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| M. Angileri | **6th grade science** | **Lesson Plans 5-13-19 Relationships in Ecosystem #2** |
| NGSS Standards | **MS-LS2-1**DCI :  **MS-LS2.A.**S & E practicesCCC | **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****5th hour** | **WEDNESDAy****2nd and 3rd hour** | **THURSDAY****4th hour** | **FRIDAY** |
| Content Objective: | SW demonstrate application of patterns of interactions among organisms across multiple ecosystems by carrying out the Find my Buddy activity with 70 % accuracy. | MSTEP Reading | PBIS PlaySW demonstrate application of how the growth of organisms and populations increases are limited by access to resources by carrying out the competition concentration game and analysis with 70 % accuracy. | MSTEP Math | SW demonstrate application of patterns of interactions among organisms across multiple ecosystems by solving the scenarios presented in the Linking Literacy activity with 70% accuracy. |
| Language objective | SW listen/speak/write to ask questions about of patterns of interactions among organisms across multiple ecosystems using notetaking strategies with 70% accuracy. |  | SW speak/write to explain how the growth of organisms and populations increases are limited by access to resources using content specific vocabulary. |  | SW speak/write to describe patterns of interactions among organisms across multiple ecosystems using sentence starters with 70% accuracy. |
| In class today | Explore 1: Finding My Ecosystem BuddyActivity Recap and QuestionsType 3 CER | MSTEP ReadingSee Wednesday | PBIS PlayExplore 2 Competition Concentration (Competition In Ecosystems) | MSTEP MathSee Wednesday | Science Today Watch It: Predation in EcosystemsFinish reading ScopepediaL.L. Textual Applications |

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 not know that a balance of resources is needed for a healthy population**

.A healthy ecosystem is made up of native plant and animal populations interacting with each other and nonliving things. If there are too many predators in an ecosystem, the prey population can be depleted, and the predator population will suffer. If there are too many herbivores in an ecosystem, the population of producers can be depleted, and the herbivore population will suffer

.**Students may not realize that plants also compete for resources.**

Plants compete for nutrients in the soil. When plants grow close to each other, they deplete the needed elements in the soil and have a negative impact on their neighbors. Plants also compete for light. Plants that grow the fastest can use their leaves to shade the shorter plants.