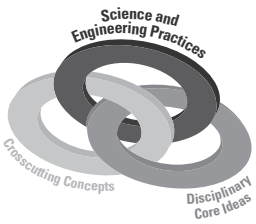
Resources in Ecosystems



Unit Overview

Phenomenon: When various species of cichlid fish are combined in aquariums, some stop eating to the point of dying.

Storyline: The living things on our planet interact with each other and with the nonliving parts of the environment in dynamic ecosystems. Apply what you learn about resources, interactions, and changes in ecosystems to solve a problem in the fish exhibit at a zoo.

Resources in Living Systems

Learn how resource availability impacts living things by analyzing data from case studies and playing a game of matching species with biomes and ecosystems to understand competition and species distributions. Finally, construct a model ecosystem and track resources needed by the living things within it.

Interactions Among Organisms

Explore the impact of interactions between living things. Focus on the relationship between predators and their prey, and then learn to classify interactions by their positive and negative impacts.

Engineering Challenge: Preserving Frog-Bat Interactions

Build a sound shield to protect acoustic interactions from highway noise.

Changing Ecosystems

Study how the many interactions of an ecosystem cause even small changes to lead to other large changes. Observe this in your own model ecosystems, and then study the impact of biological and physical changes that can occur in some specific natural ecosystems.

Performance Assessment: Changing Resources for Cichlid Fish

Use your understanding of the resources and interactions in dynamic ecosystems to determine what needs changing in the cichlid fish exhibit where some species are unhealthy. Then, present your solution at a conference.

ANCHORING PHENOMENON

Anchoring Phenomenon: When various species of cichlid fish are combined in aquariums, some stop eating to the point of dying.

1. Complete the first two columns of this chart.
   - List what you think you already know about this unit's phenomenon.
   - Then write at least three questions you have about this phenomenon.

   Return to this chart at the end of the unit. Add the key information you learned about this phenomenon. Give evidence!

Know	Want to Know	Learned