

Instructor Sheet
Panther Food Web
Lesson 21

Grade Level(s): Elementary, Middle

Duration: 60-100 minutes (one or two periods)

Setting: Indoors, use computer to find information, then do artwork

Skills: Reading, interpretation, media construction, web navigation

Subject Areas: Environmental science, life science, visual arts

Overview: Students construct a food web for the panther, using words, drawings, and/or photos printed out from the web site, plus data gathered on the panther and on individual species like the nine-banded armadillo, white-tailed deer, and wild hog.

Site location(s):

Natural History:

Diet (click on pie chart)

Habitat

Sunshine State Standards:

Grades 3-5

SC.F.2.2.1 knows that many characteristics of an organism are inherited from the parents of the organism, but that other characteristics are learned from an individual's interactions with the environment.

SC.G.1.2.5 knows that animals eat plants or other animals to acquire the energy they need for survival.

SC.G.2.2.1 knows that all living things must compete for Earth's limited resources; organisms best adapted to compete for the available resources will be successful and pass their adaptations (traits) to their offspring.

SC.G.2.2.2 knows that the size of a population is dependent upon the available resources within its community.

SC.G.2.2.3 understands that changes in the habitat of an organism may be beneficial or harmful.

VA.A.1.2.1 uses and organizes two-dimensional and three-dimensional media, techniques, tools, and processes to produce works of art that are derived from personal experience, observation, or imagination.

VA.A.1.2.2 uses control in handling tools and materials in a safe and responsible manner.

VA.A.1.2.4 uses good craftsmanship in a variety of two-dimensional and three-dimensional media.

Grades 6-8

VA.A.1.3.3 understands what makes various organizational elements and principles of design effective and ineffective in the communication of ideas.

VA.B.1.3.2 knows how the qualities and characteristics of art media, techniques, and processes can be used to enhance communication of experiences and ideas.

Background Information:

The Sun is the source of energy for almost all life on Earth. Plants use the Sun to make the food they need through photosynthesis. Biologists call plants *producers*, because they are able to produce their own food using solar energy.

Animals can't produce their own food. Instead, they must eat plants or other animals. Biologists call animals *consumers*. Some consumers only eat plants. They are called *herbivores*. Some consumers only eat animals. They are called *carnivores*. Others eat both plants and animals. They are called *omnivores*. Humans are omnivores. Most humans eat many different kinds of plants and animals.

Food chains and *food webs* are used to describe the flow of energy from the Sun to producers (plants) and consumer (animals). An example of a food chain is: Sun → marsh grass → grasshopper → frog → snake
Marsh grass is a producer. Grasshoppers, frogs, and snakes are consumers. The grasshopper eats the grass; the frog eats the grasshopper; and the snake eats the frog.

Rarely is one plant or animal eaten by only one other animal. For example, insects and deer and marsh rabbits eat marsh grass, as well as a grasshopper. Frogs are eaten by aquatic birds, turtles, and raccoons as well as snakes. You can construct many different food chains beginning with solar energy and plants. Biologists link these chains and create *food webs* to show the links between food chains.

When plants and animals die, other organisms break down the remains into chemicals that can be used by plants. These *decomposers* include bacteria and fungi.

The Activity

Pre-planning:

1. Reserve a computer lab or set up computers in your classroom, with connection to printer.
2. Gather poster board or large art paper, art materials (crayons, markers, colored pencils, paint, scissors, tape, glue, etc.)
3. Photocopy student sheet (if desired)

Procedure:

1. Go over background information.
2. Assign computers and partners (if necessary).
3. Explain rubric for grading.
4. Students use worksheet to record information and print out photos (or create their own artwork) for approximately one class period, and design and construct food webs for the second class period.

Assessment:

- 1 bonus point for artistic additions to the food webs
- 4 = Food webs are accurate, neat, creative, and include specific examples of plants and animals in the panther's habitat
- 3 = Food webs are mostly accurate, neat, creative and include some specific examples of plants and animals in the panther's habitat.
- 2 = Food webs are mostly accurate and neat
- 1 = Food webs are started
- 0 = Little or no participation

Student Sheet
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Name(s) _____

Class _____
Date _____

Hot spots!
Natural History:
 Diet (click on pie chart)
 Habitat (Animals)

Directions: During this class period, you will research what a Florida panther eats and in turn, what those animals eat. Keep track of the information you gather, below.

List all the animals you find that a panther eats:

1. _____
(Click on this animal in the Habitat section to find out what this animal eats:)

2. _____ It eats:

3. _____ It eats:

4. _____ It eats:

5. _____ It eats:

II. Create a food web that incorporates the organisms from the chart above into a web. Arrows should start at the plant or animal that gets eaten and point at the animal that eats it.