Name: _____ Class Period: _____

Ecology (Interactions of Life)

Start Date: April 10, 2017 End Date: April 28, 2017

DOK 1- Beginning Begin here if Pre-Assessment score is 79 or below.	DOK 2- Developing Begin here if Pre-Assessment score is 80 -99.	DOK 3- Proficient Begin here if Pre-Assessment score is 100.	DOK 4- Distinguished
Pre-Assessment (Place score at the bottom of the sheet) Self-Assess from the Pre-Assessment **Student notes for DOK 1:** ***Complete Must Do and then select either the Website task, notes from the powerpoints or create your own assignment. Be sure you take the vocabulary assessment and then conference with teacher before moving on to DOK 2.*** **MUST DO:** Flashcards for Interactions of Life (Share with Teacher) OR Vocabulary Foldable or TIP Chart **population, limiting factor, carrying capacity, extinction, competition, predator, prey, symbiosis, mutualism, commensalism, parasitism, community, ecosystem, biosphere, biome.**	**Element C - Must Do** Predation or Starvation Activity https://www.biologycorner.com/worksheets/predator_prey_graphing.html **Element C -** You may choose from these options. 1. Virtual Lab: Population Ecology https://www.biologycorner.com/worksheets/virtual_lab_population.html 2. Lesson of the Kaibab - https://www.biologycorner.com/worksheets/kaibab.html 3. Create your own assignment related to how populations change due to available resources. MUST be teacher approved.	**Choose A, B or C** **A**.You have just been hired by the Georgia Public Broadcasting System (GPBS) to work in the Early Education Science Department. Your job is to teach children about producers, consumers and decomposers. Think of several examples of each. Think about their relationships. Also, imagine the different types of symbiotic relationships. Using the examples, you came up with, create a cartoon story that explores the relationship between producers, consumers and decomposers. Make sure you include all 3 symbiotic relationships and predator/prey relationships. What is your interpretation of this cartoon? Support your rationale. **B.** It is important to introduce the idea of population change, there are many reasons for population change – limited resources, predator-prey cycles, human impact, habitat change – to name but a few. Students will graph population data and then use their graphs to evaluate one of the most famous examples of population change, the predator-prey population cycle of the snowshoe hare and the Canada lynx. The data is taken from the 300 year's worth of real data collected by trappers of the Hudson Bay Company. From the data make some hypotheses about what causes population change in the real world.	**Choose A or B** **A**. Research an organism that is on the endangered species list and identify the food it eats, identify another organism that eats it, gather data from the last 50 years about the organism's population and then predict when the organism may become extinct based on data collected and what might happen to the food chain and food web should that organism become extinct. **B.** Create your own assignment. MUST be teacher approved.
Webquest for Interactions of Life http://zunal.com/webquest.php?w=162592 Take Notes from PowerPoints **Element C - Predator Prey Relationships PowerPoint** **Predator Prey Relationships** **Element D - Symbiotic Relationships in Nature PowerPoint** Symbiotic Relationships PowerPoint Create your own assignment related to vocabulary terms above. MUST be teacher approved	**Element D - Must Do** Create a Flipbook that distinguishes between the different types of relationships that occur in our environment. Include 2 examples of each type (not the example we used in class). (mutualism, commensalism, parasitism & predator/prey) **Element D**:You may choose from these options 1. Investigate how organisms or populations may interact with one another through symbiotic relationships and how some species have become so adapted to each other that neither could survive without the other (e.g., predator-prey, parasitism, mutualism and commensalism). 2. Create a comic strip explaining the different symbiotic relationships. 3. Create your own assignment related to mutualism, commensalism, parasitism & predator/prey . MUST be teacher approved		

**For websites and powerpoints go to teacher website, look in class folder and click link needed.		***Use informational worksheet to complete **C.** Create your own assignment related to impact on population changes, must include some data collected, hypothesis of changes to come, ways to possibly "fix" the environment so organisms are not lost. . MUST be teacher approved.	
Vocabulary Quiz Attempt: _____ Attempt: _____	DOK2 Formative Assessment on Illuminate. See teacher for Access Code. Attempt 1: _____ Attempt 2: _____	DOK3 Formative Assessment on Illuminate. See teacher for Access Code. Attempt 1: _____ Attempt 2: _____	Formative Assessment: Same as Assignment Score: _____

Pre-Assessment: _____ **Post-Assessment: _____** **Goal for Playlist: Level _____**

Unit Competency: MS5 Life Science: Matter and Energy in Organisms and Ecosystems

Students will apply scientific and engineering practices to understand and analyze the characteristics, functions, and behavioral interactions within an ecosystem.

Unit GPS Standards: S7L4. Students will examine the dependence of organisms on one another and their environments.
c. Recognize that changes in environmental conditions can affect the survival of both individuals and entire species.
d. Categorize relationships between organisms that are competitive or mutually beneficial.
Performance Indicators:

1. (4c) Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
2. (4d) Determine mutualistic and competitive relationships in ecosystems.

Learning Targets:

1. **I can describe how changes to the predator/prey relationship affect an ecosystem**
2. **I can apply my knowledge and understanding of symbiotic relationships to real-world examples.**

Direct Instruction/Whole Class

- **Predator/Prey Card Game (wolves and deer - what happens to the populations?)**
- **Gizmo (Prairie Ecosystem)**