



THE WEB OF LIFE GAME

Understand relationships between organisms and their environment



GRADES 5-6

MATERIALS

- ball of string/yarn

KEY WORDS

- predator
- prey
- producer
- ecosystem
- organism
- savannah
- herbivores
- carnivores
- omnivores.

STANDARDS

- SCI.5.3.1
- SCI.6.3.1
- SCI.6.3.2
- SCI.6.3.3

OBJECTIVES

- Students will describe specific relationships between organisms and determine whether these relationships are competitive or mutually beneficial.
- Students will describe how changes in a habitat or ecosystem can be beneficial or detrimental to organisms living there.

BACKGROUND INFORMATION

- The savannah provides for the needs of many kinds of animals. Large hoofed animals, like the wildebeest and zebras, graze on the tender grasses. Other animals, such as giraffes and gazelles, browse on trees and shrubs. Small mammals like rodents eat plants and insects and dwell in underground burrows. Predators and scavengers feed on the plant-eating animals.

PROCEDURE

- Have students sit in a circle in a grassy area. Each student should be a different plant or animal that might be found in an ecosystem. (It may be helpful to supply a list to choose from.) Be sure to include many plants, several herbivores, a few carnivores, and a few omnivores.
- Ask one “plant” to hold on to the end of a spool of string. Have the students determine which animal or plant might be connected in some way to the prior organism and pass the spool of string to that student. The second student wraps the string around one hand. Continue the process until all students are connected in a giant web.
- The students should move back and out until the slack in the string is taken up; jiggle the string to feel the system’s “vibrations.”
- As the students which link in the system is least important and have that link drop out. Take up the slack again. Continue to remove “unnecessary” links, or those which cannot survive when other links are removed.
- As the links are removed, discuss:
 - What happens when we remove a link in the ecosystem?
 - Can the system withstand the loss of these links?
 - What will eventually happen to a system which becomes less and less complex? Why?
 - Were the changes more dramatic when the system was composed of many parts (links) or when it had fewer parts?
 - Is a complex ecosystem more or less stable than a simple ecosystem?
 - Can you think of any systems which people have created which might be considered ecologically unstable because of their lack of diversity? What might be done to reduce the hazards of such systems?
 - What other webs of life might there be? What about webs of life within your school? Within your community? What about economic webs of life? Cultural webs of life? World-wide webs of life?





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EXTENSIONS

- Do the activity again, but with a different ecosystem, like one in Indiana.

EXAMPLE FOOD CHAINS

African Savannah		Indiana Woodland	
Plants	Grass Acacia tree	Plants	Grass
Herbivores	Zebra Giraffe	Herbivores	Mouse Rabbit
Carnivore	Lion	Carnivore	Bobcat
Omnivore	Honey badger	Omnivore	Raccoon

