Course: Grade 3 science	Marking Period: 1A Structures of Life (SOL)	Lesson #5 - Ecosystem: Habitats for Living Things (3 Days)

Standard(s):
3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

***Objective(s):**
Day 1: Students will define ecosystem and the levels of organization in an ecosystem and begin naming the nonliving (abiotic) and the living (biotic) things found in an ecosystem.
Day 2: Students will create a visual representation (pyramid) showing the levels of an ecosystem.
Day 3: Students will write to explain the levels of an ecosystem and what effects may occur if the ecosystem was to change.

*** Target Text/Literacy Component:**

Planning/Preparation Notes:
The purpose of this lesson is to help students understand the interrelationships of animals/plants with components of their natural ecosystem. They are going to begin learning the levels of organization within an ecosystem. The word “trophic level” is never used, but that is what the levels of the pyramid are called. An ecosystem contains both the **BIOTIC** (living) and **ABIOTIC** (nonliving) items within it. Additionally this standard would like students

Living things or organisms inhabit areas on the earth called **habitats**, where food is available to them.

An **environment** is the surrounding area that an organism lives in, including the air, water, food and energy for that organism to survive.

An **ecosystem** is a whole working unit that includes an area's living organisms and nonliving environmental conditions, linked by nutrient and energy cycles.)

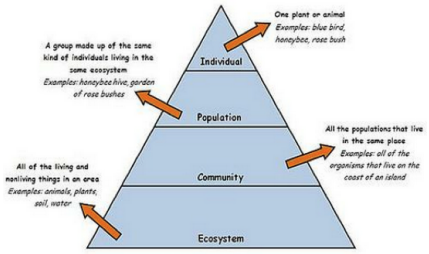
Humans can have a positive or negative impact on the environment, depending on our actions or lack of actions.

Resources/Materials:

- Gr3 MP1A Lesson 5 Google Slides
- Youtube video, Residents in North East evaluated from home mid following due to Tropical Storm, Isaias (2:09)
- Study Jams: Ecosystems video (2:52)
- Discovery Education Video: ***Ecosystems and Biomes*** (3:30)

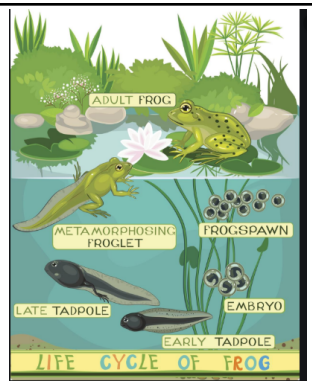
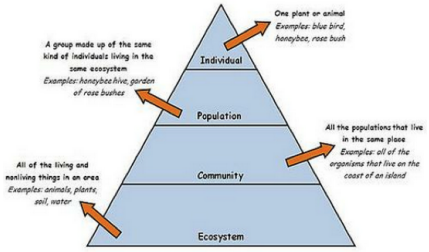
Instructional Sequence of Lesson

Time	*Activities	Instructional Considerations (*Enrichment/Extension Activities, Accommodations/Modifications, Differentiation Strategies, SDI*)	*Formative Assessment/ Check for Understandings
	Day 1 Objective: Students will define *ecosystem* and the levels of organization in an ecosystem and begin naming the nonliving (abiotic) and the living (biotic) things found in an ecosystem. Assessment: Create a pyramid showing the levels of organization within the ecosystem.		
5 min.	***Getting Started/Drill/Anticipatory Set (*Engage)** Can "things" still function when you remove a part? ● Think of an example of something that CAN function when a piece is removed. (Ex. remove a finger and a person can still bounce a basketball) ● Think of an example of something that CANNOT function when a piece is removed. (Ex. Car - remove a tire and it cannot move) Think-Pair-Share: You already know that this unit is about living things, called **organisms.** Organisms have a special job within their ecosystem. But before we can understand these jobs, we must answer an important question ---- **What is an ecosystem?**		Student answers

20-25 min	***Instruction: whole, group, individual*** **(Exploration)** 1. To introduce ecosystems, watch the following video. Video - What is an ecosystem? (2:48) As you watch, focus on these important vocabulary words and define them afterwards: · **Individual -** a single organism (ex. a cat) · **Population -** a group of the same organisms (ex. a cat population) · **Community -** different types of organisms found in the same location (ex. cat, dogs, birds, grass, trees, etc that all live in the same location) · **Ecosystem -** the living and nonliving parts that organisms live in 2. To allow the students flexibility, you can also have them dive into the Study Jams (as a class or on their own chromebook - easy to assign to students through Google Classroom) Ecosystems: StudyJams! Science | Scholastic.com ● have the students list the nonliving and the living things they find in the ecosystem from the Studyjams.		
5 min	***Closing Activity*** Have the students complete 1 of 2 tasks: 1. Have them complete the Study Jams mini-assessment 2. Have them complete the exit ticket of the levels of organization found within the ecosystem.	Student choice of closing activity	

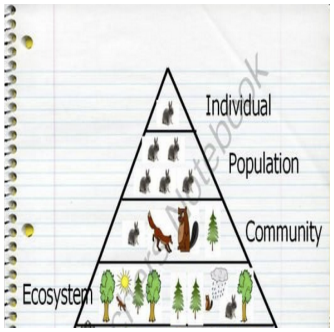
Day 2

Objective: Students will write to explain the levels of an ecosystem and what effects may occur if the ecosystem was to change.
Assessment:

5-7 min	***Getting Started/Drill/Anticipatory Set (*Engage)** Observe the classroom frog habitat, name all the living and nonliving things the frog is dependent upon for survival. Nonliving - Water, rocks Living - Tadpole As a class, discuss what other plants and animals could live along with the frog if it were living in the wild. Use the pyramid (from day 1 exit pass) to show the levels of organization within an ecosystem beginning with the frog as the individual. Individual: frog Population: many frogs Community: frog, grasshopper, lilypad Ecosystem: frog, grasshopper, lilypad, water, rock, sunlight (biotic & abiotic)	 	
20-25 min	***Instruction: whole, group, individual (*Explanation)** Present the What are Ecosystems Google Slides (slides 1-11) to explain that an **ecosystem** includes all of the living things (plants, animals and organisms) in a given area, interacting with each other, and also with their non-living environments (weather, earth, sun, soil, climate, atmosphere).		
10 min	***Closing Activity*** Have the students complete 1 of the 2 tasks: 1. If they did the study Jams - have them complete the quick assessment linked to Ecosystems. 2. Have them read the Nonfiction article - Mountain	Be sure to have an updated Flash Player if you do StudyJams.	Option 1 - answers to the Study Jam assessment Option 2 - there is a crossword puzzle

	Ecosystem		or reading guide linked to Mountain Ecosystem.
Objective: Assessment:	**Day 3**		
5-7 min	***Getting Started/Drill/Anticipatory Set*** Display slide 12: Explain that it can be helpful to imagine a pyramid like the one below. See how the pyramid gets larger as it gets closer to the bottom? This is similar to the size of each group. The **individual** is very small - just one living thing. The group gets larger when we look at the entire **population**, and even larger when we look at the **community** made up of all the living things that live in the same place. At the bottom, we see that the **ecosystem** is the largest group because it is made up of all the living and nonliving things in the area. In your Science Journal, use what you have learned in this section to describe in detail an ecosystem. You will begin with the individual and work your way down the pyramid giving examples of each of the parts.		
	Instruction: whole, group, individual **Elaboration** 1. Class Discussion - Ecosystems function as a unit and all pieces must work together in order for it to be successful. What happens if a piece of the ecosystem is removed? Using the types of ecosystems that you discussed yesterday, talk about what would happen if	Elaboration: If you do not do the Nonfiction reading - Mountain ecosystem for day 2 closing activity Students can read the non-fiction text, “Mountain Ecosystem” to learn more about a specific ecosystem. To check understanding, ask	

	different pieces of the ecosystem were to change or disappear? What may cause these different pieces to disappear? If students do not bring up natural disasters or human interactions, be sure to discuss it. 2. Students can explore changes in ecosystems by viewing the last slide on the PPT called *What are Ecosystems*. Students may also reference the Study Jams video clip to discover additional changes: Changes in Ecosystems: StudyJams! Science | Scholastic.com	students to complete the related questions.	
15 min.	***Closing Activity*** Create a poster that labels the levels of organization within an ecosystem. See sample below. Rubric: Total Points - 20 4 pts-correctly represent the four levels of organization within the ecosystem 4 pts-label each of the levels 8 pts-write a complete sentence that describes each of the four levels within the ecosystem. 4 pts - write a complete sentence describing what may happen if one of these pieces were to be changed or taken away	Outdoor Extension Opportunity	

***Lesson Evaluation:**

Were students able to identify the levels of the pyramid?

Did students understand that an ecosystem needs all of its parts, both biotic and abiotic, to be successful?

DId students understand that both natural and human interactions can affect an ecosystem?

- ★ *The template includes items listed as minimum requirements listed on Page 11, in Article 6.16.1.2 in the Negotiated Agreement Between The Board of Education of Cecil County and The Cecil County Classroom Teachers Association. This article states: *Plans shall specify the daily outcomes developed from indicators and/or objectives found in the Cecil County Public School approved curriculum, the instructional activities that shall bring these to fruition, and how student achievement of the daily outcomes shall be evaluated.*
- ★ *Refer to the Text Complexity Grade Bands and Associated Lexile Ranges table in the CCPS Lesson Planning Template Guiding Document for grade specific lexile ranges.*
- ★ *Every activity does not need an accompanying formative assessment.*