

# Kindergarten Grade Science Curriculum Guide

Bartlett City Schools (May 2018)

## Kindergarten Science Curriculum Pacing Guide 2018-2019

Bartlett City Schools (May 2018)

| First Nine Weeks |   |  | Second Nine Weeks |  |   |
|------------------|---|--|-------------------|--|---|
| Week             | Topics  | Content  | Week              | Topics   | Content                                   |
| 1                | Staggered Enrollment  |  | 1-2               | <b>K.LS1: From Molecules to Organisms: Structures and Processes</b><br><b>K.ESS3: Earth and Human Activity</b> | R2BR-Bug Safari, Hey, Little Ant, Spiders |
| 2-4              | Social Studies  |  | 3-8               | Social Studies   |   |
| 5-6              | <b>K.LS1: From Molecules to Organisms: Structures and Processes</b>   | R2BR- My Five Senses, Look, Listen, Taste, Touch, and Smell: Learning About Your Five Senses |                   |  |   |
| 7                | <b>K.LS1: From Molecules to Organisms: Structures and Processes, K.LS3.1: Heredity: Inheritance and Variation of Traits</b> | R2BR-Living or Nonliving, I am a Living Thing  |                   |  |   |
| 8                | Social Studies  |  |                   |  |   |
| 9                |   | <b>Pumpkins</b>  |                   |  |   |

| Third Nine Weeks |   |   | Fourth Nine Weeks |   |   |
|------------------|---|---|-------------------|---|---|
| Week             | Topics  | Content   | Week              | Topics  | Content   |
| 1-2              | <b>K.ESS2: Earth's Systems</b><br><b>K.ETS1: Engineering Design</b> | R2BR-The Year at Maple Hill Farm, The Mitten, Animals in Winter | 1-2               | <b>Plants-K.ESS3: Earth &amp; Human Activity,</b><br><b>K.LS1: From Molecules to Organisms: Structures and Processes</b><br><b>K.LS3.1: Heredity: Inheritance and Variation of Traits</b> | R2BR-The Tiny Seed, Tops and Bottoms                                |
| 3-7              | Social Studies  |   | 3-4               | <b>K.PS1: Matter and Its Interactions</b>   | R2BR-Change It!   |
| 8-9              | <b>K.ESS2: Earth's Systems</b>                                      | R2BR-Weather Forecasting, Clouds                                | 5-6               | <b>K.ESS3: Earth and Human Activity</b>   | R2BR-Home for a Tiger, Home for a Bear, Here is the African Savanna |
|                  | <b>Family Life</b>  |   | 7-10              | Social Studies  |   |

### First Nine Weeks

| TN State Standards (Next Generation)  | Vocabulary  | Objectives/Learning Targets   | Instructional Resources  | Crosscutting Concept and Science and Engineering Principles   |
|---|---|---|--|---|
| Week 1 Staggered Enrollment   |   |   |  |   |
| Week 2 I Like Me!, SS Week 1 Fun at School  |   |   |  |   |
| Week 3 Me First!, SS Week 3 Follow the Rules and 4 Responsibility   |   |   |  |   |
| Week 4 Kindergarten, Here I Come, SS Week 27 Jobs People Do   |   |   |  |   |
| Week 5 <a href="#">My Five Senses</a>   |   |   |  |   |
| <b>DCI:LS1: From Molecules to Organisms: Structures and Processes</b>   |   |   |  |   |
| <p><b>K.LS1: From Molecules to Organisms: Structures and Processes</b></p> <p>(3) Explain how humans use their five senses in making scientific findings.</p> <p><b>COMPONENT IDEA:</b><br/>D. Information Processing</p> | <ul style="list-style-type: none"> <li>- See – eyes</li> <li>- Hear – ears</li> <li>- Smell – nose</li> <li>- Taste – tongue</li> <li>- Touch – fingers</li> <li>- Aware</li> </ul> | <p><b>EXPLANATION:</b> Students should begin to consider the external features of living organisms. The purpose of this standard is to emphasize that all living organisms have external structures that aid in processes such as seeing, hearing, moving, grasping, providing protection, and locating and taking in food, water, and air. Students should be led to patterns such as: plants are often anchored to the ground while animals are free to move, plants are able to make their own food, or both plants and animals have external structures used in gas exchange.</p> | <p><b>McGraw-Hill (2002)</b><br/><b>Unit Theme-Learn About Your World</b><br/><b>pp. 14 – 19 Smell, Touch and Taste</b></p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-five-senses.html">http://bcs-r2br.weebly.com/k-five-senses.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/><b>Structure and Function</b><br/><i>Students investigate how the roles of specific components of a system affect the functioning of the larger system.</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/><b>Engaging in argument from evidence</b> <i>Students create and identify evidence-based arguments and consider degree to which an argument is supported by evidence.</i></p> <p><b>Next Generation Science Standard Practices</b></p> <ol style="list-style-type: none"> <li>1. Asking questions (for science) and defining problems (for engineering)</li> <li>2. Developing and using models</li> <li>6. Constructing explanations (for science) and designing solutions (for engineering)</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol> <p><b>Mathematics</b><br/>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i><br/>MP.7 Look for and make use of structure</p> <p><b>English/Language Arts</b><br/>RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.<br/>SL.K.1a Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).<br/>SL.K.1b Continue a conversation through multiple exchanges.<br/>SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood<br/>SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.</p> |

### Week 6 Look, Listen, Taste, Touch and Smell

#### DCI:LS1: From Molecules to Organisms: Structures and Processes

|  |   |   |  |  |
|--|---|---|--|--|
| <p><b>K.LS1: From Molecules to Organisms: Structures and Processes</b></p> <p>3) Explain how humans use their five senses in making scientific findings.</p> <p><b>COMPONENT IDEA:</b><br/>D. Information Processing</p> | <ul style="list-style-type: none"> <li>- See – eyes</li> <li>- Hear – ears</li> <li>- Smell – nose</li> <li>- Taste – tongue</li> <li>- Touch – fingers</li> <li>- Aware</li> </ul> | <p><b>EXPLANATION:</b> Students should begin to consider the external features of living organisms. The purpose of this standard is to emphasize that all living organisms have external structures that aid in processes such as seeing, hearing, moving, grasping, providing protection, and locating and taking in food, water, and air. Students should be led to patterns such as: plants are often anchored to the ground while animals are free to move, plants are able to make their own food, or both plants and animals have external structures used in gas exchange.</p> | <p>McGraw Hill – 2002</p> <p>Unit Theme: Learn About Your World</p> <p>pp. 2-7 Use Your Eyes<br/>pp. 8-13 Use Your Ears</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-five-senses.html">http://bcs-r2br.weebly.com/k-five-senses.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b></p> <p><b>Structure and Function</b><br/><i>Students investigate how the roles of specific components of a system affect the functioning of the larger system.</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b></p> <p><b>Engaging in argument from evidence</b> <i>Students create and identify evidence-based arguments and consider degree to which an argument is supported by evidence.</i></p> <p><b>Next Generation Science Standard Practices</b></p> <ol style="list-style-type: none"> <li>1. Asking questions (for science) and defining problems (for engineering)</li> <li>2. Developing and using models</li> <li>6. Constructing explanations (for science) and designing solutions (for engineering)</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol> <p><b>Mathematics</b></p> <p>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p> <p>MP.7 Look for and make use of structure</p> <p><b>English/Language Arts</b></p> <p>RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.</p> <p>SL.K.1a Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).</p> <p>SL.K.1b Continue a conversation through multiple exchanges.</p> <p>SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood</p> <p>SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.</p> |
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**Week 7 | I am a Living Thing, Living or Nonliving, SSW Week 5 Time**

**DCI:LS1: From Molecules to Organisms: Structures and Processes**

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|---|--|---|--|--|
| <p><b>K.LS.1: From Molecules to Organisms: Structures and Processes</b></p> <p>(2) Recognize differences between living organisms and non-living materials and sort them into groups by observable physical attributes.</p> <p><b>COMPONENT IDEA:</b><br/>A. Structure and Function</p> | <ul style="list-style-type: none"> <li>- Living</li> <li>- Nonliving</li> <li>- Survive</li> <li>- Energy</li> </ul> | <p><b>EXPLANATION:</b> Students should be given the opportunity to make observations of sets of living and non-living things in order to create a classification system based on their observations. The focus should be on the idea that living organisms all go through a basic life cycle which includes: birth, growth and reproduction, and death.</p> | <p><b>McGraw-Hill (2002)</b><br/><b>Unit Theme-Learn about Plants:</b><br/>pp.40-44, 72-75<br/><b>Unit Theme—Learning about Animals:</b> pp.112-113</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-livingnonliving.html">http://bcs-r2br.weebly.com/k-livingnonliving.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/><b>Pattern</b><br/><i>Students recognize, classify, and record the patterns they observe in nature or man-made objects.</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/><b>Analyzing and interpreting data</b> <i>Students set a foundation for data analysis by recording their thoughts and observations about patterns and events in a manner that can be shared with others</i></p> <p><b>Next Generation Science Standard Practices</b></p> <ol style="list-style-type: none"> <li>1. Asking questions (for science) and defining problems (for engineering)</li> <li>2. Developing and using models</li> <li>6. Constructing explanations (for science) and designing solutions (for engineering)</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol> <p><b>Mathematics</b><br/>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.<br/>MP.7 Look for and make use of structure</p> <p><b>English/Language Arts</b><br/>RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.<br/>RI.K.9 With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).<br/>SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.<br/>SL.K.6 Speak audibly and express thoughts, feelings, and ideas clearly.<br/>W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p> |
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Week 8 SS Week 6 What is History? (Columbus Day), Teacher Directed-Apples

Week 9 Teacher Directed-Pumpkins

### Second Nine Weeks

| TN State Standards (Next Generation)  | Vocabulary  | Objectives/Learning Targets   | Instructional Resources  | Crosscutting Concept and Science and Engineering Principles   |
|---|---|---|--|---|
| <b>Week 1 <a href="#">Bug Safari, Hey Little Ant</a></b>  |   |   |  |   |
| <b>DCI:ESS3: Earth and Human Activity</b>   |   |   |  |   |
| <p><b>K.ESS3: Earth and Human Activity</b></p> <p>1) Use a model to represent the relationship between the basic needs (shelter, food, water) of different plants and animals (including humans) and the places they live.</p> <p>3) Communicate solutions that will reduce the impact from humans on land, water, air, and other living things in the environment</p> <p><b>COMPONENT IDEA:</b><br/>A. Natural Resources</p> | <ul style="list-style-type: none"> <li>- insect</li> <li>- antennae</li> <li>- human being</li> <li>- head</li> <li>- thorax</li> <li>- abdomen</li> <li>- observe</li> </ul> | <p><b>EXPLANATION:</b> Organisms will live in places that give them access to the materials that are needed to meet their basic needs. Humans utilize natural resources in everything they do. This extends from common needs such as food and clothing to the complex devices such as computers that humans have developed. The focus of this standard is only on basic needs for survival, not modern conveniences. Examples of relationships may include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight, so they often grow in meadows. Plants, animals, and their surroundings make up a system. Humans use soil and water to grow food, wood to burn to provide heat or build shelters, and materials such as iron or copper extracted from Earth to make cooking pans. Life is far more abundant near water sources. Examples of humans using natural resources should be limited to processes where the resources are used in a nearly raw form. This standard might pair well with design challenges asking students to evaluate potential habitation sites.</p> | <p><b>McGraw Hill (2002)</b><br/><b>Unit Theme—Learning about Animals:</b> pp.88-9, 94-95, 96-107</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-insects-and-spiders.html">http://bcs-r2br.weebly.com/k-insects-and-spiders.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/><b>Cause and Effect</b><br/><i>Students identify cause and effect relationships through observable patterns, utilizing simple tests to provide evidence that supports or refutes their ideas.</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/><b>Developing and using models</b> <i>Students make drawings, displays, and simple representations for events they experience through their senses, incorporating relative scales when appropriate.</i></p> <p><b>Next Generation Science Standard Practices</b></p> <ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>3. Planning and carrying out investigation</li> <li>8. Obtaining, Evaluating, and Communicating Information</li> </ol> <p><b>Mathematics</b></p> <p>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.<br/>MP.7 Look for and make use of structure</p> <p><b>English/Language Arts</b></p> <p>RI.K.1 With prompting and support, ask and answer questions about key details in a text.<br/>W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.<br/>SL.K.1a Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).<br/>SL.K.2 Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.<br/>SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.</p> |
| <b>Week 2 <a href="#">Spiders</a></b>   |   |   |  |   |

### DCI:ESS3: Earth and Human Activity

|  |   |   |  |   |
|--|---|---|--|---|
| <p><b>K.ESS3: Earth and Human Activity</b></p> <p>1) Use a model to represent the relationship between the basic needs (shelter, food, water) of different plants and animals (including humans) and the places they live.</p> <p>3) Communicate solutions that will reduce the impact from humans on land, water, air, and other living things in the environment.</p> <p><b>COMPONENT IDEA:</b><br/>A. Natural Resources</p> | <ul style="list-style-type: none"> <li>- Spider</li> <li>- Fang</li> <li>- Venom</li> <li>- Prey</li> <li>- Egg sac</li> <li>- Web</li> <li>- Silk</li> </ul> | <p><b>EXPLANATION:</b> Organisms will live in places that give them access to the materials that are needed to meet their basic needs. Humans utilize natural resources in everything they do. This extends from common needs such as food and clothing to the complex devices such as computers that humans have developed. The focus of this standard is only on basic needs for survival, not modern conveniences. Examples of relationships may include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight, so they often grow in meadows. Plants, animals, and their surroundings make up a system. Humans use soil and water to grow food, wood to burn to provide heat or build shelters, and materials such as iron or copper extracted from Earth to make cooking pans. Life is far more abundant near water sources. Examples of humans using natural resources should be limited to processes where the resources are used in a nearly raw form. This standard might pair well with design challenges asking students to evaluate potential habitation sites.</p> | <p><b>McGraw Hill (2002)</b><br/><b>Unit Theme—Learning about Animals:</b> pp.88-9, 94-95, 96-107</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-insects-and-spiders.html">http://bcs-r2br.weebly.com/k-insects-and-spiders.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/><b>Cause and Effect</b><br/><i>Students identify cause and effect relationships through observable patterns, utilizing simple tests to provide evidence that supports or refutes their ideas.</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/><b>Developing and using models</b> <i>Students make drawings, displays, and simple representations for events they experience through their senses, incorporating relative scales when appropriate.</i></p> <p><b>Next Generation Science Standard Practices</b><br/>1. Asking questions and defining problems<br/>3. Planning and carrying out investigation<br/>8. Obtaining, Evaluating, and Communicating Information</p> <p><b>Mathematics</b><br/>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.<br/>MP.7 Look for and make use of structure</p> <p><b>English/Language Arts</b><br/>RI.K.1 With prompting and support, ask and answer questions about key details in a text.<br/>W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.<br/>SL.K.1a Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).<br/>SL.K.2 Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.<br/>SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.</p> |
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Week 3 Veteran's Day, ReadWorks-Fly Our Flag for Veteran's Day, SS Week 7 American Heroes

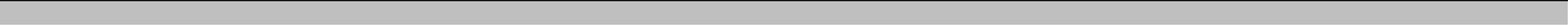
Week 4 A Turkey for Thanksgiving, In November, SS Week 10 Timelines, SS Week 12 First Thanksgiving

Week 5 Lily Learns About Needs and Wants, SS Week 11 Needs and Wants, SS 26 Resources

Week 6 The Scarecrow's Hat, SS Week 28 Money

Week 7 Teacher Directed-Holiday Customs, SS Week 20 Holidays Around the World

Week 8 Teacher Directed-Holiday Customs



### Third Nine Weeks

| TN State Standards (Next Generation) | Vocabulary | Objectives/Learning Targets | Instructional Resources | Crosscutting Concept and Science and Engineering Principles |
|--------------------------------------|------------|-----------------------------|-------------------------|---|
|--------------------------------------|------------|-----------------------------|-------------------------|---|

**Week 1 [The Year at Maplehill Farms, The Mitten](#), SSW Week 25 Rights and Responsibilities**

### DCI:ESS2: Earth's Systems

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|---|--|--|---|---|
| <p><b>K.ESS2: Earth's Systems</b></p> <p>2) Develop and use models to predict weather and identify patterns in spring, summer, autumn, and winter.</p> <p><b>COMPONENT IDEA:</b><br/>D. Weather and Climate</p> | <ul style="list-style-type: none"> <li>- Seasons</li> <li>- Winter</li> <li>- months</li> <li>- December</li> <li>- January</li> <li>- February</li> </ul> | <p><b>EXPLANATION:</b> Students are introduced to weather patterns that accompany the changing seasons. At this grade, students are not expected to fully grasp that time can be considered at different scales (e.g., a number of days makes up a season). Instead, students should focus on making comparisons of weather at different times throughout the year. An example may include constructing a class chart to discuss seasons and the different weather that happens in each.</p> | <p><b>McGraw-Hill (2002):</b><br/><b>Unit Theme-Weather and Seasons:</b><br/>pp. 154-189</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-winter.html">http://bcs-r2br.weebly.com/k-winter.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/><b>Scale, Proportion, and Quantity</b> <i>Students make comparisons using relative scales. (e.g., bigger or smaller, closer or further, sooner or later)</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/><b>Developing and using models</b> <i>Students make drawings, displays, and simple representations for events they experience through their senses, incorporating relative scales when appropriate.</i></p> <p><b>Next Generation Science Standard Practices</b></p> <ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>2. Developing and using models</li> <li>3. Planning and carrying out investigation</li> <li>8. Obtaining, Evaluating, and Communicating Information</li> </ol> <p><b>Mathematics</b></p> <p>K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference.</p> <p>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p> <p>MP3 Construct viable arguments and critique the reasoning of others.</p> <p><b>English/Language Arts</b></p> <p>RI.K.1 With prompting and support, ask and answer questions about key details in a text.</p> <p>RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.</p> <p>RI.K.9 With prompting and support, identify basic similarities in and differences between two texts on the same topic</p> <p>SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.</p> <p>W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p> |
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**Week 2 [Animals in Winter](#), SSW Week 14 Seasons**

### DCI:ESS2: Earth's Systems

|   |   |   |   |   |
|---|---|---|---|---|
| <p><b>K.ESS2: Earth's Systems</b></p> <p>2) Develop and use models to predict weather and identify patterns in spring, summer, autumn, and winter</p> <p><b>COMPONENT IDEA:</b><br/>D. Weather and Climate</p> <p><b>K.ETS2: Links Among Engineering, Technology, Science, and Society</b></p> <p>1) Use appropriate tools (magnifying glass, rain gauge, basic balance scale) to make observations and answer testable scientific questions.</p> | <ul style="list-style-type: none"> <li>- Migrate</li> <li>- Hibernate</li> <li>- Gather</li> <li>- Bury</li> <li>- Store</li> <li>- Tunnel</li> <li>- Spread</li> <li>- Discover</li> </ul> | <p><b>EXPLANATION:</b></p> <p>Students are introduced to weather patterns that accompany the changing seasons. At this grade, students are not expected to fully grasp that time can be considered at different scales (e.g., a number of days makes up a season). Instead, students should focus on making comparisons of weather at different times throughout the year. An example may include constructing a class chart to discuss seasons and the different weather that happens in each.</p> | <p><b>McGraw-Hill (2002):</b><br/><b>Unit Theme-Weather and Seasons:</b><br/>pp. 154-189</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-winter.html">http://bcs-r2br.weebly.com/k-winter.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/><b>Scale, Proportion, and Quantity</b> <i>Students make comparisons using relative scales. (e.g., bigger or smaller, closer or further, sooner or later)</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/><b>Developing and using models</b> <i>Students make drawings, displays, and simple representations for events they experience through their senses, incorporating relative scales when appropriate.</i></p> <p><b>Next Generation Science Standard Practices</b></p> <ol style="list-style-type: none"> <li>1. Asking questions and defining problems</li> <li>2. Developing and using models</li> <li>3. Planning and carrying out investigation</li> <li>8. Obtaining, Evaluating, and Communicating Information</li> </ol> <p><b>Mathematics</b></p> <p>K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference.</p> <p>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p> <p>MP3 Construct viable arguments and critique the reasoning of others.</p> <p><b>English/Language Arts</b></p> <p>RI.K.1 With prompting and support, ask and answer questions about key details in a text.</p> <p>RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.</p> <p>RI.K.9 With prompting and support, identify basic similarities in and differences between two texts on the same topic</p> <p>SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.</p> <p>W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p> |
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Week 3 Martin Luther King, Jr. , SS Week 21 Let's Celebrate

Week 4 America the Beautiful, A is for America, SS Week 23 American Monuments

Week 5 A is for America, The Scrambled States of America, SS Week 8 Famous People of TN, SS Week 19 Tennessee: My State Home

Week 6 Celebrating Presidents' Day, SS Week 22 Presidents & Patriots

Week 7 My Teacher for President, SS Week 16 Good Citizens

Week 8 [Weather Forecasting](#), SS Week 15 Weather

**DCI:ESS3: Earth and Human Activity**

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| <p><b>K.ESS3: Earth and Human Activity</b></p> <p>(2) Explain the purpose of weather forecasting to prepare for, and respond to, severe weather in Tennessee.</p> <p><b>COMPONENT IDEA:</b><br/>B. Natural Hazards</p> |  | <p><b>EXPLANATION:</b> Severe weather is a phenomenon that can adversely affect, yet is largely beyond the control of, humans. Because of its geographic location, there are certain types of severe weather that might directly affect Tennessee, while others may not occur. As with other natural hazards, understanding severe weather can help alleviate damages and losses associated with severe weather. Weather forecasting can help make short-term preparations, or long-term construction decisions to minimize effects</p> | <p><b>McGraw-Hill (2002)</b><br/><b>Unit Theme-Weather and Seasons:</b> pp. 170-171<br/><b>Unit Theme—Learn About Your World:</b> pp. 6</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-weather.html">http://bcs-r2br.weebly.com/k-weather.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/><b>Stability and Change</b><br/><i>Students begin to question causes for stability and change and why some systems do not change.</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/><b>Developing and using models</b> <i>Students make drawings, displays, and simple representations for events they experience through their senses, incorporating relative scales when appropriate.</i></p> <p><b>Next Generation Science Standard Practices</b><br/>1. Asking questions and defining problems<br/>3. Planning and carrying out investigation<br/>8. Obtaining, Evaluating, and Communicating Information</p> <p><b>Mathematics</b><br/>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.<br/>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.1<br/>MP3 Construct viable arguments and critique the reasoning of others.</p> <p><b>English/Language Arts</b><br/>RI.K.2 With prompting and support, identify the main topic and retell key details of a text.<br/>SL.K.2 Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.<br/>SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.<br/>W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p> |
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Week 9 [Clouds](#)

**DCI:ESS2: Earth’s Systems**

# Kindergarten Grade Science Curriculum Guide

Bartlett City Schools (May 2018)

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| <p><b>K.ESS2.1 Earth's Systems</b><br/>         (1) Analyze and interpret weather data (precipitation, wind, temperature, cloud cover) to describe weather patterns that occur over time (hourly, daily) using simple graphs, pictorial weather symbols, and tools (thermometer, rain gauge).</p> <p><b>COMPONENT IDEA:</b><br/>         D. Weather and Climate</p> |  | <p><b>EXPLANATION:</b> The focus of kindergarten investigations into weather is to begin to allow students to see that there are changes in the weather and there are patterns within these changes. The patterns should also include phenomena which are concurrent (e.g., The temperature drops when there is cloud cover, or it is very windy before a large temperature change.) The focus at this grade level is on gathering information and recognizing the patterns. These discussions set the foundation for later grades where students will investigate the underlying cause and effect relationships for these patterns as well as be able to differentiate weather from climate. Examples may include analyzing weather data over a period of time and making a class chart to illustrate findings. <i>(Students are not required to make readings. Students should be able to make comparisons of two thermometers: The higher the mercury rises, the greater the temperature.)</i></p> | <p><b>McGraw-Hill (2002)</b><br/> <b>Unit Theme-Weather and Seasons:</b><br/>         pp. 170-171<br/> <b>Unit Theme—Learn About Your World:</b> pp. 6</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-weather.html">http://bcs-r2br.weebly.com/k-weather.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/> <b>Pattern</b><br/> <i>Students recognize, classify, and record the patterns they observe in nature or man-made objects.</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/> <b>Using mathematics and computational thinking</b><br/> <i>Students recognize patterns and make comparisons using counting and number lines.</i></p> <p><b>Next Generation Science Standard Practices</b><br/>         1. Asking questions and defining problems<br/>         3. Planning and carrying out investigation<br/>         8. Obtaining, Evaluating, and Communicating Information</p> <p><b>Mathematics</b><br/>         K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.<br/>         K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.1<br/>         MP3 Construct viable arguments and critique the reasoning of others.</p> <p><b>English/Language Arts</b><br/>         RI.K.2 With prompting and support, identify the main topic and retell key details of a text.<br/>         SL.K.2 Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.<br/>         SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.<br/>         W.K.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.</p> |
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**Fourth Nine Weeks**

| TN State Standards (Next Generation) | Vocabulary | Objectives/Learning Targets | Instructional Resources | Crosscutting Concept and Science and Engineering Principles |
|--------------------------------------|------------|-----------------------------|-------------------------|---|
| Week 1 <a href="#">The Tiny Seed</a> |            |                             |                         |   |

**DCI:LS1: From Molecules to Organisms: Structures and Processes**

**DCI:LS3: Heredity Inheritance and Variation of Traits**

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| <p><b>K.LS1: From Molecules to Organisms: Structures and Processes</b><br/>         1) Use information from observations to identify differences between plants and animals (locomotion, obtainment of food, and take in air/gasses).</p> <p><b>K.LS3.1: Heredity: Inheritance and Variation of Traits</b><br/>         1) Make observations to describe that young plants and animals resemble their parents</p> <p><b>COMPONENT IDEA:</b><br/>         A. Structure and Function<br/>         A. Inheritance of Traits</p> | <ul style="list-style-type: none"> <li>- Spring</li> <li>- Winter</li> <li>- Autumn (fall)</li> <li>- Summer</li> <li>- Drifts</li> <li>- Weed</li> <li>- Petals</li> <li>- Seed pod</li> </ul> | <p><b>EXPLANATION:</b> This standard provides an opportunity for students to begin to compile observations that living organisms resemble their parents. It is important to note that the offspring will not look identical to their parents, but will have similarities. Observations might resemble comparisons of different leaf arrangements in species of beech tree vs walnut tree or similar activities in which student look for small differences in otherwise similar organisms. Gene expression and mechanisms for passing DNA from parent to offspring are not discussed until middle school, these early observations can compel students to search for explanations as their content knowledge increases.</p> | <p><b>McGraw Hill (2002)</b><br/> <b>Unit Theme—Learn about Plants:</b> pp. 58-69<br/> <b>Unit Theme—Learning about Animals:</b> pp.96-107</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-seeds.html">http://bcs-r2br.weebly.com/k-seeds.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/> <b>Structure and Function</b><br/> <i>Students investigate how the roles of specific components of a system affect the functioning of the larger system.</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/> <b>Engaging in argument from evidence</b> <i>Students create and identify evidence-based arguments and consider degree to which an argument is supported by evidence.</i></p> <p><b>Next Generation Science Standard Practices</b><br/>         1. Asking questions and defining problems<br/>         2. Developing and using models<br/>         3. Planning and carrying out investigation<br/>         4. Analyzing and Interpreting Data<br/>         8. Obtaining, Evaluating, and Communicating Information</p> <p><b>Mathematics</b><br/>         K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i><br/>         K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p> <p><b>English/Language Arts</b><br/>         RI.K.1 With prompting and support, ask and answer questions about key details in a text.<br/>         SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</p> |
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**Week 2 [Tops and Bottoms](#)**

**DCI:LS1: From Molecules to Organisms: Structures and Processes**

**DCI:LS3: Heredity Inheritance and Variation of Traits**

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| <p><b>K.LS1: From Molecules to Organisms: Structures and Processes</b><br/>           1) Use information from observations to identify differences between plants and animals (locomotion, obtainment of food, and take in air/gasses).<br/> <b>K.LS3.1: Heredity: Inheritance and Variation of Traits</b><br/>           1) Make observations to describe that young plants and animals resemble their parents</p> <p><b>COMPONENT IDEA:</b><br/>           A. Structure and Function<br/>           A. Inheritance of Traits</p> | <ul style="list-style-type: none"> <li>- hare</li> <li>- clever</li> <li>- tortoise</li> <li>- field</li> <li>- plant (verb)</li> <li>- harvest</li> <li>- profit</li> <li>- trick</li> <li>- gather</li> </ul> | <p><b>EXPLANATION:</b> Students should begin to consider the external features of living organisms. The purpose of this standard is to emphasize that all living organisms have external structures that aid in processes such as seeing, hearing, moving, grasping, providing protection, and locating and taking in food, water, and air. Students should be led to patterns such as: plants are often anchored to the ground while animals are free to move, plants are able to make their own food, or both plants and animals have external structures used in gas exchange.</p> | <p><b>McGraw-Hill (2002)</b><br/> <b>Unit Theme—Learn about Plants:</b> pp. 46-52<br/> <b>Unit Theme—Learning about Animals:</b> pp.78-81</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-seeds.html">http://bcs-r2br.weebly.com/k-seeds.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/> <b>Structure and Function</b><br/> <i>Students investigate how the roles of specific components of a system affect the functioning of the larger system.</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/> <b>Engaging in argument from evidence</b> <i>Students create and identify evidence-based arguments and consider degree to which an argument is supported by evidence.</i></p> <p><b>Next Generation Science Standard Practices</b><br/>           1. Asking questions (for science) and defining problems (for engineering)<br/>           2. Developing and using models<br/>           6. Constructing explanations (for science) and designing solutions (for engineering)<br/>           8. Obtaining, evaluating, and communicating information</p> <p><b>Mathematics</b><br/>           K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i><br/>           MP.7 Look for and make use of structure</p> <p><b>English/Language Arts</b><br/>           RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.<br/>           SL.K.1a Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).<br/>           SL.K.1b Continue a conversation through multiple exchanges.<br/>           SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood<br/>           SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.</p> |
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Week 3 [Change It](#)

**DCI:PS1: Matter and Its Interactions**

|  |   |   |  |  |
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| <p><b>K.PS1: Matter and Its Interactions</b></p> <p>1) Plan and conduct an investigation to describe and classify different kinds of materials including wood, plastic, metal, cloth, and paper by their observable properties (color, texture, hardness, and flexibility and whether they are natural or human-made.</p> <p>2) Conduct investigations to understand that matter can exist in different states (solid and liquid) and has properties that can be observed and tested. 3) Construct an evidence-based account of how an object made of a small set of pieces (blocks, snap cubes) can be disassembled and made into a new object.</p> <p><b>COMPONENT IDEA:</b><br/>A. Structure and Properties of Matter</p> | <ul style="list-style-type: none"> <li>- Matter</li> <li>- Gas</li> <li>- flow</li> <li>- Liquid</li> <li>- pour</li> <li>- Solid</li> <li>- Shape</li> <li>- Container</li> <li>- space</li> </ul> | <p><b>EXPLANATION:</b> Students can make observations of different materials in groups, utilizing a graphic organizer to track and organize their observations. Being able to describe materials based on physical properties allows students to make determinations about appropriate uses for materials, as well as consider whether. In later grades, students can use such records of the initial physical properties of a material to determine whether or not a chemical reaction has occurred. Care should be taken that the objects selected for grouping permit a wide variety of groupings. For example, some groups may form groupings based on color, others by texture, size, or even smell. Evidence collected during the investigation should allow students to answer the question about whether a material is man-made or naturally occurring. <i>(Making measurements is not a grade-appropriate skill. Discussion of size should be relative comparisons of size.)</i></p> | <p><b>McGraw-Hill (2002)</b><br/><b>Unit Theme-Learn About Your World:</b> pp. 2-19</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-states-of-matter.html">http://bcs-r2br.weebly.com/k-states-of-matter.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/><b>Structure and Function</b><br/><i>Students begin to track and describe changes in a system using relative scales</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/><b>Planning and carrying out controlled investigations</b><br/><i>Students carry out investigations in groups, making decisions about suitable measurements for data collection in order to answer a question.</i></p> <p><b>Next Generation Science Standard Practices</b></p> <ol style="list-style-type: none"> <li>1. Asking questions (for science) and defining problems (for engineering)</li> <li>3. Planning and carrying out investigations</li> <li>6. Constructing explanations (for science) and designing solutions (for engineering)</li> <li>7. Engaging in argument from evidence</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol> <p><b>Mathematics</b></p> <p>K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p> <p>MP5 Use appropriate tools strategically.</p> <p><b>English/Language Arts</b></p> <p>RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.</p> <p>RI.K.9 With prompting and support, identify basic similarities in and differences between two texts on the same topic</p> <p>SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</p> <p>W.K.5 With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed</p> |
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Week 4 [Discovery Education: Videos on Matter](#)

**DCI:PS1: Matter and Its Interactions**

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|---|---|---|--|---|
| <p><b>K.PS1: Matter and Its Interactions</b></p> <p>1) Plan and conduct an investigation to describe and classify different kinds of materials including wood, plastic, metal, cloth, and paper by their observable properties (color, texture, hardness, and flexibility and whether they are natural or human-made.</p> <p>2) Conduct investigations to understand that matter can exist in different states (solid and liquid) and has properties that can be observed and tested.</p> <p>3) Construct an evidence-based account of how an object made of a small set of pieces (blocks, snap cubes) can be disassembled and made into a new object.</p> <p><b>COMPONENT IDEA:</b><br/>A. Structure and Properties of Matter</p> | <ul style="list-style-type: none"> <li>- Matter</li> <li>- Gas</li> <li>- flow</li> <li>- Liquid</li> <li>- pour</li> <li>- Solid</li> <li>- Shape</li> <li>- Container</li> <li>- space</li> </ul> | <p><b>EXPLANATION:</b> Students can make observations of different materials in groups, utilizing a graphic organizer to track and organize their observations. Being able to describe materials based on physical properties allows students to make determinations about appropriate uses for materials, as well as consider whether. In later grades, students can use such records of the initial physical properties of a material to determine whether or not a chemical reaction has occurred. Care should be taken that the objects selected for grouping permit a wide variety of groupings. For example, some groups may form groupings based on color, others by texture, size, or even smell. Evidence collected during the investigation should allow students to answer the question about whether a material is man-made or naturally occurring. <i>(Making measurements is not a grade-appropriate skill. Discussion of size should be relative comparisons of size.)</i></p> | <p><b>McGraw-Hill (2002)</b><br/><b>Unit Theme-Learn About Your World:</b> pp. 2-19</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-states-of-matter.html">http://bcs-r2br.weebly.com/k-states-of-matter.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/><b>Structure and Function</b><br/><i>Students begin to track and describe changes in a system using relative scales</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/><b>Planning and carrying out controlled investigations</b><br/><i>Students carry out investigations in groups, making decisions about suitable measurements for data collection in order to answer a question.</i></p> <p><b>Next Generation Science Standard Practices</b></p> <ol style="list-style-type: none"> <li>1. Asking questions (for science) and defining problems (for engineering)</li> <li>3. Planning and carrying out investigations</li> <li>6. Constructing explanations (for science) and designing solutions (for engineering)</li> <li>7. Engaging in argument from evidence</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol> <p><b>Mathematics</b></p> <p>K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p> <p>MP5 Use appropriate tools strategically.</p> <p><b>English/Language Arts</b></p> <p>RI.K.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.</p> <p>RI.K.9 With prompting and support, identify basic similarities in and differences between two texts on the same topic</p> <p>SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</p> <p>W.K.5 With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.</p> |
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Week 5 [Home for a Tiger, Home for a Bear](#)

**DCI:ESS3: Earth and Human Activity**

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|---|--|---|---|---|
| <p><b>K.ESS3:EarthandHuman Activity</b><br/>         (1) Use a model to represent the relationship between the basic needs (shelter,food, water) of different plants and animals (including humans) and the places they live.</p> <p><b>COMPONENT IDEA:</b><br/>         A. Natural Resources</p> |  | <p><b>EXPLANATION:</b> Organisms will live in places that give them access to the materials that are needed to meet their basic needs. Humans utilize natural resources in everything they do. This extends from common needs such as food and clothing to the complex devices such as computers that humans have developed. The focus of this standard is only on basic needs for survival, not modern conveniences. Examples of relationships may include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight, so they often grow in meadows. Plants, animals, and their surroundings make up a system. Humans use soil and water to grow food, wood to burn to provide heat or build shelters, and materials such as iron or copper extracted from Earth to make cooking pans. Life is far more abundant near water sources. Examples of humans using natural resources should be limited to processes where the resources are used in a nearly raw form. This standard might pair well with design challenges asking students to evaluate potential habitation sites.</p> | <p><b>McGraw Hill (2002)</b><br/> <b>Unit Theme—Learning about Animals:</b> pp.88-9, 94-95, 96-107</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-habitats.html">http://bcs-r2br.weebly.com/k-habitats.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/> <b>Cause and Effect</b><br/> <i>Students identify cause and effect relationships through observable patterns, utilizing simple tests to provide evidence that supports or refutes their ideas</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/> <b>Developing and using models</b> <i>Students make drawings, displays, and simple representations for events they experience through their senses, incorporating relative scales when appropriate</i></p> <p><b>Next Generation Science Standard Practices</b><br/>         1.Asking questions and defining problems<br/>         2.Developing and using models<br/>         3.Planning and carrying out investigation<br/>         4.Analyzing and Interpreting Data<br/>         8. Obtaining, Evaluating, and Communicating Information</p> <p><b>Mathematics</b><br/>         K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i><br/>         K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p> <p><b>English/Language Arts</b><br/>         RI.K.1 With prompting and support, ask and answer questions about key details in a text.<br/>         SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</p> |
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Week 6 [Here is the African Savanna](#)

**DCI:ESS3: Earth and Human Activity**

# Kindergarten Grade Science Curriculum Guide

Bartlett City Schools (May 2018)

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| <p><b>K.ESS3:EarthandHuman Activity</b><br/>         (1) Use a model to represent the relationship between the basic needs (shelter,food, water) of different plants and animals (including humans) and the placethey live.</p> <p><b>COMPONENT IDEA:</b><br/>         A. Natural Resources</p> |  | <p><b>EXPLANATION:</b> Organisms will live in places that give them access to the materials that are needed to meet their basic needs. Humans utilize natural resources in everything they do. This extends from common needs such as food and clothing to the complex devices such as computers that humans have developed. The focus of this standard is only on basic needs for survival, not modern conveniences. Examples of relationships may include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight, so they often grow in meadows. Plants, animals, and their surroundings make up a system. Humans use soil and water to grow food, wood to burn to provide heat or build shelters, and materials such as iron or copper extracted from Earth to make cooking pans. Life is far more abundant near water sources. Examples of humans using natural resources should be limited to processes where the resources are used in a nearly raw form. This standard might pair well with design challenges asking students to evaluate potential habitation sites.</p> | <p><b>McGraw Hill (2002)</b><br/> <b>Unit Theme—Learning about Animals:</b> pp.88-9, 94-95, 96-107</p> <p>Click on Title to see lesson plans and resources on Read 2 Be Ready page or type in link below</p> <p><a href="http://bcs-r2br.weebly.com/k-habitats.html">http://bcs-r2br.weebly.com/k-habitats.html</a></p> | <p><b>CROSSCUTTING CONCEPT:</b><br/> <b>Cause and Effect</b><br/> <i>Students identify cause and effect relationships through observable patterns, utilizing simple tests to provide evidence that supports or refutes their ideas</i></p> <p><b>SCIENCE AND ENGINEERING PRINCIPLE:</b><br/> <b>Developing and using models</b> <i>Students make drawings, displays, and simple representations for events they experience through their senses, incorporating relative scales when appropriate</i></p> <p><b>Next Generation Science Standard Practices</b><br/>         1.Asking questions and defining problems<br/>         2.Developing and using models<br/>         3.Planning and carrying out investigation<br/>         4.Analyzing and Interpreting Data<br/>         8. Obtaining, Evaluating, and Communicating Information</p> <p><b>Mathematics</b><br/>         K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i><br/>         K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p> <p><b>English/Language Arts</b><br/>         RI.K.1 With prompting and support, ask and answer questions about key details in a text.<br/>         SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</p> |
| <p>Week 7 As the Crow Flies, SS Week 9 Where Do You Live?, SS Week 13 Maps and Globes, Which Way?</p>   |  |   |   |   |
| <p>Week 8 As the Crow Flies, SS Week 17 Maps and Globes, SS Week 18 Which Way?</p>  |  |   |   |   |
| <p>Week 9 (Independence Day-ReadWorks) Summer Weather and Summer Safety</p>   |  |   |   |   |
| <p>Week 10 SS Week 24 Celebrate America</p>   |  |   |   |   |

- The following standards are used throughout each science topic.
  - K.ETS1.1 – Ask and answer questions about the scientific world and gather information using the senses
  - K.ETS1.2 – Describe objects accurately by drawing and/or labeling pictures.

# Kindergarten Grade Science Curriculum Guide

Bartlett City Schools (May 2018)

- The explanations for each:
  - K.ETS.1.1 - **EXPLANATION:** Engineering leads to improvements in our daily lives and begins with the recognition of situations to be improved. Students should begin to explore how the observations they make can be helpful in thinking about design problems. In later grades, students will learn how to combine these observations in order to define problems which can be resolved through engineering.
  - K.ETS.1.2 - **EXPLANATION:** In early stages, the design process involves actively developing solutions in brainstorming sessions. To participate in collaborative settings, students must be able to make a physical representation of their ideas early in the design process in order to receive feedback from others. In later grades, students will transition from such preliminary drawings to the creation of detailed models and prototypes. The process of labeling such images allows students to recognize that their device consists of a number of smaller parts whose interactions must be considered and planned.
- The crosscutting concept for each:
  - K.ETS1.1 - **Systems and System Models** Students identify and describe parts and their roles in the inner workings as part of a larger system/object.
  - K.ETS1.2 - **Systems and System Models** Students identify and describe parts and their roles in the inner workings as part of a larger system/object.
- The Science and Engineering Principle for each:
  - K.ETS1.1 - **Developing and using models** Students make drawings, displays, and simple representations for events they experience through their senses, incorporating relative scales when appropriate.
  - K.ETS1.2 - **Developing and using models** Students develop a model, plan, or drawing representing a device.