Marietta City Schools
2023-2024 District Unit Planner

First Grade: Q1

Topic Title:	*#3 Survival of Plants and Animals in a Habitat*	**Unit Duration**	*3 weeks*

Mastering content and skills through KNOWLEDGE-BUILDING (establishing the purpose of the unit):

What enduring understandings will students gain from this unit? Plants and animals who share the same habitat have some needs in common and some needs specific to themselves.

GSE Standards

ELA

ELAGSE1RL5 Explain major differences between texts that tell stories and texts that give information.

ELAGSE1RI2 Identify the main topic and retell key details of a text.

ELAGSE1RI3 Describe the connection between two individuals, events, ideas, or pieces of information in a text.

ELAGSE1RI6 Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

ELAGSE1RI7 Use illustrations and details in a text to describe its key ideas.

ELAGSE1L5 With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings.

Science

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals.

a. Develop models to identify the parts of a plant—root, stem, leaf, and flower.

b. Ask questions to compare and contrast the basic needs of plants (air, water, light, and nutrients) and animals (air, water, food, and shelter).

c. Design a solution to ensure that a plant or animal has all of its needs met.

Essential Questions

Factual—

What is a habitat?

What are an animal's basic needs?

What are a plant's basic needs?

Inferential—

Where do you find food, water, and shelter in your habitat?

Which plants and animals depend on each other the most?

How do people affect the habitats we live in?

Critical Thinking-

Why can't all animals live in all habitats?

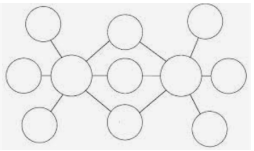
What would happen if a drought kept any rain from falling in a habitat for a long time?

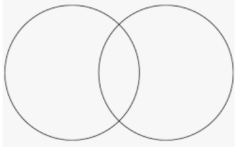
Tier II Words- High Frequency Multiple Meaning	**Tier III Words-** Subject/ Content Related Words
shelter, nutrients, survival, depend, rely	reproduce, interdependent, carnivore, herbivore

Assessments

Transfer of Integrated Skills:

- Compare Habitats
  1. Provide students with a Double Bubble Map or Venn Diagram and explain its use for comparing similarities and contrasting differences between objects or ideas.





  2. Differentiate task complexity by assigning students to either compare/contrast two animals discussed in this unit including how their needs are met in their habitats or compare/contrast their survival in their own habitat as people with the survival of an animal of their choice in another habitat.

  ELAGSE1RI2 Identify the main topic and retell key details of a text.
  ELAGSE1RI3 Describe the connection between two individuals, events, ideas, or pieces of information in a text.
  ELAGSE1RI7 Use illustrations and details in a text to describe its key ideas.

- District Mini Assessment: “My Dog Spot” and “Fruit Cycle”

  ELAGSE1RI2 Identify the main topic and retell key details of a text.
  ELAGSE1RI3 Describe the connection between two individuals, events, ideas, or pieces of information in a text.

Content-Specific GSE/Skills:

- Animals and People Constructed Response
- Habitats Constructed Response
- Basic Needs Constructed Response

Writing Task and Rubric:

Show What You Know

1. Allow each student to choose one animal and one plant from this unit that share the same habitat.
2. Have students create an illustration and description of the animal and plant in their habitat. The illustration and description should include:
   a. Names of animal, plant, and habitat of their choice
   b. Sources of food, water, and shelter

c. Any ways that the animal and plant interact with one another

ELAGSE1W5: With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.
ELAGSE1RI2 Identify the main topic and retell key details of a text.
ELAGSE1RI3 Describe the connection between two individuals, events, ideas, or pieces of information in a text.
ELAGSE1RI6 Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

	4	3	2	1
Animal and Plant	Includes additional animals or plants who share the same habitat	Includes an animal and plant who share a natural habitat	Includes either an animal or plant but not both	Does not include an animal or plant
Habitat	Depicts additional details about the chosen habitat	Depicts 3 basic needs (food, water, and shelter) in the habitat	Depicts 1 or 2 of the basic needs	Does not depict basic needs in habitat
Coherence	Illustration or text contains additional accurate information	Illustration and text match completely	Illustration and text have some contradictions	Illustration and text are incomplete or absent

Objective or Content	**Learning Experiences**	**Differentiation Considerations**
Daily Lessons for Text Comprehension	15 Day Plan: Survival of Animals of Plants and Animals in a Habitat	
Connected SS/Sci Experiences *(omit this row if KBU does not contain SS or Sci connections)*	***Exploration I*** In this activity, students will test how fresh air, a basic need of plants, can affect the overall health of a plant. **Materials Per pair or group:** • 2 seedlings • large, clear plastic bag • half-inch tubing, 8 inches • rubber stopper, half-inch • scissors	

	• tape • hand lens • science notebook **Per class:** • grow area with natural light • watering can • distilled water In this Hands-On Activity, students will test a plant's need for air. Students will set up an experiment with one plant covered so that it does not receive fresh air, and one plant uncovered so that it receives fresh air. Both plants should receive the same amount of water, sunlight, and be kept at the same room temperature. ***Communicating*** Throughout the activity encourage students to make observations using the hand lens. After introducing the activity, ask students what they already know about the needs of plants, and what scientists know about plants. Based on this information, what do they think will happen in their investigation? Divide students into pairs or groups. Discuss the purpose of the activity. Encourage students to come up with questions that they will be able to answer in the activity, and to ask questions as they make observations during the investigation. ***Evaluating*** Assess how well students develop their questions and guide students towards developing "testable questions". Each pair or group needs both control and experimental plants. Have students label each plant and then place the experimental plant into the plastic bag. Tie the plastic bag shut or seal it in another manner so that the plant does not receive fresh air. Remove as much air as possible before sealing the bag. Next, instruct students on how to install a watering tube for the experimental plant. Students should cut a small hole in the plastic bag near the bottom of the plant and the potting container. Show students that the	

	tube should be inserted through the hole and placed firmly into the potting soil. The edges of the hole in the plastic bag should be taped to the tubing. This will help prevent air from reaching the plant. Now, show students how to insert the rubber stopper into the tube. Try to remove as much air as possible before sealing the tube. Allow students to observe their plants for several days. Students should water both plants at the same time of day and with equal amounts of water. Remind students that the experimental plant should be watered through the plastic tube to minimize the amount of fresh air the plant is exposed to. Students should record observations in their science notebooks daily. Observations can include the overall condition of the plant, the color of the plant or the plant leaves, and the rigidity of the plant. Ask students to place a chart like the one below in their science notebook. Have students write and draw with color their daily observations in the chart. Instruct students to add labels to their drawings. Have students use a hand lens to make observations of the leaves and stems. Some changes to the leaves and stem may only be noticeable with a hand lens at the beginning of the experiment. ***Evaluating*** Sample observations chart, with a few sample observations: What happens if plants do not have fresh air?	

Day	Plant with Fresh Air	Plant with no Fresh Air
1	[leaves are green and strong] [drawing of healthy, green plant]	[leaves are green and strong] [drawing of healthy, green plant]
2		
3		
4		
5	[leaves are green, and look bigger, stem looks longer]	[leaves are weak and soft, plant looks unhealthy]
6		
7		

At the end of the experiment, ask students to write a paragraph or draw a diagram in their science notebooks about the basic needs of plants. Students should note how the experimental plant is meeting each of the basic needs and which basic need is being excluded. Have students share their conclusions with the class either as a presentation or by displaying their writing or diagrams in the classroom.

Exploration II

In this activity, students will look for different animals, determine their needs, and figure out how they meet those needs. They will use observations to describe patterns of what animals need to survive.

Materials List (per group)

- Hand lens
- Notebook or paper and clipboard
- Pencils

	To introduce the activity, provide time for students to describe animals that are local to your area. It may be necessary to remind them that insects are animals, too. They should come up with a list of animals that they might see in the park or the location you have chosen for this activity. If they have not used magnifying glasses before, it might be helpful to show them how to use them correctly. Part 1: Animals in the Park Prepare students to go outside, and walk to a nearby park or other area in nature, possibly on the school grounds. Review the buddy system so that everyone will remain safe. Remind students to take notes of what animals they see and draw them as they see them. Note that they will have to describe each animal's needs and how they meet those needs. Explain to students that they are here only to observe animals and that they should not disturb animals in their habitat. 1. Have students wander around the park in groups of two or three. 2. Have students take notes on any animal they see. 3. If students see animals eating or drinking, be sure that they describe what need that is and how it is being met. Part 2: Determining Needs and How They Are Met When you return to the classroom, divide students into small groups so that they can determine the needs of animals in general. Encourage them to use evidence from what they observed outside during the activity. Once they have determined the needs of animals in general, they should describe how each animal they saw met those needs. If the class did not see many animals, you may want students to consider animals that they did not see. Ask: What needs do all animals have? What special needs do some animals have? Do an animal's needs change during the year? Does their way of meeting those needs change throughout the year? ***Communicating*** 1. Describe what animals you saw. Student answers will vary, but should include insects and may include rabbits, deer, or other local fauna. 2. Draw a picture of each animal that you saw. Student answers will vary, but should include the body shape of the animal, its appendages, and its eyes and mouth if they're visible.	

Consider making a sample observations chart for the class, such as the following chart:
Sample Observations Chart: Animals and Their Needs

Animal	***Needs***	***How It Meets This Need***
Deer	*Water, food, ways to avoid predators, air*	*The deer drinks water from the pond in the park. It eats the leaves of trees and grasses. It avoids predators by running away. It can breathe air everywhere.*
Worm	*Water, food, ways to avoid predators, air*	*The worm gets water from the damp soil. It eats leaves and other plant matter in the soil. It avoids predators by burrowing into the soil. It breathes air by taking in air through its skin.*

Exploration III

In this activity, students will determine whether plants need soil to grow. They will do so by germinating bean seeds in wet paper towels, measuring the growth of these seeds, and comparing the results to the growth of a control seed germinated in soil. Alternatively, students can place lettuce or other plants in a cup of water alone, keeping track of the mass of plant material as it grows.

Materials List (per group)

- Plastic cup, 9 oz
- Soil, potting
- Paper towels
- Seeds, lima beans
- Plastic zipper bags
- Pen or marker
- Metric ruler
- Balance, triple beam

	• Lettuce or similar small plants (optional) • Water ***Communicating*** To introduce the activity, ask students what they think plants need to grow. (Answers should include water, soil, air, and sunlight.) Then, ask them if they think plants can grow without one of those things, and if so, what would it be. Ask students what the advantages and disadvantages of growing plants in water. Then, tell students that they will be testing this concept by germinating seeds both in and out of soil. After students have collected and analyzed the data, explain the concept of hydroponics, or growing plants in water. [Teacher's note: If necessary, explain that "germinating" means sprouting seeds.] Prepare the investigation by filling one cup with warm water and the other with potting soil, and distributing one cup of water and one cup of soil to each student, along with the other materials. 1. Have students use the water in the cup to wet the paper towel. Direct them to make sure the paper towel is thoroughly saturated with water, but is not dripping. 2. Have students place three of their bean seeds on the top half of the paper towel. Then,instruct them to fold the bottom half of the towel up so that it covers the beans. Have them place the paper towels inside the plastic zip bag and seal it. 3. Have students take the fourth bean seed and plant it in the cup of soil. Remind them to water the seed with some of their remaining water. Explain that this bean is their control, because it is planted in soil the way most plants are. If necessary, explain the concept of a control, and the importance of controls in scientific investigations. 4. Have students label their beans with their names, then place both the plastic zip bag and the soil cup in a place where they can get sunlight. Have students clean up any water and/or soil that may have spilled in their workplace. Tell students that they will be returning to the experiment each day to check on the seeds' progress. 5. Over the next several days, have students check the growth of their seeds. Instruct them to dampen the paper towel and water the soil. Remind them that it may take a few days for the seeds to germinate and that each seed will grow at its own rate. Instruct students to measure the growth of each seed and to write their measurements down, labeled by the date, and whether the seed being measured is germinating in the towel or in the soil cup.	

	6. Remind students about the advantages of growing plants in water. Ask students to think about what their experiments have shown about what plants need to grow. Do they think plants can be grown entirely without soil? How can the hydroponic system be used to grow plants successfully? Alternate Procedure 1. Have students obtain the mass of two lettuce plants and record their measurements. 2. Have students plant one lettuce plant in the soil cup and place the other lettuce plant in the cup of water. 3. Over the next several days, have students measure the mass of the plant material as it grows and the mass of the water they have added, labeled by the date. ***Evaluating*** 1. How much did the beans that were placed in the paper towels grow? How did they compare to the control bean planted in soil? Student answers will vary, but they should observe that the initial growth of the beans is similar to that of the control. 2. Did the growth of the beans, both in soil and in paper towels, match your hypothesis? If not, how was it different? Students may have hypothesized that the beans grown without soil would not grow as quickly as the control. 3. Based on your observations, do seeds need soil to grow? Can plants grow entirely without soil? If so, will they grow better in soil? Students should note that seeds can grow without soil as long as they have water and sun. They should also note that plants can grow without soil for a while, but eventually they either need soil or a replacement like a full hydroponic system that provides a source of nitrogen, phosphorus, and other essential elements.	
Connected Structured Literacy Activities	**Elkonin Boxes** are a great multisensory activity to improve phoneme segmenting abilities. Provide blocks or tokens. Have students move and say key words from books in this unit as they separate the tokens into little boxes--*shelter /sh/ /ĕ/ /l/ /t/ /er/* or *food /f/ ū/ /d/.* Listening to segment phonemes rather than decode or spell graphemes allows you to use words that involve letter sounds not already taught. **Concept Sort:** Create a set of index cards featuring key vocabulary from this unit along with a picture that represents the word. Collaboratively sort the words into categories that align with big ideas in this unit--mammals, birds, young animals, features, habitats, weather. **Performance Task:** Throughout this unit, students will encounter many different ways that animals look, move, eat, and	

<table>
<tr><td></td><td>communicate.
1. Have each student create a personal thesaurus to build an understanding of nuance between word meanings related to those categories. For example:
<table><tr><td>LOOK
furry, hairy, fuzzy, smooth</td><td>MOVE
walk, climb, lumber, dash</td></tr><tr><td>EAT
bite, gnaw, tear, chew</td><td>COMMUNICATE
bark, squawk, howl, chatter</td></tr></table>2. Keep the sentence frame “I can _____ like a ____.” posted throughout the unit. Whenever a student learns about an animal they find particularly interesting, allow them to act out on of the new vocabulary words related to that animal. But first they must introduce their action using the sentence frame.</td><td></td></tr>
<tr><td>Connected
Tier 1 Unit</td><td>CKLA Domain 8: Plants and Animals</td><td></td></tr>
<tr><td>Connected
Writing Activities</td><td>Focus skill: Sentence creation and expansion
● Topic Verb Finish (TVF)</td><td></td></tr>
<tr><td colspan="3">Additional Planning Resources</td></tr>
<tr><td colspan="3"><table><tr><td>MCS K-5 KBU Overview</td><td>KBU as a 15-day Plan (Template)</td><td>MCS Structured Literacy Repository</td><td>Berger Framework for Comprehension (Template)</td><td>The Writing Revolution (Templates)</td></tr></table></td></tr>
<tr><td colspan="3">Additional Instructional Resources</td></tr>
<tr><td colspan="3">Suggested High Quality Complex Texts

Suggested Experiential Resources</td></tr>
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