

Animals A to Z
Grades: PreK through 3rd

Standards:

Kindergarten: I Inquiry: A1, A2, B1a/b; II Life Science: A1a/b, B1a/b/c

Grade 1: I Inquiry: A1, A2a, B1a

Grade 2: I Inquiry: A1a, A2a, B1a.; II Life Science: A1a, A2a/b, B1/2/3, C1

Grade 3: I Inquiry: A1, A2a, A5a, B1a; II Life Science: A1b, A2a, B1a, C1a/b, C2

Objective:

1. To introduce students to vertebrate animals, enabling him/her to distinguish fish, amphibians, reptiles, birds, and mammals.
2. To learn to observe the characteristics of these various vertebrates.
3. To use their observations to classify the vertebrates into categories based on certain characteristics, i.e. amphibian, aviary, mammal, cold-blooded, etc.
4. To understand the basic needs of animals and how they adapt to the environment.
5. To understand the life cycle of several vertebrate animals.
6. To understand the interaction of populations within the ecosystem in relation to the food web.

Pre-Visit Activities:

1. Review the vocabulary list.
2. Become familiar with mammals, amphibians, fish and avians.

Vocabulary:

Vertebrate: An animal with a backbone

Skeleton: The bone structure inside the body of an animal

Habitat: The place an animal lives

Scales: Hard pieces of skin; they may overlap to cover the entire body of an animal

Gills: A body part for breathing underwater

“Cold-blooded”: The body temperature of the animal is about the same as the temperature of its surroundings.

Fish: A cold-blooded vertebrate with wet, scaly skin; it breathes underwater using gills.

Amphibian: A cold-blooded vertebrate that lives part of its life (larval stage) in the water and part of its life (adult) on land.

Reptile: A cold-blooded vertebrate with dry, scaly skin; has lungs, and lays eggs covered with a leathery shell.

“Warm-blooded”: The animal’s body temperature stays about the same regardless of the surrounding temperature.

Bird: A warm-blooded vertebrate that has feathers and wings; it lays eggs covered with a hard shell.

Mammal: A warm-blooded vertebrate covered with fur or hair; it breathes with lungs and the young get milk from the mother.

Post-Visit Activities:

1. The “Food Chain/Food Web” lesson plan is designed to help your students understand the interrelatedness of all creatures and plants in an ecosystem.
2. Of course, a visit to the Museum would allow the students to see how closely humans and animals interact and how they are represented in art.
3. Have students chart which animals share the same habitat or animals that have the same covering.

4. Set up an aquarium in your classroom and have students take a new responsibility each week.

Food Chain/Food Web

An AskERIC Lesson Plan

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Endorsed by: Lisa Blank, University of Montana

Date: October 26, 1999

Grade Level(s): 3, 4

Subject(s): Science/Ecology

Duration: 1-2 45-minute sessions

Description: Students will learn the basics of food chains and food webs through various ways such as whole class activities, journaling, oral discussions, and small group activities.

Goals: Students will demonstrate a basic understanding of a food chain and food web and are able to appreciate each as a representation of the life cycle.

Objectives: Students will:

1. Recognize the food chain/food web and the living things that are a part of it by journaling
2. Successfully put the note cards in order of the food chain
3. Complete and turn in the food web worksheet to be graded
4. Discuss the elements of a food chain and the impacts of them on the world.

Materials:

- Fish journal page
- Food web worksheet
- Note cards
- Glue
- Sand/glitter

Procedure:

1. *Scientific Explanation:* What is a food chain? A food chain is how energy passes from one living thing to another. How is a food chain related to a food web? A food web is formed when food chains overlap. What are the components of a food chain? All living things. How is a food chain formed? From the smallest living things to the largest feeding off one another.
2. *Focus Phase:* Write the words: sun, green grass, rabbit, and fox on the board. Ask students to journal why they think these four words would be placed together? What do they have in common? They are all in a food chain. Next, hold up a chart of a food chain and ask the students if they recognize what it is? What is a primary producer? An herbivore? A primary carnivore? Etc. What animals are in each of the categories? What happens if there are no producers, does the food chain still work? What do you think? Journal.

3. *Challenge Phase:* Arrange the students in groups of 3-4 and give each group a set of 15 note cards with various living things on them. (Each group must have the sun, some plants, and animals. The teacher will make the cards. Try to paste the pictures on the cards, but if not, write the word on the card.) Allow 15-20 minutes for the students to put the cards in the proper order, according to the food chain. After the groups have finished, have each group paste the cards on a piece of poster board and share their results with the class. Does everyone agree that is where the salmon fish goes? Is a berry a producer? Etc.
4. *Concept Introduction:* Ask the students to go back to their original journal entries and write the new knowledge they have learned from the activity. Also, have them answer their initial questions if they are able to at this point. Next, have the students write a sentence describing what a food chain is and what items belong in it. Discuss orally. Give the students the food web worksheet to complete with a partner or individually.
5. *Concept Application:* Show the students different pictures of living things that are in a food chain or food web. Ask the students where each of the living things would go in the food chain and have them provide a rationale for their choice. (Have the students tape the animals on the board in the order of a food chain for more student interaction.) Next, have the students brainstorm as a class which living things may be in a desert or tropical food chain. (Create a list on board.) Finally, ask the students to journal some final questions such as: 1) How is a spider web like a food chain or food web? Threads of a spider web are connected and all living things are connected. 2) How would a drought affect the food chain and food web? Plants would die which would decrease the food supply.
6. *Extension:* a) Create a spelling list for the web based on the vocabulary used in the lesson such as: primary, secondary, tertiary, producer, consumer, decomposer, food chain, food web, herbivore, carnivore, and omnivore. b) Take animals that are found in a food chain and give one to each student. The students will then create a sand/glitter picture and make a bulletin board with the art.

Assessment:

The students will demonstrate science understanding by:

1. Explaining what a food chain is, its components, and where a food chain may exist.
2. Correctly predicting what living things would be found in a food chain and where they would be placed in the chain.
3. Answering the food web worksheet and food chain questions correctly through journaling.
4. Contributing to class discussions.

Useful Resources:

International Academy of Science

<http://www.science.edu/>

<http://www.projectwild.org/>