

**PACING GUIDE FOR SCIENCE**

**Grade 1st**

<b><u>Topic</u></b>	<b><u>Unit</u></b>	<b><u>Marking Period</u></b>	<b><u>Number of Days</u></b>
Waves and their applications in Technologies for Information Transfer	Unit 1	MP 1	40-45 days
From Molecules to Organisms: Structure and Processes	Unit 2	MP 2	20-25 days
Heredity: Inheritance and Variation of Traits	Unit 3	MP 2	20-25 days
Earth's Place in the Universe	Unit 4	MP 3	40-45 days
Engineering Design	Unit 5	MP 4	40-45 days

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Science Curriculum Map

<b>Grade: 1st</b>
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<b>Standard:</b> 1-PS4	<b>Content Topic:</b> Waves and Their Applications in Technologies for Information Transfer
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Strand	Disciplinary Core Ideas / Essential Statement	Objective / Essential Question	Science & Engineering Practices / Skills & Lesson
<i>1-PS4-1</i>	Sound can make matter vibrate, and vibrating matter can make sound. (PS4.A)	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.  How can we prove that sound starts with a vibration?	plan and conduct investigations collaboratively to produce data to serve as the basis for evidence to answer a question
<i>1-PS4-2</i>	Objects can be seen if light is available to illuminate them or if they give off their own light (PS4.B)	Make observations to construct an evidence-based account that objects can be seen only when illuminated.  How can we prove that objects can only be seen when illuminated?	make observations (firsthand or from media) to construct an evidence-based account for natural phenomena
<i>1-PS4-3</i>	Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (PS4.B)	Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light  How can light beams bend?  Can you bend a beam of light?  Do shadows change?	plan and conduct investigations collaboratively to produce data to serve as the basis for evidence to answer a question
<i>1-PS4-4</i>	people also use a variety of devices to communicate (send and receive information) over long distances (PS4.C)	Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance  How can you solve a communication problem using sound?  How can light energy help us communicate with others?	use tools and materials provided to design a device that solves a specific problem

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Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
Lab- My Listening Walk	Assessment Rubric (pg 124)	Knowing Science-Physical Science 2.2 and 2.3
Lab- How Sound Works	Assessment Rubric (pg 139)	Knowing Science Literature
Lab- Dancing Sugar	Assessment Rubric (pg 102)	Knowing Vocabulary Science Flashcards
Lab-Sources of Light	Science Journal	Mystery Science
Lab-Light and Heat	Lab	Holt: Science
Lab- Light Rays	Research questions	Knowing Science- Physical Science Unit 2.1
Lab-Bendable Light	STEM project page	Better Lessons- Mirror Mirror on the Wall
Lab- Does Light go Through?		Better Lessons- Shadows, Shadows, Shadows
Lab-Better Lessons- Mirror Mirror on the Wall		Better Lessons- Investigating how we Hear
Lab-Better Lessons- Shadows, Shadows, Shadows		Better Lessons- Stem and Sound
Lab- Better Lessons- Investigating how we Hear		Better Lessons- Stem and Light
Lab-Better Lessons- Stem and Sound		
Lab- Better Lessons- Stem and Light		
Teacher created; guideline 3-5 questions		
Alternative Assessments: Performance Task		

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
Mystery Science Lights & Sound mysteries 1&2	---Science investigations begin with a question
Videos	---Scientists use different ways to study the world
Mystery Science Lights & Sound mystery 4	<b>ELA/Literacy – W.1.2</b>
Mystery Science Lights & Sound mystery 3	Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. (1-PS4-2) W.1.7
Mystery Science Lights & Sound	Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of

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<p>mysteries 5&amp;6</p>	<p>instructions). (1-PS4- 1),(1-PS4-2),(1-PS4-3),(1-PS4-4) W.1.8</p> <p>With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-PS4-1),(1-PS4-2),(1- PS4-3) SL.1.1</p> <p>Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. (1-PS4-1),(1-PS4-2),(1- PS4-3)</p> <p><b>Mathematics – MP.5</b></p> <p>Use appropriate tools strategically. (1-PS4-4) 1.MD.A.1</p> <p>Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-PS4-4) 1.MD.A.2</p> <p>Express the length of an object as a whole number of length units, by layering multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. (1-PS4-4)</p>
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Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
Visual aids	Pre-teach vocabulary	<a href="http://education.jlab.org/vocabhangman/">http://education.jlab.org/vocabhangman/</a>
Sentence Frames	Non-linguistic cues	Science content vocabulary hangman
Modeling	Sentence frames	<a href="http://kids.nationalgeographic.com/NationalGeographiconline">http://kids.nationalgeographic.com/National Geographic online</a>
Anchor charts	Visual aids	<a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml">http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml</a> Interactive science activities
Modify rubric	Manipulatives	
Teacher directed grouping	Graphic organizers	<a href="http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive">http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive</a>
	Use of educational websites: <a href="http://www.khanacademy.org">www.khanacademy.org</a> <a href="http://www.colorincolorado.org/">www.colorincolorado.org/</a>	

21st Century Education	Career Education
<p><u>THEMES:</u> Global Awareness Financial, Economic, Business and Entrepreneurial Literacy Civic Literacy Health Literacy</p> <p><u>SKILLS:</u> Creativity and Innovation Critical Thinking and Problem Solving Communication and Collaboration Information Literacy Media Literacy ICT</p>	<p>Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.</p> <p>CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p>

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Literacy Life and Career Skills	CRP9. Model integrity, ethical leadership and effective management. CRP10. Plan education and career paths aligned to personal goals. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.
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<b>Standard:</b> 1-LS1	<b>Content Topic:</b> From Molecules to Organisms: Structure and Processes
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Strand	Disciplinary Core Ideas / Essential Statement	Objective / Essential Question	Science & Engineering Practices / Skills & Lesson
<b>1-LS1-1</b>	<p>---All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow (LS1.A)</p> <p>--- Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs (LS1.D)</p>	<p>Use materials to design a solution to a human problem by mimicking how plants and / or animals use their external parts to help them survive, grow, and meet their needs</p> <p>How do plants and animals use their external parts to help them meet their needs?</p>	<p>use materials to design a device that solves a specific problem or a solution to a specific problem</p>
<b>1-LS1-2</b>	<p>Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive (LS1.B)</p>	<p>Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive</p> <p>How do mother elephants behave to help their offspring survive?</p>	<p>read grade appropriate texts and use media to obtain scientific information to determine patterns in the natural world</p>

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
<p>Lab- How do people get ready for winter?</p> <p>Lab- Why do animals migrate?</p> <p>Lab- What happens when animals hibernate?</p> <p>Lab- What is the difference between winter sleep and hibernation?</p> <p>Lab- Which animals remain active</p>	<p>Assessment Rubric (pg 55)</p>	<p>Knowing Science-Life Science Unit 1.3</p> <p>Knowing Science- Life Science-Unit 1.1</p> <p>Knowing Science Literature</p> <p>Knowing Vocabulary Science Flashcards</p> <p>Better Lessons-</p>

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<p>during winter?</p> <p>Lab- Better Lessons- Mama Elephant and her Offspring</p> <p>Teacher created; guideline 3-5 questions</p> <p>Alternative Assessments: Performance Task</p>		<p>Mama Elephant and her Offspring</p> <p>Mystery Science</p> <p>Holt: Science</p>
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Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
<p>Mystery Science Plant &amp; Animal Superpowers mysteries 1,3,5,6</p> <p>Videos</p> <p>Mystery Science Plant &amp; Animal Superpowers mystery 2</p> <p>Google Classroom- Internet Research</p>	<p>---the shape and stability of structures of natural and designed objects are related to their function</p> <p>----every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world</p> <p>---patterns in the natural world can be observed, used to describe, phenomena, and used as evidence</p> <p>---scientists look for patterns and order when making observations about the world</p> <p><b>ELA/Literacy – RI.1.1</b></p> <p>Ask and answer questions about key details in a text. (1-LS1-2) RI.1.2</p> <p>Identify the main topic and retell key details of a text. (1-LS1-2) RI.1.10</p> <p>With prompting and support, read informational texts appropriately complex for grade. (1-LS1-2) W.1.7</p> <p>Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (1-LS1- 1)</p> <p><b>Mathematics – 1.NBT.B.3</b></p> <p>Compare two two-digit numbers based on the meanings of the tens and one digits, recording the results of comparisons with the symbols <math>&gt;</math>, <math>=</math>, and <math>&lt;</math>. (1-LS1-2) 1.NBT.C.4</p> <p>Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning uses. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. (1- LS1-2) 1.NBT.C.5</p> <p>Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (1-LS1-2) 1.NBT.C.6</p>

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	Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. (1-LS1-2)
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Visual aids	Pre-teach vocabulary	<a href="http://education.jlab.org/vocabhangman/">http://education.jlab.org/vocabhangman/</a>
Sentence Frames	Non-linguistic cues	Science content vocabulary hangman
Modeling	Sentence frames	<a href="http://kids.nationalgeographic.com/National%20Geographic%20online">http://kids.nationalgeographic.com/National Geographic online</a>
Anchor charts	Visual aids	
Modify rubric	Manipulatives	<a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml">http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml</a> Interactive science activities
Teacher directed grouping	Graphic organizers	
	Use of educational websites: <a href="http://www.khanacademy.org">www.khanacademy.org</a> <a href="http://www.colorincolorado.org/">www.colorincolorado.org/</a>	<a href="http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive">http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive</a>

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<b>Standard:</b> 1-LS3	<b>Content Topic:</b> Heredity: Inheritance and Variation of Traits
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Strand	Disciplinary Core Ideas / Essential Statement	Objective / Essential Question	Science & Engineering Practices / Skills & Lesson
<b>1-LS3-1</b>	<p>---young animals are very much, but not exactly like, their parents. Plants are also very much, but not exactly, like their parents. (LS3.A)</p> <p>---individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways (LS3.B)</p>	<p>make observations to construct an evidence based account that young plants and animals are like, but not exactly like, their parents</p> <p>How are focus plants similar to but not exactly like the parent plant?</p>	<p>make observations (firsthand or from media) to construct an evidence based account for natural phenomena</p>

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
<p>Lab- Better Lessons-Plant Secrets</p> <p>Teacher created; guideline 3-5 questions</p> <p>Alternative Assessment: Performance Task</p>	<p>Venn Chart- how focus plant was similar to, but not exactly like the parent plant</p>	<p>Knowing Science</p> <p>Knowing Science Literature</p> <p>Knowing Vocabulary Science Flashcards</p> <p>Mystery Science</p> <p>Better Lessons- Plant Secrets</p> <p>Holt: Science</p>

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
<p>Mystery Science Plant and Animal Superpowers mystery 4</p>	<p>patterns in the natural world can be observed, used to describe phenomena, and used as evidence</p> <p><b>ELA/Literacy – RI.1.1</b></p> <p>Ask and answer questions about key details in a text. (1-LS3-1) W.1.7</p> <p>Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (1-LS3- 1) W.1.8</p> <p>With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-LS3-1)</p>

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	<p><b>Mathematics – MP.2</b></p> <p>Reason abstractly and quantitatively. (1-LS3-1) MP.5</p> <p>Use appropriate tools strategically. (1-LS3-1) 1.MD.A.1</p> <p>Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-LS3-1)</p>
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Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
Visual aids	Pre-teach vocabulary	<a href="http://education.jlab.org/vocabhangman/">http://education.jlab.org/vocabhangman/</a>
Sentence Frames	Non-linguistic cues	Science content vocabulary hangman
Modeling	Sentence frames	<a href="http://kids.nationalgeographic.com/NationalGeographiconline">http://kids.nationalgeographic.com/National Geographic online</a>
Anchor charts	Visual aids	<a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml">http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml</a> Interactive science activities
Modify rubric	Manipulatives	
Teacher directed grouping	Graphic organizers	<a href="http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive">http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive</a>
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<b>Standard:</b> 1-ESS1	<b>Content Topic:</b> Earth's Place in the Universe
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Strand	Disciplinary Core Ideas / Essential Statement	Objective	Science & Engineering Practices / Skills & Lesson
<b>1-ESS1-1</b>	<p>---patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted (ESS1.A)</p> <p>---Seasonal patterns of sunrise and sunset can be observed, described, and predicted (ESS1.B)</p>	<p>use observations of the sun, moon, and stars to describe patterns that can be predicted</p> <p>How can we use the sun, stars, and moon to describe patterns that can be predicted?</p>	<p>use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions</p>
<b>1-ESS1-2</b>	<p>---Seasonal patterns of sunrise and sunset can be observed, described, and predicted (ESS1.B)</p>	<p>make observations at different times of year to relate the amount of daylight to the time of year</p> <p>How do seasons relate to the amount of daylight?</p>	<p>make observations (firsthand or from media) to collect data that can be used to make comparisons</p>

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
<p>Lab- Day and Night</p> <p>Lab-The Sun's Path</p> <p>Lab- Shadow Clocks</p> <p>Lab- The Moon</p> <p>Lab- What are characteristics of each season?</p> <p>Lab-What makes the seasons?</p> <p>Lab-What are our final seasonal observations?</p> <p>Teacher created; guideline 3-5 questions</p> <p>Alternative Assessments:Performance Task</p>	<p>Assessment Rubric (pg 23)</p> <p>Assessment Rubric (pg 45)</p> <p>Assessment Rubric (pg 59)</p>	<p>Knowing Science- Earth Science Lesson 1.1</p> <p>Knowing Science- Earth Science Lesson 1.2</p> <p>Knowing Science Literature,</p> <p>Knowing Vocabulary Science Flashcards</p> <p>Mystery Science</p> <p>Holt: Science</p>

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Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
<p>Mystery Science Spinning Sky mysteries 1-3,5,6</p> <p>Mystery Science Spinning Sky mystery 4</p>	<p>---patterns in the natural world can be observed, used to describe phenomena, and used as evidence</p> <p>---science assumes natural events happen today as they happened in the past</p> <p>---many events are repeated</p> <p><b>ELA/Literacy – W.1.7</b></p> <p>Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (1-ESS1-1),(1-ESS1-2) W.1.8</p> <p>With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-ESS1-1),(1-ESS1-2)</p> <p><b>Mathematics – MP.2</b></p> <p>Reason abstractly and quantitatively. (1-ESS1-2) MP.4</p> <p>Model with mathematics. (1-ESS1-2) MP.5</p> <p>Use appropriate tools strategically. (1-ESS1-2) 1.OA.A.1</p> <p>Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations to represent the problem. (1-ESS1-2) 1.MD.C.4</p> <p>Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. (1-ESS1-2)</p>

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Sentence Frames	Non-linguistic cues	Science content vocabulary hangman
Modeling	Sentence frames	<a href="http://kids.nationalgeographic.com/National%20Geographic%20online">http://kids.nationalgeographic.com/National Geographic online</a>
Anchor charts	Visual aids	<a href="http://www.bbc.co.uk/schools/science_eclips/ages/10_11/science_10_11.shtml">http://www.bbc.co.uk/schools/science_eclips/ages/10_11/science_10_11.shtml</a>
Modify rubric	Manipulatives	Interactive science activities
Teacher directed grouping	Graphic organizers	<a href="http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive">http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive</a>
	Use of educational websites: <a href="http://www.khanacademy.org">www.khanacademy.org</a> <a href="http://www.colorincolorado.org/">www.colorincolorado.org/</a>	

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<p><b><u>THEMES:</u></b> Global Awareness Financial, Economic, Business and Entrepreneurial Literacy Civic Literacy Health Literacy</p> <p><b><u>SKILLS:</u></b> Creativity and Innovation Critical Thinking and Problem Solving Communication and Collaboration Information Literacy Media Literacy ICT Literacy Life and Career Skills</p>	<p>Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.</p> <p>CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP9. Model integrity, ethical leadership and effective management. CRP10. Plan education and career paths aligned to personal goals. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.</p>

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<b>Standard:</b> K-2-ETS1	<b>Content Topic:</b> Engineering Design
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<b>Strand</b>	<b>Disciplinary Core Ideas / Essential Statement</b>	<b>Objective / Essential Question</b>	<b>Science &amp; Engineering Practices / Skills &amp; Lesson</b>
<b><i>K-2-ETS1-1</i></b>	<p>--- a situation that people want to change or create can be approached as a problem to be solved through engineering (ETS1.A)</p> <p>---ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool (ETS1.A)</p> <p>---before beginning to design a solution, it is important to clearly understand the problem (ETS1.A)</p>	<p>ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>How can we design a solution to the problem of overpopulation of deer?</p>	<p>---ask questions based on observations to find more information about the natural and / or designed world</p> <p>---define a simple problem that can be solved through the development of a new or improved object or tool</p>
<b><i>K-2-ETS1-2</i></b>	<p>designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions, such as climate change, to other people (ETS1.B)</p>	<p>develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem</p> <p>How can we design a solution to the problem of overpopulation of deer?</p>	<p>develop a simple model based on evidence to represent a proposed object or tool</p>
<b><i>K-2-ETS1-3</i></b>	<p>because there is always more than one possible solution to a problem, it is useful to compare and test designs (ETS1.C)</p>	<p>analyze data from tests of two objects designed to solve the same problems to compare the strength and weaknesses of how each performs</p> <p>How can we design a solution to the problem of overpopulation of deer?</p>	<p>analyze data from tests of an object or tool to determine if it works as intended</p>

Alpha Public School  
Science Curriculum Map

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
<p>Lab- Better Lessons- Solve the Problem of Overpopulation</p> <p>Teacher created; guideline 3-5 questions</p> <p>Alternative Assessment: Performance Task</p>	<p>Present solution orally or through a drawing</p>	<p>Knowing Science-Unit 2- Living Things</p> <p>Knowing Science Literature,</p> <p>Knowing Vocabulary Science Flashcards</p> <p>Better Lessons- Solve the Problem of Overpopulation</p> <p>Mystery Science</p> <p>Science Fusion</p>

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
<p>Video</p> <p>Mystery Science</p> <p>Google Classroom- Internet Research</p>	<p>the shape and stability of structures of natural and designed objects are related to their function</p> <p><b>ELA/Literacy – RI.2.1</b></p> <p>Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. (K-2-ETS1-1) W.2.6</p> <p>With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (K-2-ETS1-1),(K-2-ETS1-3) W.2.8</p> <p>Recall information from experiences or gather information from provided sources to answer a question. (K-2-ETS1-1),(K-2-ETS1-3) SL.2.5</p> <p>Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (K-2-ETS1-2)</p> <p><b>Mathematics – MP.2</b></p> <p>Reason abstractly and quantitatively. (K-2-ETS1-1),(K-2-ETS1-3) MP.4</p> <p>Model with mathematics. (K-2-ETS1-1),(K-2-ETS1-3) MP.5</p> <p>Use appropriate tools strategically. (K-2-ETS1-1),(K-2-ETS1-3) 2.MD.D.10</p> <p>Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories.</p> <p>Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (K-2-ETS1-1),(K-2-ETS1-3)</p>

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Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
Visual aids	Pre-teach vocabulary	<a href="http://education.jlab.org/vocabhangman/">http://education.jlab.org/vocabhangman/</a>
Sentence Frames	Non-linguistic cues	Science content vocabulary hangman
Modeling	Sentence frames	<a href="http://kids.nationalgeographic.com/NationalGeographiconline">http://kids.nationalgeographic.com/National Geographic online</a>
Anchor charts	Visual aids	<a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml">http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml</a>
Modify rubric	Manipulatives	Interactive science activities
Teacher directed grouping	Graphic organizers	<a href="http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive">http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive</a>
	Use of educational websites: <a href="http://www.khanacademy.org">www.khanacademy.org</a> <a href="http://www.colorincolorado.org/">www.colorincolorado.org/</a>	

21st Century Education	Career Education
<p><u>THEMES:</u> Global Awareness Financial, Economic, Business and Entrepreneurial Literacy Civic Literacy Health Literacy</p> <p><u>SKILLS:</u> Creativity and Innovation Critical Thinking and Problem Solving Communication and Collaboration Information Literacy Media Literacy ICT Literacy Life and Career Skills</p>	<p>Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.</p> <p>CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP9. Model integrity, ethical leadership and effective management. CRP10. Plan education and career paths aligned to personal goals. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.</p>