</p> <p>Nutrients</p> <p>Rock</p> <p>Water</p> <p>Surface</p> <p>Recycle</p> <p>Earth</p> <p>Litter</p> <p>Trees</p> <p>Plastic</p> <p>Rubber</p> <p>Sunlight</p> <p>Air</p> <p>Water</p> <p>Shelter</p> <p>Needs</p>	<p>2/9-4/7/2021</p>

<p>In this lesson, students watch video clips of animals and plants in their natural environment, to gather evidence that all living things have basic needs that must be met in order to survive. Then, to illustrate their understanding of this concept, students draw pictures of real or imaginary pets eating, drinking, breathing, and taking shelter (from the elements or from other animals).  <a href="http://www.pbslearningmedia.org/resource/tdc02.sci.life.colt.lp_stayalive/the-needs-of-living-things/">http://www.pbslearningmedia.org/resource/tdc02.sci.life.colt.lp_stayalive/the-needs-of-living-things/</a></p> <p><b>Needs of Plants and Animals</b>  A collection of Power Point slides that teachers can use to teach these concepts.  <a href="http://www.compton.k12.ca.us/pages/departments/Curriculum/PDF/1stGradeUnitBChp35.pdf">http://www.compton.k12.ca.us/pages/departments/Curriculum/PDF/1stGradeUnitBChp35.pdf</a></p> <p><b>Plant and Animal Needs</b>  Plants and animals change as they grow. Animals need food, water, shelter, air, and space to survive. Plants need nutrients, water, air light, and a place with adequate space for them to grow.  <a href="http://www.doe.virginia.gov/testing/sol/standards_docs/science/2010/lesson_plans/kindergarten/life_processes/session_K-7ab.pdf">http://www.doe.virginia.gov/testing/sol/standards_docs/science/2010/lesson_plans/kindergarten/life_processes/session_K-7ab.pdf</a></p> <p><b>NCES 1.L1 Live Binder</b>  A live binder collection dedicated to ES 1.L.1.  <a href="http://www.livebinders.com/play/play?id=478503">http://www.livebinders.com/play/play?id=478503</a></p> <p><b>Plants and Animals Unit</b>  Students investigate the basic needs of plants and animals, and more.  <a href="https://www.georgiastandards.org/Frameworks/GSO%20Frameworks/1%20Science%20Framework%20Plants%20and%20Animals.pdf">https://www.georgiastandards.org/Frameworks/GSO%20Frameworks/1%20Science%20Framework%20Plants%20and%20Animals.pdf</a></p> <p><b>Beyond penguins and Polar Bears: Plants</b>  Plants are a common topic in elementary classrooms for good reason – they are an effective, inexpensive way for students to observe living organisms and life cycles firsthand. Primary students often focus on familiar plants, basic plant structures and their functions, and our use of plants as a food source. In the upper-elementary grades, students investigate germination, plant life cycles, and flowering and seed production in more detail. These students are also ready to consider the diversity of plants around the world and the</p>		
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<p>adaptations that allow plants to survive in very different environments.  <a href="http://beyondpenguins.ehe.osu.edu/issue/polar-plants/hands-on-lessons-and-activities-about-plants">http://beyondpenguins.ehe.osu.edu/issue/polar-plants/hands-on-lessons-and-activities-about-plants</a></p> <p><b>PBL Unit Plants and Animals</b></p> <p>All around us are plants and animals. We see plants and animals at school, at our homes, and while we are in our cars. In this unit students will explore the world around them through a visit to the zoo and by growing plants.  <a href="http://www2.davidson.k12.nc.us/pbl/eett/EETT0506/Plants%20and%20Animals%20PBL.pdf">http://www2.davidson.k12.nc.us/pbl/eett/EETT0506/Plants%20and%20Animals%20PBL.pdf</a></p> <p><b>CScope Unit: Basic Needs of Plants and Animals</b>  <a href="http://www.bigspringisd.net/Uploads/177/misc/f266918.pdf">http://www.bigspringisd.net/Uploads/177/misc/f266918.pdf</a></p> <p><b>Bright Hub – Animals Have Needs Too</b></p> <p>Helping students understand characteristics of animals is a major portion of the first grade science curriculum. With these animal basic needs lesson plans, your first graders will understand the needs of pets and other animals. You can extend the lesson to include the interdependence of plants and animals, as well.  <a href="http://www.brighthubeducation.com/lesson-plans-grades-1-2/102180-the-basic-needs-of-animals-first-grade-lesson/">http://www.brighthubeducation.com/lesson-plans-grades-1-2/102180-the-basic-needs-of-animals-first-grade-lesson/</a></p> <p><b>Needs of Animals – Learn NC</b></p> <p>In this lesson plan first grade students will examine photographs of 4-H club members with animals from North Carolina. They will make observations from the visual material to build an understanding of the needs of animals. They will begin to learn that these needs have remained the same in different times.  <a href="http://www.learnnc.org/lp/pages/1626">http://www.learnnc.org/lp/pages/1626</a></p> <p><b>Who Needs What – Teach Engineering</b></p> <p>In an introductory discussion, students identify the physical needs of animals and then speculate on the needs of plants. With teacher guidance, students then design an experiment that can take place in the classroom to test whether or not plants need light and water in order to grow. This prepares them to conduct the associated activity in which</p>		
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<p>sunflower seeds are planted in plastic cups, and once germinated, are exposed to different conditions. In a classroom setting it is easy to test for the effects of light versus darkness, and watered versus non-watered conditions. During exposure of the plants to these different conditions, students measure growth of the seedlings every few days using non-standard measurement. After a few weeks, they compare the growth of plants exposed to the different conditions, and make pictorial bar graphs that demonstrate these comparisons.</p> <p><a href="https://www.teachengineering.org/lessons/view/duk_sunflower_mary_less">https://www.teachengineering.org/lessons/view/duk_sunflower_mary_less</a></p> <p><b>Bottle Biology</b></p> <p><a href="http://resources.fastplants.org/agriscience/agriscienceappendixa.pdf">http://resources.fastplants.org/agriscience/agriscienceappendixa.pdf</a></p> <p><b>North Carolina Species</b></p> <p><a href="http://www.ncwildlife.org/Learning/Species">http://www.ncwildlife.org/Learning/Species</a></p> <p><b>North Carolina Environmental Education</b></p> <p><a href="http://web.eenorthcarolina.org/core/item/topic.aspx?tid=85010">http://web.eenorthcarolina.org/core/item/topic.aspx?tid=85010</a></p> <p><b>NC Environmental Education resources</b></p> <p><a href="http://www.projectwild.org/growingupwild/NorthCarolina.htm">http://www.projectwild.org/growingupwild/NorthCarolina.htm</a></p> <p><a href="http://deg.nc.gov/node/83115">http://deg.nc.gov/node/83115</a></p> <p><a href="https://forestry.ces.ncsu.edu/ncplt/">https://forestry.ces.ncsu.edu/ncplt/</a></p> <p><a href="http://www.nrcs.usda.gov/wps/portal/nrcs/detail/?ss=16&amp;navtype=BROWSEBYSUBJECT&amp;cid=nrcs143_022018&amp;navid=2201200000000000&amp;position=Not%20Yet%20Determined.Html&amp;ttype=detail">http://www.nrcs.usda.gov/wps/portal/nrcs/detail/?ss=16&amp;navtype=BROWSEBYSUBJECT&amp;cid=nrcs143_022018&amp;navid=2201200000000000&amp;position=Not%20Yet%20Determined.Html&amp;ttype=detail</a></p> <p><a href="http://www.fs.usda.gov/main/conservationeducation/educator-toolbox/elementary">http://www.fs.usda.gov/main/conservationeducation/educator-toolbox/elementary</a></p> <p><b>The Needs of Living Things</b></p> <p>Students learn what animals and plants need to survive, how their habitats support these needs, and how organisms can change their environment.</p> <p><a href="http://www.pbslearningmedia.org/resource/tdc02.sci.life.colt.lp_stayalive/the-needs-of-living-things/">http://www.pbslearningmedia.org/resource/tdc02.sci.life.colt.lp_stayalive/the-needs-of-living-things/</a></p>		
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### **Plants and Animals**

Students will identify the basic needs and specific physical characteristics of plants.

Students will identify the basic needs and specific physical characteristics of animals.

<https://www.georgiastandards.org/Frameworks/GSO%20Frameworks/1%20Science%20Framework%20Plants%20and%20Animals.pdf>

### **Core Knowledge Animals and Their Needs**

This unit will fan the flames of the children's enthusiasm by letting them participate in hands-on lessons that involve real animals. The students will learn about animal characteristics, pet care, animals' basic needs, and animal safety. The lessons incorporate a variety of teaching styles to engage all learners.

[http://www.coreknowledge.org/mimik/mimik\\_uploads/lesson\\_plans/1095/K\\_animalsneeds-uwp.pdf](http://www.coreknowledge.org/mimik/mimik_uploads/lesson_plans/1095/K_animalsneeds-uwp.pdf)

### **CScope Basic Needs of Plants and Animals**

This lesson is one approach to teaching the concepts associated with this standard.

<http://www.bigspringisd.net/Uploads/177/misc/f266918.pdf>

### **Video Resources:**

Bill Nye – garbage -

[http://www.dailymotion.com/video/x3cvox0?GK\\_FACEBOOK\\_OG\\_HTML5=1](http://www.dailymotion.com/video/x3cvox0?GK_FACEBOOK_OG_HTML5=1)

Habitat Song - <https://www.youtube.com/watch?v=VVPyjuKPxFA>

Habitat – Old McDonald - <https://www.youtube.com/watch?v=xlFI2jXhUV4>

Berenstain bears – the trouble with pets

<https://www.youtube.com/watch?v=IBc6Ri4MK9Y&list=PLpTWh6VEf2n98HbsesnNLjfwFTAIRIFYd>

### **Assessment Prototype**

1. L.1.1 Guide students to observe animals and plants on school grounds, noting how the environment provides each with air, water, light, space, food and shelter.

1. L.1.2 Guide students to investigate schoolyard and classroom habitats and

<p>compare (detect correspondences among) the different living things they find in each type of environment.</p> <p>1.L.1.3 Lead students to apply an understanding of ecology by participating in animal and plant caretaking, recycling, etc. Develop and follow classroom procedures that demonstrate respect and care for the environment and minimize harmful human impact.</p>		
<p><b>Unit of Study: Molecular Biology</b></p> <p><b>1.L.2 Summarize the needs of living organisms for energy and growth.</b></p> <p>1.L.2.1 Summarize the basic needs of a variety of different plants (including air, water, nutrients, and light) for energy and growth.</p> <p>1.L.2.2 Summarize the basic needs of a variety of different animals (including air, water, and food) for energy and growth.</p> <p><b>Instructional Resources:</b></p> <p><b>The Needs of Living Things</b> Students learn what animals and plants need to survive, how their habitats support these needs, and how organisms can change their environment. <a href="http://www.pbslearningmedia.org/resource/tdc02.sci.life.colt.lp_stayalive/the-needs-of-living-things/">http://www.pbslearningmedia.org/resource/tdc02.sci.life.colt.lp_stayalive/the-needs-of-living-things/</a></p> <p><b>Plants and Animals</b> Students will identify the basic needs and specific physical characteristics of plants. Students will identify the basic needs and specific physical characteristics of animals. <a href="https://www.georgiastandards.org/Frameworks/GSO%20Frameworks/1%20Science%20Framework%20Plants%20and%20Animals.pdf">https://www.georgiastandards.org/Frameworks/GSO%20Frameworks/1%20Science%20Framework%20Plants%20and%20Animals.pdf</a></p> <p><b>Core Knowledge Animals and Their Needs</b> This unit will fan the flames of the children's enthusiasm by letting them participate in hands-on lessons that involve real animals. The students will learn about animal characteristics, pet care, animals' basic needs, and animal safety. The lessons incorporate a variety of teaching styles to engage all learners. <a href="http://www.coreknowledge.org/mimik/mimik_uploads/lesson_plans/1095/K_animalsneeds-uwp.pdf">http://www.coreknowledge.org/mimik/mimik_uploads/lesson_plans/1095/K_animalsneeds-uwp.pdf</a></p>	<p>Living Air Water Light Nutrients Food Energy Growth Habitat Environment Organisms Plants Animals needs</p>	<p>4/8- 6/3/2021</p>



**CScope Basic Needs of Plants and Animals**

This lesson is one approach to teaching the concepts associated with this standard.

<http://www.bigspringisd.net/Uploads/177/misc/f266918.pdf>

**Needs of Living Things – Australia version**

This is a unit about basic needs of living things that focuses on animals and plants that can be found in Australia. This is a very good resource for interdisciplinary study.

[http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=19&ved=0ahUKEwjPluSQ\\_LvOAhWC5yYKHY9XBtY4ChAWCDswCA&url=http%3A%2F%2Fwww.qm.qld.gov.au%2F%2Fmedia%2FDocuments%2FLearning%2Bresources%2FQMSB%2FTeacher%2Band%2Bstudent%2Bresources%2Fneeds-of-living-things-teacher-resource.pdf&usg=AFQjCNFJhKJvQ5FoXd3ptUlol7dmBBVa1A](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=19&ved=0ahUKEwjPluSQ_LvOAhWC5yYKHY9XBtY4ChAWCDswCA&url=http%3A%2F%2Fwww.qm.qld.gov.au%2F%2Fmedia%2FDocuments%2FLearning%2Bresources%2FQMSB%2FTeacher%2Band%2Bstudent%2Bresources%2Fneeds-of-living-things-teacher-resource.pdf&usg=AFQjCNFJhKJvQ5FoXd3ptUlol7dmBBVa1A)

**Beacon Needs of Living Things Unit**

The purpose of this unit is for first graders to learn about living things. Students will learn how to group living things, basic needs of living things, that there are many different living things and that each has an environment. They will also learn how living things adapt to both their environment and for survival purposes. Language Arts skills are reinforced using the science content.

<http://www.beaconlearningcenter.com/unitplan/unitplan.asp?ID=2952>

**Science Web Australia**

This unit aims to bring student prior knowledge to a conscious level, making explicit all the basic needs of living things. Through the firsthand experience of a guest presenter, students recognise how people look after a pet to meet its basic needs. Focus questions help identify what senses the animal uses to help meet those needs. Students use the experience to create a model of a pet and identify how they would meet its needs.

<http://scienceweb.asta.edu.au/years-f-2/unit1/overview/yrf2-unit1-overview.html>

**Bio Ed Online**

Differences between needs and wants, living and nonliving, plants and animals; survival needs for people, plants and animals (air, food, water, home, habitat, environment).

<http://www.bioedonline.org/lessons-and-more/lessons-by-topic/ecology/needs-of-living-things/>

**Needs of Living Things – selected units to explore and adapt\***

<http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=16&ved=0ahUKEwidlpeRgLzOAhUDySYKHQwWChU4ChAWCDwwBQ&url=http%3A%2F%2Ffieldofmarseec.nsw.edu.au%2Fwp-content%2Fuploads%2F2013%2F02%2FNeeds-of-Living-Things.doc&usg=AFQjCNFI8W9BjUgkiegEjg2Cuy68ZDj6IA>

<http://www.state.nj.us/education/modelcurriculum/sci/ku4.pdf>

**Writing Prompts:**

1. Create a Venn diagram that compares the needs of plants and animals.
2. Write a haiku about your favorite animals and one of its needs.
3. Create a graphic organizer featuring the animals and plants you encounter in your environment.

**Assessment Prototypes:**

1. L.2.1 & 1.L.2.2

Guide students to assist with maintaining classroom pets and plants and have students monitor & record what provisions for food, water, and habitat are made for these living organisms in the classroom.