

# Ganado Unified School District (Science/Kindergarten)

## *PACING Guide SY 2019-2020*

1 <sup>st</sup> Quarter (July 31 – October 3, 2019)				
1 <sup>st</sup> Quarter (8 Performance Objectives)				
Strand 1: Inquiry Process, Strand 2: History and Nature of Science, Strand 3: Science in Personal and Social Perspectives, Strand 4: Life Science, Strand 5: Physical Science, Strand 6: Earth and Space Science				
Timeline & Resources	AZ College and Career Readiness Standard,	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
1 <sup>st</sup> Quarter (Integrated My Math)  Science Fusion  <b>Unit 10:</b> Motion Position  Lesson 29	<u>Strand 5: Physical Science</u> <u>Concept 1: Properties of Objects and Materials</u> <b>S5.C1.P01:</b> Identify the following observable properties of objects using the senses: <ul style="list-style-type: none"> <li>• Shape</li> <li>• Texture</li> <li>• Size</li> <li>• Color</li> </ul> (Geometry) <b>K.G.1</b> Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.)	<b>Lesson 29</b> <b>Where Things Are</b>	K.G.1 I can describe where objects are located. Students will use the words <i>above</i> and <i>below</i> to describe or place an object with respect to another object.	<b>Lesson 29</b> above below beside behind in front of left right in out



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	<p><i>Lesson 4</i> <i>Mathematical Practice</i></p> <ol style="list-style-type: none"> <li>1. <i>Make sense of problems and persevere in solving them.</i></li> <li>2. <i>Reason abstractly and quantitatively.</i></li> <li>4. <i>Model with mathematics</i></li> <li>5. <i>Use appropriate tools strategically.</i></li> <li>8. <i>Look for and express regularity in repeated reasoning.</i></li> </ol>			
<p><i>Science Fusion</i></p> <p><b>Unit 1:</b> <i>Doing Science</i></p> <p>Lessons 1 Lesson 2 Lesson 3</p>	<p><u>Strand 4: Life Science</u> <u>Concept 1: Characteristics of Organisms</u> <b>S4.C1.PO3:</b> Identify the five senses and their related body parts:</p> <ul style="list-style-type: none"> <li>• Sight – eyes</li> <li>• Hearing – ears</li> <li>• Smell – nose</li> <li>• Taste – tongue</li> <li>• Touch – skin</li> </ul>	<p><b>Lesson 1</b> How do we use our senses?</p> 	<p>Identify and describe the five senses.</p> <p>Use the five senses to observe and learn about the world.</p> <p>Identify the sensory organ associated with each sense.</p> <p>Observe many properties of one thing.</p>	<p>touch smell hear see taste</p>



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	<p><i>Strand 1: Inquiry Process</i>  <i>Concept 3: Analysis and Conclusions</i>  <b>S1.C3.P01:</b> Organize (e.g., compare, classify, and sequence) objects, organisms, and events according to various characteristics.</p>	<p><b>Lesson 2</b>          How do we use science skills?</p>  <p><b>Lesson 3</b>          How do we use science tools?</p> 	<p>Observe and describe things.</p> <p>Pose questions about things and surroundings.</p> <p>Identify science processes.</p> <p>Demonstrate how science process can be used to describe things and investigate questions.</p> <p>Identify science tools.</p> <p>Recognize how science tools help in investigations.</p> <p>Use a hand lens, a measuring cup, a thermometer, a balance, and a ruler to help analyze things.</p> <p>Describe safe ways to conduct investigations.</p>	<p>observe          compare          measure          sort</p> <p>hand lens          thermometer          measuring cup          balance          ruler</p>
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<p><i>Science Fusion</i></p> <p><b>Unit 7:</b> <i>Weather and Seasons</i></p> <p>Lessons 20 Lesson 21 Lesson 22</p>	<p><i>Strand 6: Earth and Space Science</i> <i>Concept 3: Changes in the Earth and Sky</i></p> <p><b>S6.C3.P01:</b> Identify the following aspects of weather:</p> <ul style="list-style-type: none"> <li>• Temperature</li> <li>• Wind</li> <li>• Precipitation</li> <li>• Storms</li> </ul> <p><b>S6.C3.P02:</b> Describe observable changes in weather.</p> <p><b>S6.C3.P03:</b> Give examples of how the weather affects people's daily activities.</p>	<p><b>Lesson 20</b> <b>What is Weather?</b></p>  <p><b>Lesson 21</b> <b>How Can We Measure Weather?</b></p>  <p><b>Lesson 22</b> <b>What Are the Seasons?</b></p>	<p><b>Lesson 20</b> weather sunny snowy rainy cloudy windy</p> <p>thermometer windsock high temperature low temperature</p> <p>spring summer fall winter</p>
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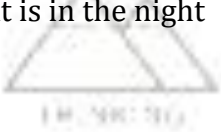
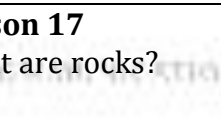
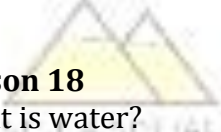
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<b>2<sup>nd</sup> Quarter (October 8 – December 20, 2019)</b>				
<b>2<sup>nd</sup> Quarter (8 Performance Objectives)</b>				
<b>Strand 1:</b> Inquiry Process, <b>Strand 2:</b> History and Nature of Science, <b>Strand 3:</b> Science in Personal and Social Perspectives, <b>Strand 4:</b> Life Science, <b>Strand 5:</b> Physical Science, <b>Strand 6:</b> Earth and Space Science				
Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
<p><i>Science Fusion</i></p> <p><b>Unit 5:</b> <i>Day and Night</i></p> <p>Lessons 15 Lesson 16</p>	<p><u><i>Strand 6: Earth and Space Science</i></u> <u><i>Concept 2: Objects in the Sky</i></u> <b>S6. C3. PO.1.</b> Identify the following aspects of weather.</p> <ul style="list-style-type: none"> <li>• Temperature</li> <li>• Wind</li> <li>• Precipitation</li> <li>• Storms</li> </ul> <p><b>S6. C3. PO.2.</b> Describe observable changes in weather.</p> <p><b>S6. C3. PO.3.</b> Give examples of how the weather affects people’s daily activities.</p>	<p><b>Lesson 15</b> What is in the day sky?</p>	<p>Observe and describe what the sky looks like during the day.</p> <p>Recognize that the sun can only be seen in the daytime.</p> <p>Recognize that things are pulled toward the ground unless something holds them up.</p> <p>Observe that the occurrence of night and day is a repeating pattern.</p> <p>Observe that things can be big and things can be small as seen from Earth.</p>	<p>clouds sky sun</p>

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		<p><b>Lesson 16</b> What is in the night sky?</p> 	<p>Describe the night sky.</p> <p>Identify objects in the night sky.</p> <p>Observe that moon can be seen at night and sometimes during the day.</p>	<p>stars moon</p>
<p><i>Science Fusion</i></p> <p><b>Unit 6:</b> <i>Earth's Resources</i></p> <p>Lesson 17 Lesson 18 Lesson 19</p>	<p><u><i>Strand 6: Earth and Space Science</i></u> <b>S6. C1. PO.1.</b> Identify rocks, soil, and water as basic Earth materials.</p> <p><b>S6. C1. PO.2.</b> Compare physical properties (e.g., color texture, capacity to retain water) of basic Earth materials.</p>	<p><b>Lesson 17</b> What are rocks?</p>  <p><b>Lesson 18</b> What is water?</p> 	<p>Observe and describe rocks.</p> <p>Compare and sort rocks.</p> <p>Give examples of ways rocks are useful.</p> <p>Recognize that water is found in lakes, rivers, ponds, and oceans.</p> <p>Understand that rivers contain fresh water and oceans contain salt water.</p> <p>Describe the physical properties of water, including clarity and</p>	<p>rocks</p> <p>water</p>


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	<p><b>S6.C1.P03.</b> Classify a variety of objects as being natural or man-made.</p> <p><b>S6.C1.P04.</b> Identify ways some natural or man-made materials can be reused or recycled (e.g., efficient use of paper, recycle aluminum cans.)</p>	<p><b>Lesson 19</b> How do we use and conserve Natural Resources?</p>	<p>color.</p> <p>Identify some natural resources.</p> <p>Give examples of ways rocks, soil, and water are useful.</p> <p>Describe ways to dispose of natural resources and to conserve natural resources for future use.</p> <p>Explore that some materials can be used over and over again.</p> <p>Explain how to interact with the environment in ways that are respectful of it.</p>	<p>natural resources rock soil water</p>
<p><i>Science Fusion</i></p> <p><b>Unit 8:</b> <i>Matter</i></p> <p>Lessons 23,</p>		<p><b>Lesson 23</b> How do we describe and sort matter?</p>	<p>Identify matter as a solid, a liquid, or a gas.</p> <p>Observe and describe properties of objects.</p> <p>Compare and sort objects based</p>	<p>matter</p>

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<p>Lesson 24, Lesson 25</p>		<p><b>Lesson 24</b> How can we change matter?</p> <p><b>Lesson 25</b> How can heating and cooling change matter?</p>	<p>on observable properties.</p> <p>Describe how paper and clay can be changed.</p> <p>Recognize that the shape of materials can be changed by cutting, tearing, crumpling, smashing, or rolling.</p> <p>Recognize physical changes of matter.</p> <p>Observe, record, and discuss how matter can be changed by heating.</p> <p>Observe, record, and discuss how matter can be changed by cooling.</p>	<p>change</p> <p>heat cool</p>
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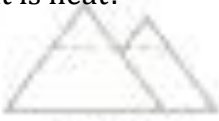
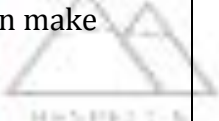


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<b>3<sup>rd</sup> Quarter (January 7 – March 13, 2020)</b>				
<b>3<sup>rd</sup> Quarter (8 Performance Objectives)</b>				
<b>Strand 1:</b> Inquiry Process, <b>Strand 2:</b> History and Nature of Science, <b>Strand 3:</b> Science in Personal and Social Perspectives, <b>Strand 4:</b> Life Science, <b>Strand 5:</b> Physical Science, <b>Strand 6:</b> Earth and Space Science				
<b>Timeline &amp; Resources</b>	<b>AZ College and Career Readiness Standard</b>	<b>Essential Question (HESS Matrix)</b>	<b>Learning Goal</b>	<b>Vocabulary (Content/Academic)</b>
<p><i>Science Fusion</i></p> <p><b>Unit 9:</b> <i>Energy</i></p> <p>Lesson 26 Lesson 27 Lesson 28</p>		<p><b>Lesson 26</b> What is sound?</p> <p><b>Lesson 27</b> What is light?</p>	<p>Observe that sounds is made when objects vibrate.</p> <p>Identify sounds and the sources of their vibrations.</p> <p>Compare sounds for loudness, pitch, and rhythm.</p> <p>Recognize the sun as Earth’s source of light.</p> <p>Identify human-made sources of light.</p> <p>Recognize how paper can be changed by exposure to sunlight.</p>	<p>sound vibrate</p> <p>light</p>

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		<p><b>Lesson 28</b> What is heat?</p> 	<p>Recognize the sun as Earth's source of heat.</p> <p>Recognize that sound, light, and heat are kinds of energy.</p>	<p>heat</p>
<p><i>Science Fusion</i></p> <p><b>Unit 10:</b> <i>Motion</i> Lesson 30 Lesson 31 Lesson 32</p>	<p><i>Strand 5: Physical Science</i> <b>S5. C3. PO.1.</b> Investigate how applied forces (push and pull) can make things move.</p>  <p><b>S5. C3. PO.2.</b> Investigate how forces can make things move without another thing touching them (e.g., magnets, static electricity).</p> <p><b>S5. C3. PO.3.</b> Sort materials according to whether they are or are not attracted by a magnet.</p>	<p><b>Lesson 30</b> <b>How Things Move</b></p>  <p><b>Lesson 31</b> How can we change the way things move?</p> 	<p>Identify push and pull as ways to move things.</p> <p>Observe that a push or a pull can change the way a thing is moving.</p> <p>Identify gravity as a force.</p>	<p>zigzag up and down round and round straight back and forth fast slow</p> <p>push pull</p>

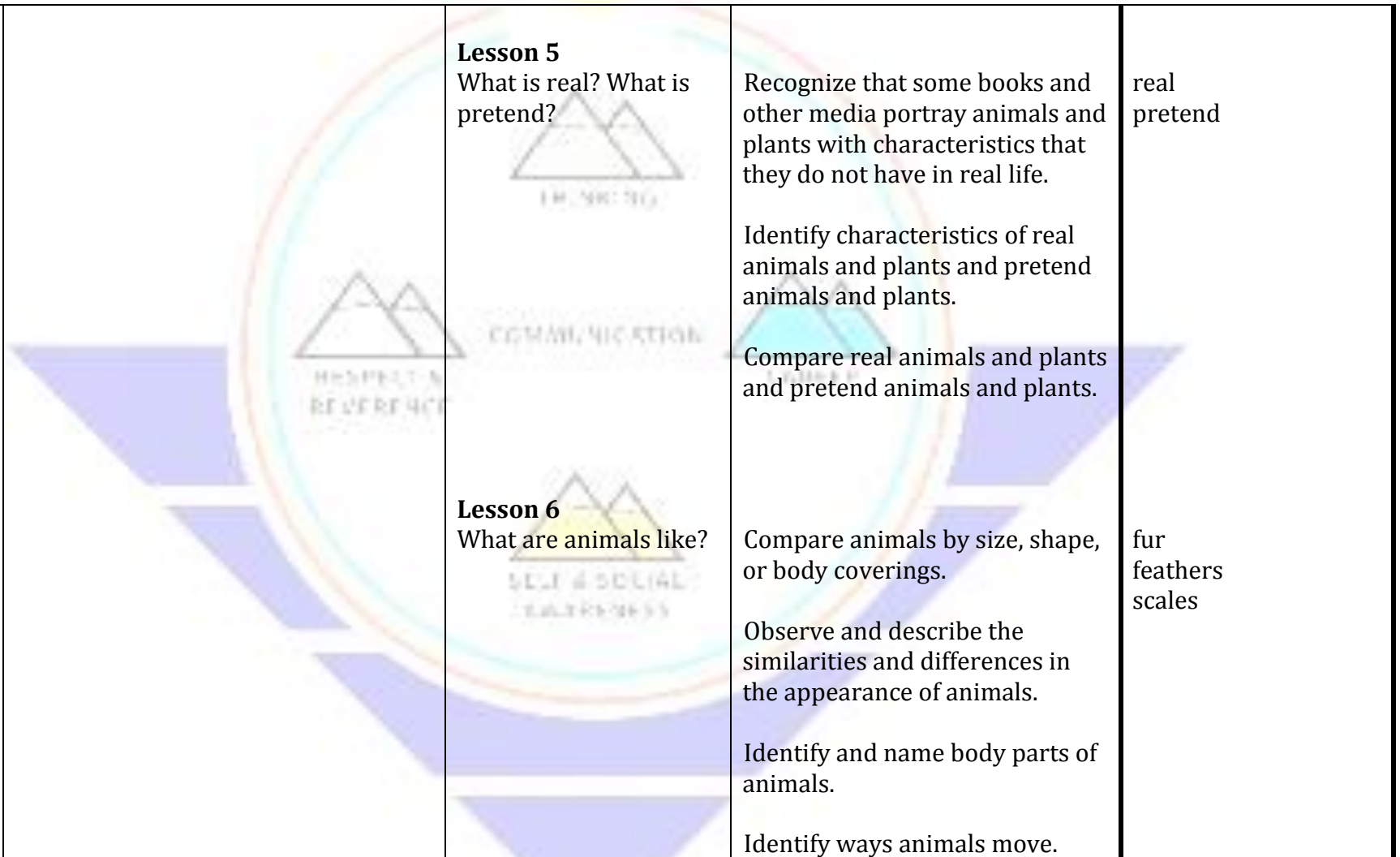
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	<p><b>S5. C3. PO.4.</b> Investigate familiar everyday uses of magnets (e.g., in toys, cabinet locks, decoration).</p>	<p><b>Lesson 32</b> Which objects do magnets attract?</p>	<p>Understand that gravity pulls things down to the ground.</p> <p>Observe and describe how magnets react to objects made of iron and steel.</p> <p>Sort objects according to whether or not a magnet attracts them.</p> <p>Observe that magnets can cause some objects to move without touching them.</p>	<p>magnets attract</p>
<p><i>Science Fusion</i></p> <p><b>Unit 2:</b> <i>Animals</i></p> <p>Lesson 4 Lesson 5</p>	<p><b>S4. C1. PO1.</b> Distinguish between living things and nonliving things.</p>	<p><b>Lesson 4</b> What are living things?</p>	<p>Classify things as living and nonliving.</p> <p>Describe characteristics of living things.</p> <p>Describe characteristics of nonliving things.</p> <p>Sort living and nonliving things.</p>	<p>living things nonliving things</p>




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Lesson 6		<p><b>Lesson 5</b> What is real? What is pretend?</p>  <p><b>Lesson 6</b> What are animals like?</p>	<p>Recognize that some books and other media portray animals and plants with characteristics that they do not have in real life.</p> <p>Identify characteristics of real animals and plants and pretend animals and plants.</p> <p>Compare real animals and plants and pretend animals and plants.</p> <p>Compare animals by size, shape, or body coverings.</p> <p>Observe and describe the similarities and differences in the appearance of animals.</p> <p>Identify and name body parts of animals.</p> <p>Identify ways animals move.</p>	<p>real pretend</p> <p>fur feathers scales</p>
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			<p>Observe and illustrate what an animal needs</p> 	
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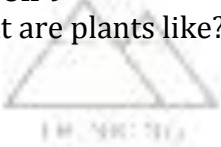

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4 <sup>th</sup> Quarter (March 23 – May 21, 2020)				
4 <sup>th</sup> Quarter (8 Performance Objectives)				
Strand 1: Inquiry Process, Strand 2: History and Nature of Science, Strand 3: Science in Personal and Social Perspectives, Strand 4: Life Science, Strand 5: Physical Science, Strand 6: Earth and Space Science				
Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
<p><i>Science Fusion</i></p> <p><b>Unit 2:</b> <i>Animals</i></p> <p>Lesson 7 Lesson 8</p>	<p><b>S4.C3.PO2.</b> Identify that plants and animals need the following to grow and survive:</p> <ul style="list-style-type: none"> <li>• Food</li> <li>• Water</li> <li>• Air</li> <li>• Space</li> </ul> <p><b>S4.C2.PO1</b> Describe that most plants and animals will grow to physically resemble their parents.</p>	<p><b>Lesson 7</b> What do animals need?</p> <p><b>Lesson 8</b> How do animals grow and change?</p>	<p>Describe animal's life cycle.</p> <p>Recognize that an animal's growth and change occur gradually.</p> <p>Recognize that some young animals look like their parents and some do not.</p>	<p>food air water shelter</p> <p>life cycle</p>


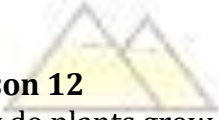
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			Sequence picture to show how animals grow and change.	
<p><i>Science Fusion</i></p> <p><b>Unit 3:</b> <i>Plants</i></p> <p>Lessons 9 Lesson 10 Lesson 11 Lesson 12</p>	<p><b>S4.C3.P01.</b> Identify some plants and animals that exist in the local environment.</p>	<p><b>Lesson 9</b> What are plants like?</p> 	<p>Identify trees, shrubs, and grasses as kinds of plants.</p> <p>Draw conclusions about kinds of plants.</p> <p>Observe and describe the sizes and shapes of plants.</p> <p>Sort plants into groups based on their physical characteristics.</p> <p>Examine variations among individuals of the same kind of plants.</p>	<p>tree shrub grass</p>
	<p><b>S4.C3.P02.</b> Identify that plants and animals need the following to grow and survive:</p> <ul style="list-style-type: none"> <li>• Food</li> <li>• Water</li> <li>• Air</li> <li>• Space</li> </ul>	<p><b>Lesson 10</b> What do plants need?</p> 	<p>Recognize that plants need water, air, light, soil and space to grow.</p> <p>Observe and compare the growth of plants.</p>	<p>light air soil space to grow water</p>

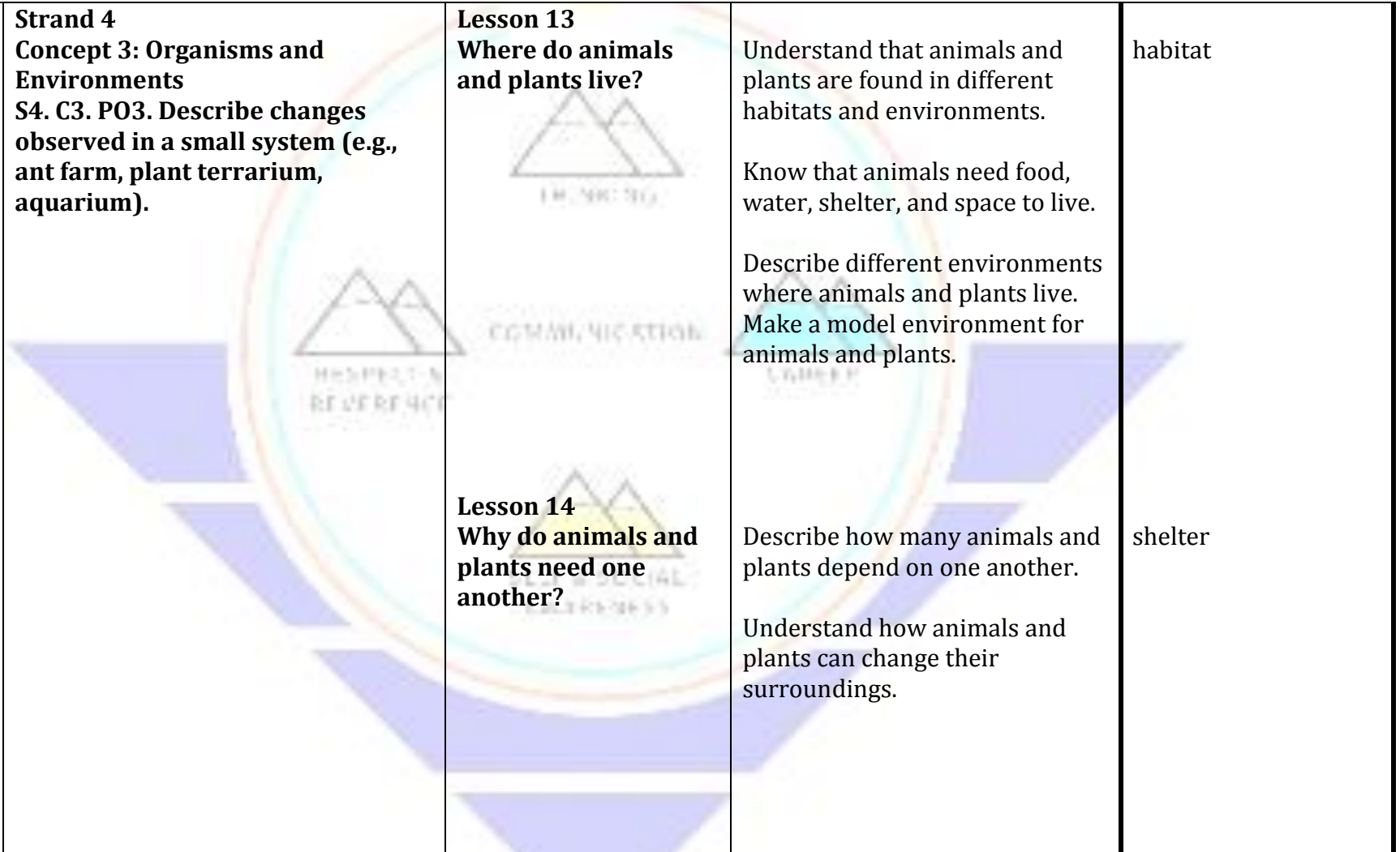
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	<p><b>S4.C2.PO1</b> Describe that most plants and animals will grow to physically resemble their parents.</p>	 <p><b>Lesson 11</b> What are some plant parts?</p>  <p><b>Lesson 12</b> How do plants grow and change?</p>	<p>Infer reasons why plants are healthy or not healthy.</p> <p>Predict the growth of a plant based on whether it is getting what it needs.</p> <p>Recognize that stems, roots, leaves, flowers, fruits, and seeds are parts of plants.</p> <p>Observe and identify the parts of a plant.</p> <p>Describe how plant parts help a plant live.</p> <p>Describe the sequence of stages in a plant's life cycle.</p> <p>Observe stages that are part of the life cycle of a plant: seed, seedlings, plant, flower, and fruit.</p> <p>Identify ways that young plants resemble their parent plants.</p>	<p>leaf fruit flower roots stem seeds</p> <p>flower seed sprout seedling adult</p>
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<p><i>Science Fusion</i></p> <p><b>Unit 4:</b> <i>Habitats</i></p> <p>Lesson 13 Lesson 14</p>	<p><b>Strand 4</b> <b>Concept 3: Organisms and Environments</b> <b>S4. C3. P03. Describe changes observed in a small system (e.g., ant farm, plant terrarium, aquarium).</b></p>	<p><b>Lesson 13</b> <b>Where do animals and plants live?</b></p>  <p><b>Lesson 14</b> <b>Why do animals and plants need one another?</b></p>	<p>Understand that animals and plants are found in different habitats and environments.</p> <p>Know that animals need food, water, shelter, and space to live.</p> <p>Describe different environments where animals and plants live. Make a model environment for animals and plants.</p> <p>Describe how many animals and plants depend on one another.</p> <p>Understand how animals and plants can change their surroundings.</p>	<p>habitat</p> <p>shelter</p>
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### **Strand 2: History and Nature of Science**

#### **Concept 2: Nature of Scientific Knowledge**

Understand how science is a process for generating knowledge.

No performance objectives at this grade level

### **Strand 3: Science in Personal and Social Perspectives**

#### **Concept 1: Changes in Environments**

Describe the interactions between human populations, natural hazards, and the environment.

No performance objectives at this grade level

### **Strand 4: Life Science**

#### **Concept 4: Diversity, Adaptation, and Behavior**

Identify plant and animal adaptations.

No performance objectives at this grade level

### **Strand 6: Earth and Space Science**

#### **Concept 2: Objects in the Sky**

Identify objects in the sky.

No performance objectives at this grade level