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| M. Angileri | **6th grade science** | **Lesson Plans 4-29-19 Competition in Ecosystems #2** |
| NGSS Standards | **MS-LS2-1**DCI :  **MS-LS2.A.**S & E practicesCCC | MS-LS2-1Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.**Interdependent Relationships in Ecosystems:** In any ecosystem, organisms and populations with similar requirements for food, water, or other resources may compete with each other for limited resources, assess to which consequently constrains the growth and reproduction.Growth of organisms and populations increases are limited by access to resources.**Analyzing and Interpreting Data:** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.**Cause and Effect:** Cause and Effect relationships may be used to predict phenomena in natural or designed systems. |
| Essential Question | Why would a non-native species thrive better in an ecosystem than a native species? |
| Vocabulary: | **Competition:** More than one individual or population in an ecosystem that relies upon the same limited resource.**Ecosystem**: A system comprising all the biotic and abiotic factors in an area and all the interactions among them.**Limited Resources:** Somethings that is needed by organisms and is not infinite in its abundance in the environments; if it is exhausted, then the organisms that need it cannot survive.**Organism:** A self-contained living thing.**Population:** A group of interacting individuals of the same species located in the same area.**Resources:** Source or supply from which benefit is produced.**Biotic**: Living, or produced by living things.**Abiotic:** Not living or produced by living things.**Competitive Interaction:** When two or more individuals or populations attempt to obtain a single resource.**Dependents Interaction:** When an organism depends on a factor for survival.**Primary Consumer:** An organism that gets its energy by feeding on producers in the food chain.**Secondary Consumer:** An animal that eats other animals that eat plants. |
|  | **MONDAY** | **TUESDAY** | **WEDNESDAY** | **THURSDAY** | **FRIDAY** |
| Content Objective: | SW demonstrate application of how the growth of organisms and populations increases are limited by access to resources by providing inferences using population data with 70 % accuracy. | SW 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. | NWEA 1 | NWEA 2 | 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. |
| Language objective | SW listen/speak to discuss how the growth of organisms and populations increases are limited by access to resources using sentence starters 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 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. |
| In class today | Graphing to understand population changesCER: Ecosystem Events and relationshipsStudy Guide Ecosystems 1 | Correct Study GuideCompetition Concentration | NWEA Testing Day 1 | NWEA Testing Day 2 | C.A. Test Ecosystems 1Rouge River Testing day 1 yenas |

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.