

Prairie Food Chains & Webs

Producers, Consumers & Decomposers

Science, Life Science, Reading, Math

Materials

Vocabulary worksheet
Food Chain worksheet

Grade Level: 4-6

Time: 45 minutes

Standards:
Science

Overview

To explore the organisms found on a prairie and identify the various food systems that allow them to either eat or be eaten.

Objectives

1. Students will identify producers, consumers, and decomposers in an ecosystem.
2. Students will identify herbivores, omnivores, and carnivores in the prairie ecosystem.
3. Students will understand the origin of food energy.
4. Students will identify food chains on the prairie.
5. Students will use pictures and arrows to create a food chain for the prairie ecosystem.

Background Information

The sun is the main source of energy for every living thing on earth. An organism that makes its own food is called a **producer**. Examples of producers in the prairie are grasses and wildflowers because they use the sun to make their own food through a process called photosynthesis. An organism that depends on others for food is called a **consumer**. Examples of consumers in the prairie include coyotes, snakes, mice and prairie chickens because they hunt or scavenge for their food. An organism that breaks down materials in dead organisms is called a **decomposer**. Examples of decomposers in the prairie are worms. Recycling happens in the prairie through decomposition. **Recycle** means to reuse something once it has died or has been thrown away.

Prairie animals can be classified into three categories based upon what they eat. An **herbivore** is an animal that feed chiefly on plants. A **carnivore** is an animals the eats meat or flesh. An **omnivore** is an animal that eats both plants and animal material.

The following table shows several prairie organisms and their diet and predators.

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| Organism | Diet | Predator(s) |
|------------------------------------|---|-------------------------------------|
| Bison <i>Consumer</i> | Herbivore: grasses | Man, coyotes, bobcats, rattlesnakes |
| Bull Frog <i>Consumer</i> | Carnivore: insects, worms, small fish, snakes | Raccoons, hawks, snakes |
| Cattle <i>Consumer</i> | Herbivore: grasses | Man, coyotes, bobcats, rattlesnakes |
| Coyote <i>Consumer</i> | Carnivore (mainly): Rabbits, insects, fruit | Man, disease |
| Grass <i>Producer</i> | Sun, soil, water, nutrients | Bison, cattle, rabbits, mice, birds |
| Grasshopper <i>Consumer</i> | Herbivore: plants | Birds, beetles, mice, snakes |
| Meadowlark <i>Consumer</i> | Omnivore: insect, worms, spiders, snails, seeds | Owls, hawks, skunks, foxes |
| Mouse and Shrew <i>Consumer</i> | Omnivore: seeds, grasses, worms, fruit, roots | Birds, snakes, skunks |
| Prairie Chicken <i>Consumer</i> | Omnivore: Grain, weeds, seeds, insects | Coyotes, hawks, bobcats, skunks |
| Rabbit <i>Consumer</i> | Herbivore: grasses, leaves, bark, twigs | Coyotes, hawks, bobcats, foxes |
| Skunk <i>Consumer</i> | Omnivore: insects, rodents, reptiles, eggs, berries, roots, grasses | Birds of prey, mountain lions |
| Snake <i>Consumer</i> | Carnivore: mice, gophers, rabbits, eggs | Hawks, eagles |
| Spider <i>Consumer</i> | Carnivore: insects and animals in some cases (insectivore) | Frogs, birds, shrews, beetles |
| Wildflower <i>Producer</i> | Sun, soil, water, nutrients | Grasshoppers, spiders, birds |
| Worm <i>Decomposer</i> | Omnivore: dead plant and animal material | Birds |

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Instructional Format

1. Follow activity outlined in student worksheets.

Resources

Kansas Foundation for Agriculture in the Classroom (2008). Prairies. In *Exploring Kansas Natural Resources Educator's Guide* (13-32). To order, visit www.ksagclassroom.org

The Iowa Living Roadway Trust Fund. <http://www.iowalivingroadway.com/LessonPlans.asp>



Name: _____

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Vocabulary Worksheet

Draw a line between two circles to match words with their definitions.

Producer

Consumer

Decomposer

The sun

Recycle

A. To reuse something once it has died or has been thrown away.

B. The main source of energy for everything living on earth.

C. An organism that breaks down materials in dead organisms.

D. An organism that depends on others for food.

E. An organism that makes its own food.

Answer the following questions.

1. What is the difference between a producer, a consumer and a decomposer?

2. Name a producer found on the prairie or Kansas grassland. _____

3. Name a consumer found on the prairie or Kansas grassland. _____

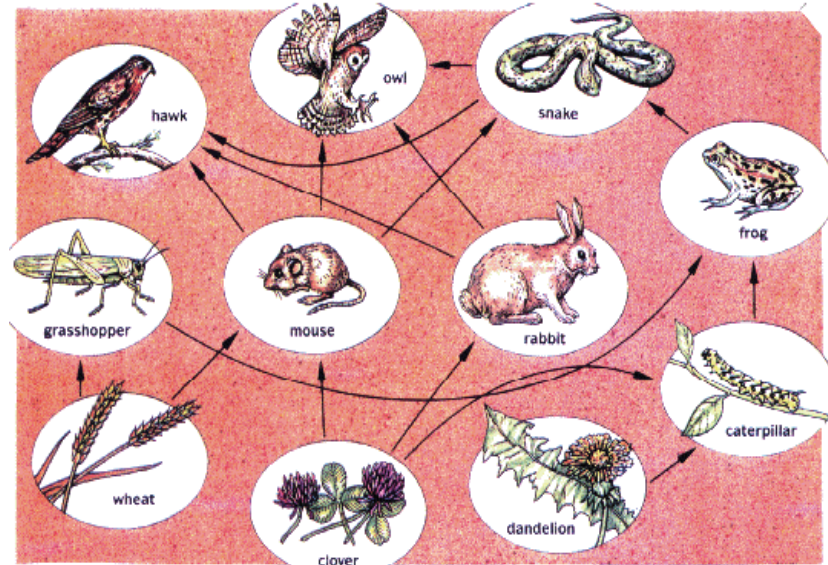
4. Name a decomposer found on the prairie or Kansas grassland. _____

Name: _____

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Food Chain Worksheet

Use the prairie food web below to answer the following questions.



5. Identify the organism(s) that are producers. _____

6. Identify the organism(s) that are consumers. _____

7. List one food chain on this prairie food web by writing each organism's name and connecting each organism with a line.

8. Name a prairie animal that fits into the following categories:

Herbivore: _____ Carnivore: _____ Omnivore: _____

9. Make your own food chain. You pick which organisms you will use in your prairie food chain. The prairie food chain starts with energy from the sun. Draw arrows in the direction that the energy flows in your food chain. Get creative and draw pictures!



The sun



Producer



Consumer



Consumer



Decomposer

