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| M. Angileri | **6th grade science** | | **Lesson Plans 5-6-19 Competition in Ecosystems #3 Relationships in Ecosystems #1** | | | | |
| NGSS Standards | **MS-LS2-2**  DCI :  **MS-LS2.A.**  S & E practices  CCC | | **MS-LS2-2:**Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.  **Interdependent Relationships in Ecosystems:** Predatory interactions may reduce the number of organisms or eliminate whole populations of organisms. Mutually beneficial interactions, in contrast, may become so interdependent that each organism required the other for survival. Although the species involved in the competitive, predatory, and mutually beneficial interactions vary across ecosystems, the patterns of interactions of organisms with their environments, both living and nonliving are shared.  **Constructing Explanations and Designing Solutions:** Construct an explanation that includes qualitative or quantitative relationships between variables that predict phenomena.  **Patterns:** Patterns can be used to identify cause and effect relationships | | | | |
| Essential Question | | Do fish Bathe? | | | | | |
| Vocabulary: | | **Abiotic:** Not living or produced by living things.  **Biotic:** Living or produced by living things.  **Competitive Interactions:** When two or more individuals or populations attempt to obtain a single resource.  **Ecosystem:** A system comprising all the biotic and abiotic factors in an area and all the interactions among them.  **Interdependent:** Needed for multiple systems to work together to accomplish various tasks.  **Mutually Beneficial Interactions:** An interaction between organisms or species that is helpful to both.  **Organism:** A self-contained living thing.  **Population:** A group of interacting individuals of the same species located in the same area.  **Predatory Interaction:** The interaction between two animals in which one animal eats the other. | | | | | |
|  | | **MONDAY** | | **TUESDAY** | **WEDNESDAY** | **THURSDAY**  **Substitute a.m.** | **FRIDAY** |
| Content Objective: | | NWEA | | SW demonstrate evaluation of how the growth of organisms and populations increases are limited by access to resources by testing using the common assessment with 70% accuracy. | SW demonstrate knowledge of patterns of interactions among organisms across multiple ecosystems by recognizing interdependence among organisms in ecosystems with 70 % accuracy. | SW demonstrate comprehension of patterns of interactions among organisms across multiple ecosystems by summarizing information using the Guided Reading with 70 % accuracy. | SW demonstrate application of patterns of interactions among organisms across multiple ecosystems by carrying out the Find my Buddy activity with 70 % accuracy. |
| Language objective | |  | | SW read to answer questions about how the growth of organisms and populations increases are limited by access to resources using the common Assessment with 70% accuracy. | SW write/speak to describe of patterns of interactions among organisms across multiple ecosystems using sentence starters using 70% accuracy. | SW read/speak to summarize the patterns of interactions among organisms across multiple ecosystems using sentence frames with 70 % accuracy. | SW listen/speak/write to ask questions about of patterns of interactions among organisms across multiple ecosystems using notetaking strategies with 70% accuracy. |
| In class today | | NWEA testing Day 2 | | C.A. Test Ecosystems yenas  L.L. Relationships prereading | APK: Relationships in Ecosystems  Hook: In one more relationship | Read and discuss Interactions among Living Things pages 31-38  Assign Guided Reading worksheet | Explore 1: Finding My Ecosystem Buddy  Activity and Questions |

Guiding Questions:

What factors can influence an organism’s survival in an ecosystem?

What are some limited resources that can affect an organism’s growth or population increases?

How cam competitive, predatory, and mutually beneficial relationships affect organisms?

What do food Webs demonstrate?

How do disruptions to components of ecosystems affect populations?

How can changes in biodiversity influence humans?

**Preconceptions**

These preconceptions can be addressed as students move through the scope; they do not need to be clarified at this point. Be sure to keep in mind the preconceptions uncovered during this APK as you move through the scope.

**Students may think that predator and prey populations are similar in size**.

Prey populations are usually larger than predator populations. The numbers of individuals in the populations of any species decrease with each step up the ecological pyramid because the available energy decreases while body size often increases.

**Students may think that organisms in an ecosystem live together because of their matching needs and behaviors and/or because all organisms within that environment coexist peacefully.**

Within an ecosystem, species compete for resources and feed on one another. They live in the same ecosystem because of similar adaptations and environmental needs.

**Students may think that carnivores are big and ferocious, and herbivores are small and passive**.

Although some carnivores, such as lions and tigers, may be larger and more aggressive and some herbivores, such as rabbits and mice, may be small and passive, there is great diversity within each group of organisms. For example, many snakes are predators, and hippopotamuses are herbivores. Snakes are not big or ferocious, and hippos are not small or passive.