

WONDERFULLY WILD UNIT
LESSON 4: Grades 4-6
A WILD CHAIN REACTION

Show Me Standards: 1.1,1.2, 1.6, 1.7, 1.8, 1.10, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 4.1, 4.2, 4.3, 4.4, 4.6 & 4.7

Knowledge Goals: Communication Arts: 1, 3, 4, 5 & 6; Science: 3, 4 & 8 Social Studies: 3 & 6

Objective: To make students aware that all creatures, great and small are connected like the strands of a web and depend upon one another for survival. When one strand is affected, the entire web becomes affected. Students will come to the realization that they have the power to make choices that can either help or hurt animals and our environment.

Materials:

- Large roll/spool of twine, yarn or string
- One scrap piece of paper per student
- Marker
- “Habitat Wanted” handout

**The activity below was adapted from a lesson called “Food Web Scramble” created by Jack Woodhead.*

Method: Begin the lesson by asking students to recall what they learned during the last lesson (animals are connected with everything in their habitat and when one part is affected or changed, the rest of the parts are affected and changed).

1. Explain that they are now going to create a habitat similar to one they would find in your area, complete with plants, animals, land, etc. with each student playing a certain role or part.
We recommend Missouri teachers choosing a deciduous forest as the habitat. It would help to have a picture of this environment to help the students remember what might live there.
2. Divide the class evenly into five groups:
 - a. Elements of Earth (only 4 students needed to represent: soil, water, sun, and air)
 - b. Producers (green plants) (types of trees, grass, flowers, plants, etc.)
 - c. Plant Eaters (herbivores) (rabbit, grasshopper, mouse, squirrel, minnow, deer, etc.)
 - d. Plant and Meat Eaters (omnivores) (raccoon, bear, opossum, birds, man, etc.)
 - e. Meat Eaters (carnivores) (frog, hawk, snake, owl, etc.)
3. Ask each student to think of a something that lives in a deciduous forest that would fit into their group’s category. For example, if the group is composed of plant eaters each student would label their piece of paper with the name of an animal that is a plant eater (see above).
4. Ask the elements of the earth to stand at the corners of the room. Have the green plants form a large circle just inside the elements, the plant eaters another circle inside the green plants, the plant & meat eaters another circle inside the plant eaters and the meat eaters make a circle inside the plant & meat eaters group. If you were to look down upon the class from above, you would see 4 circles and a square (made up of four students) surrounding the circle.
5. Give one end of the large roll of string/twine to one of the students in the innermost circle (a carnivore: coyote) and ask the student to tell you three things in the habitat that he/she depends on directly or indirectly (preys on rabbits, depends on grass to feed rabbits, and sun to grow grass for rabbits to eat). Then hand the student the end of the ball of twine/string and have them hold it while you walk the twine to the rabbit who grabs it, then to the grass who grabs it and finally to the sun who grabs it. Then beginning with the sun, ask him/her to name three things in the web that he/she affects directly or indirectly (sun grows wild flowers, which feed butterflies, and then frogs eat butterflies. Continue to facilitate and direct students until each student has received the string at least one time. Many of the plants and earth’s elements will receive the string quite a few times and this is okay.

6. Once all students have a string ask the class to hold their strings way above their heads and point out that they have formed a spider web of sorts that contains many strings that are all connected. Explain that they will now witness what happens if one strand is affected.
7. Discuss the following scenarios and ask the students to drop their strings if the scenario affects their part of the web.
 - ◆ A local chemical plant accidentally spills thousands of gallons of chemicals into a nearby river. (The poison in the water will affect all the plants and animals that live in the river and the animals that eat the river plants and animals.)
 - ◆ The forest is converted into a golf course. (Trees will be cut down and many animals will lose their homes. They may try to make homes around the golf course or on the greens. Discuss each remaining species and how they manage to coexist with humans, remembering trash may now be a food source for many animals.)
 - ◆ Widespread herbicide use. Chemicals are continually fed to plants and crops to kill insects and weeds and to make the plants grow faster. (These chemicals seep into the soil and eventually the groundwater. The insects and small animals that feed on the crops are poisoned.)

Follow up:

Eventually, all of the students will have to drop their strings because their role will be affected. Stress the idea that because everything in a habitat is connected, our actions affect every part of that web. Besides harming the environment and the wildlife, we will eventually be harming ourselves. We need to learn to coexist with all the creatures in our environment because each of us has important jobs to do.

Call to Action:

Ask students to read the local newspaper and find a problem that is occurring in your area with wildlife and devise a plan to help the animals. For example, there are many areas in St. Louis county that are being developed for residential purposes and people are upset because coyotes have been sighted in people's back yards and small pets have turned up missing. The local government is currently holding community meetings to discuss the plan of action. You could inform your students of the meeting time and place and encourage them to attend and vote for a plan that would not be deadly to the coyotes, such as a trap and release plan where the animals would be humanely captured and set free in a similar environment away from the residential areas. Or students could write letters to local politicians asking them to adopt such a plan.

Web sites: For recommended animal-related web sites visit www.apamo.org and choose "Animal Issues" from the left-side menu, then choose "Links" from the top of the page. Or [click here](#) to launch your browser and link directly to the list.

Habitat Wanted!

Having a clean environment is important to people. It's also important to animals. Wild animals live in natural habitats. They need food, clean air, water, plants, and places to rest.

Imagine if wild animals could write advertisements for their perfect habitats. What would they ask for? A polar bear habitat ad might sound like this:
Wanted: a cool place up North. Need a

peaceful place to rest all winter. Must have good spots for ice fishing.

Cut out the pictures below and glue them onto sheets of notebook paper. Then write a habitat ad next to each animal. Be creative! Use details to ask for a special kind of environment. (Think about the climate and food each animal needs. You may use library books to help you write your ads.)

