

Food Web of Life in Glades

OVERVIEW: Students will be introduced to food chains possibly found in a cedar glade of the Central Basin.

GRADE LEVEL: 6 – 8

TIME: One class period and half of another if introducing concept of cedar glades and food webs. If cedar glades have been introduced, then one typical class period should be ample time. It later may become a good wrap up for short spans of time when you're finished early on another lesson. Students enjoy this activity and usually will gladly participate.

SETTING: Classroom

OBJECTIVES: Student will either select organisms that are part of the food chain or be assigned a certain organism and determine its role in the food chain. Some selected plants and animals of the cedar glades will be introduced. The student may then decide the balance of plants and animals in a special environment, such as the cedar glade, and apply the concept to a larger area like a biome.

LEARNING STANDARDS CORRELATED: Science GLE 0607.2.3; 0707.1.2

QUESTION: What are the possible food chains within a cedar glade?

MATERIALS:

- Ball of yarn or string
- Cedar Glade Species List or Cedar Glade Animal Cards (appendix)
- Pencil and paper for students
- Whiteboard and markers, or chalkboard and chalk

BACKGROUND: Introduce students briefly to the concept of a cedar glade, stressing the presence of rock, thin soil, and unique plants. As the soil increases, more plants, such as redcedar trees, will begin to grow. Every organism on the planet interacts and depends on other organisms in its environment, and those interactions keep the community in balance. For example, predators keep the populations of their prey in check, preventing overcrowding and starvation; herbivores feed on plants and prevent them from crowding the other plants in the area; insects assist in pollinating flowers; small mammals eat seeds and then deposit them elsewhere later. Remove one part of this delicate balance, and the whole structure suffers. A food chain is a very simple way of illustrating the energy (food) relationships between organisms, but it doesn't tell the whole story. Very few organisms eat only one type of food. A food web is a much

more accurate representation, with multiple connections between all the organisms in a habitat.

PROCEDURE:

1. List a sampling of organisms living in the cedar glade on the board, large enough so students can see them. Include more organisms than the number of students in the class.
2. After introducing students to your chosen organisms from the species list and their connection to the cedar glade, place the students in a circle. It may be good to begin with half of your class as a practice run for the students and give them an idea of how to do the web.
3. Hand one student the ball of yarn. Instruct the students that are thrown the ball of yarn, make sure they hold onto the string before tossing again to another student.
4. Ask the student with the string to select a producer to begin the web. After the student announces his/her choice loud enough for all to hear, the student then is to throw the ball to another student, preferable across the circle. That student catches the ball of yarn and chooses an organism that will use the plant (i.e. eating pollen or consuming the plant) and tosses the ball to another student.
5. Continue until all students in the circle have been included, and the yarn has formed a web.
6. As the students are announcing their choices, your job is to check off those already used and to guide them in choices if the student errs in a selection.
7. At the end, choose some organisms to be removed from the food web for certain reasons (i.e. habitat loss, illegal hunting, disease). Cut the string where the student who chose that organism stands, and ask the students to observe the effect that one cut has on the web.
8. Remove another organism, and repeat. The collapse of the web should become very obvious.

JOURNALING: Suppose a major producer or consumer is eliminated from the area because of human activity. You are now a reporter for a scientific magazine. Report on what your discoveries found 50 years after the loss. What changes occurred? What had happened? Write a one page article sharing your findings after the loss.