

ILLINOIS

Extension

4-H Club GO TO Resources



April 2019

Lesson Objectives:

- Students will understand that an animal's needs determine its preferred habitat.
- Students will understand the concept of ecosystems and interdependence.

Time: 15 minutes

Equipment and supplies:

- Paper or adhesive nametags with a different components of an ecosystem on them
- Yarn or string

Preparations:

- Make signs/nametags for each member. Adhesive nametags work great.
- Review Lesson
- Gather Supplies

Earth Day - Web of Life

An ecosystem is made up of all the living animals and plants and the non-living matter in a particular place, like a forest or lake. All the living things in an ecosystem depend on all the other things - living and non-living for continued survival - for food supplies and other needs. In some ways, the actions and reactions that take place within an ecosystem are like a spider web - when one strand is broken, the web starts to unravel. What affects one part of an ecosystem, affects the whole in some way. The idea of the web of life is shown by the interdependence within an ecosystem. Animals and plants depend on a complex system of food for survival.

For example: In a typical prairie ecosystem, the web might work like this: The sun provides energy for the grass; grasshoppers feed on the grass; birds and frogs eat the grasshoppers; snakes eat birds, frogs and mice; owls and hawks will eat the birds as well as snakes, frogs and mice. When an animal dies, it is decomposed by worms, fungi and bacteria action and nutrients are released to the soil during the decaying process for the grass to use again. Connecting the many plants and animals with lines representing their functions and food chains within this web would create a tangled maze. It is obvious that all forms of life in the ecosystem are dependent on all other living and non-living things for food, nutrients and energy.

Activity: Make several signs/nametags representing many of the components of an ecosystem. Include animals, plants, soil, water and the sun. Several animals and plants that are part of an interconnecting food chain should be worked out before hand. Students should pick a sign/nametags to wear. Have them sit in a circle facing each other. Next, starting with the sun, have the group connect all the components (participants) that are related to each other in an ascending order by having them take hold of the string one at a time, thereby weaving a web, **The Web of Life**. The web should be complicated by the time they are finished.

After everyone is "connected" ask one essential component to drop the string. This represents elimination from the system. Any other related components that connected after it should also drop the string.

Processing: What happens to the system? Discuss the concept of interrelationships within ecosystems. How do people help keep, or not keep the system in balance?



Components of a Ecosystem

MOTH	RIVER	ANT
SUN	OWL	AIR
SUNFLOWER	WOODPECKER	SQUIRREL
DEER	MOSQUITO	
SNAKE	MUSHROOM	
RACCOON	LICHENS	
FROG	SKUNK	
TOAD	BEAVER	
SPIDER	BETLE	
BERRIES	CROW	
DEAD TREE	SOIL	
TURTLE	POND	
BAT	COYOTE	
ROCKS	WOOD DUCK	
FISH	CHICKADEE	
EARTHWORM	CHIPMUNK	
GRASS	RABBIT	
SALAMANDER	MOUSE	
ROBIN	FLY	
HAWK	TERMITE	

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Sources & Additional Lesson info:

4-H Club GO TO Resources is being offered to 4-H clubs in Boone, DeKalb and Ogle Counties as a way to enrich and enhance 4-H experiences and programming at the club level. It is the goal of the Extension staff to assist 4-H leaders and officers in providing simple hands-on activities on a monthly basis that can broaden the 4-H club experience and as a result heighten positive youth development.

Resources: [HTTPS://EXTENSION.ILLINOIS.EDU/ECOSYSTEMS/TEACHERGUIDE6.CFM](https://extension.illinois.edu/ecosystems/teacherguide6.cfm)

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