

# Prairie Food Chains & Webs

## Producers, Consumers, & Decomposers

***Life Science, Math, Reading, Science***

### **Materials**

Student Worksheet A: Vocabulary  
Student Worksheet B: Food Chain

### **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.

**Grade Level:** 4-6

**Time:** 45 minutes

**Standards:**

Science: Craft and Structure

*For Kansas standards, visit  
[www.ksde.org](http://www.ksde.org)*

### **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. A **herbivore** is an animal that feeds chiefly on plants. A **carnivore** is an animal that eats meat or flesh. An **omnivore** is an animal that eats both plant and animal material.

A **predator** is an animal that eats other animals. You will notice in the following table we list animals as consumers of the wildflowers and grasses.



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

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,
Coyote <i>Consumer</i>	Carnivore (mainly): Rabbits, insects, fruit	bobcat, mountain lion
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	Owl, 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, bobcats, mountain lions
Snake <i>Consumer</i>	Carnivore: mince, gophers, rabbits, eggs	Hawks, eagles
Spider <i>Consumer</i>	Carnivore: insects and animals in some cases (insectivore)	Frogs, birds, shrews, beetles
Wildflowers & Grasses <i>Producer</i>	Sun, soil, water, nutrients	Grasshoppers, spiders, birds, bison, beef cattle
Worm <i>Decomposer</i>	Omnivore: dead plant and animal material	Birds

## **Instructional Format**

1. Discuss background information with students.
2. Students will complete the worksheets.
3. Worksheets may be used as assessment tools.



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## **Procedures**

1. Follow activity outlined in student worksheets.

## **Conclusion Questions (Assessments)**

1. Worksheets may be used as assessment tools.

## **Resources**

*Exploring Kansas Natural Resources Educator's Guide*. Unit 2 – Prairies (13-32). Kansas Foundation for Agriculture in the Classroom. *To order, visit [www.ksagclassroom.org](http://www.ksagclassroom.org).*

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



## Prairie Food Chains & Webs

**Carnivore**- An animals the eats meat or flesh.

**Consumer**- An organism that depends on others for food.

**Decomposer**- An organism that breaks down materials in dead organisms.

**Herbivore**- An animal that feeds chiefly on plants.

**Omnivore**- An animal that eats both plants and animal material.

**Predator** - An animal that eats other animals, usually smaller than themselves.

**Producer**- An organism that makes its own food.

**Recycle**- To reuse something once it has died or has been thrown away.



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## Student Worksheet A: Vocabulary Worksheet

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

The image contains eight circles of varying sizes. The terms and definitions are as follows:

- Producer** (small circle)
- Decomposer** (medium circle)
- Consumer** (medium circle)
- The sun** (small circle)
- Recycle** (small circle)
- B. The main source of energy for everything living on earth.** (large circle)
- A. To reuse something once it has died or has been thrown away.** (medium circle)
- C. An organism that breaks down materials in dead organisms.** (medium circle)
- D. An organism that depends on others for food.** (medium circle)
- E. An organism that makes its own food.** (medium circle)

Answer the following questions.

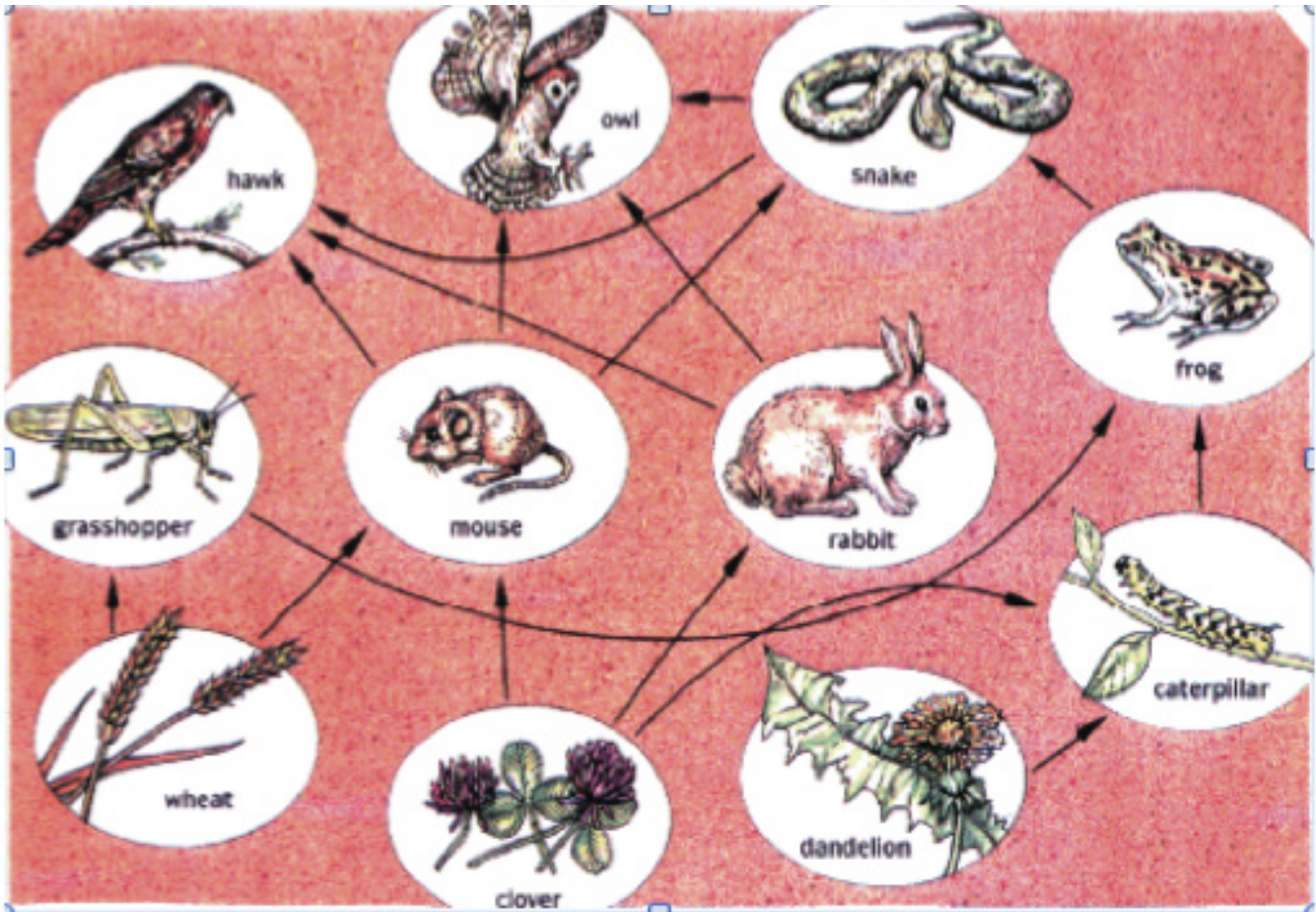
1. What is the difference between a producer, a consumer, and a decomposer?  
\_\_\_\_\_  
\_\_\_\_\_
2. Name a producer found on the prairie or Kansas grassland. \_\_\_\_\_
3. Name a consumer found on the prairie or Kansas grassland. \_\_\_\_\_
4. Name a decomposer found on the prairie or Kansas grassland. \_\_\_\_\_



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## Student Worksheet B: Food Chain Worksheet

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



1. Identify the organism(s) that are producers.
2. Identify the organism(s) that are consumers.
3. List one food chain on this prairie food web by writing each organism's name and connecting each organism with a line.
4. Name a prairie animal that fits into the following categories:  
 Herbivore: \_\_\_\_\_ Carnivore: \_\_\_\_\_ Omnivore: \_\_\_\_\_
5. 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

