

Prairie Energy Paths

Trace how food energy moves through a prairie food web.

4.3.b “food webs show the flow of energy within an ecosystem;”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each organism, then write 1, 2, and 3 above grass, grasshopper, and meadowlark to mark one path of food energy.

A Prairie Food Web

- ① On a sunny prairie, bluestem grass captures energy from the Sun and uses it to grow. A grasshopper eats the grass. A cottontail rabbit also eats the grass. These arrows begin a food web: grass → grasshopper and grass → rabbit. Each arrow points toward the organism receiving food energy in this wide prairie habitat each day.
- ② A western meadowlark eats grasshoppers, and a garter snake eats grasshoppers too. The snake may eat a mouse that has eaten grass seeds. A red-tailed hawk can eat rabbits, mice, meadowlarks, and snakes. Because one organism can have several food sources or predators, the connected paths form a web instead of one simple chain here.
- ③ When organisms die, fungi and bacteria break down their remains. They get energy from the dead material. Nutrients return to soil, where grass can use them, but energy does not return to the Sun. At every step, organisms use some energy for living, so less energy is available farther along a path. Food webs show these energy paths.

2 ANSWER WITH EVIDENCE Use the passage

1 What does an arrow in this food web point toward?

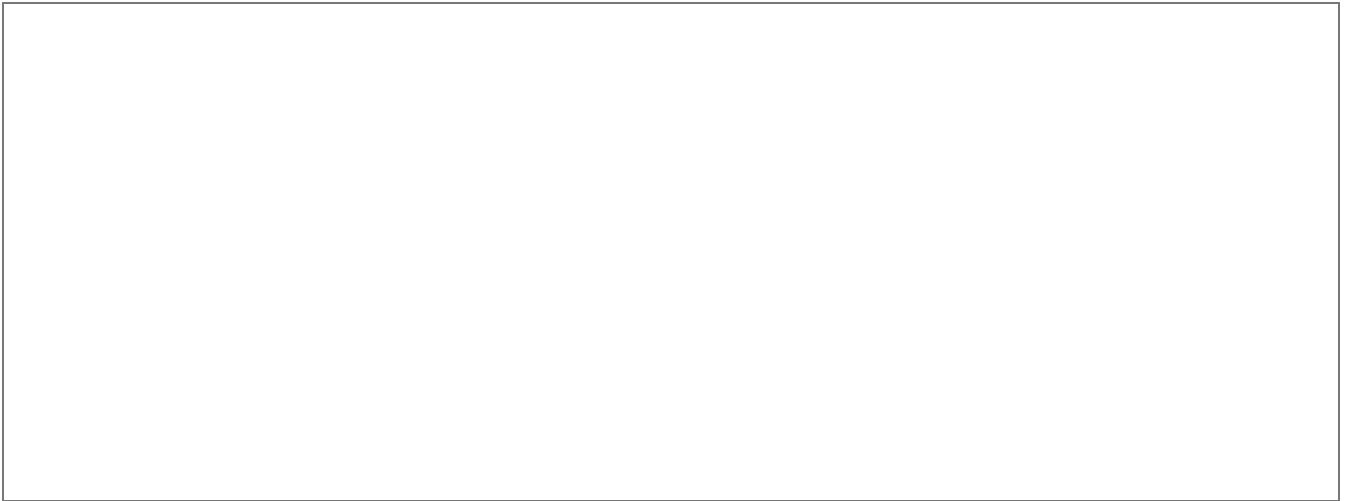
2 Write one energy path from the Sun to the red-tailed hawk that includes a rabbit.

3 Which two animals in the passage eat grasshoppers?

4 How does the red-tailed hawk help make the feeding paths a web instead of one simple chain?

3 YOUR TURN Your own words

In the box, draw a pond food web with arrows that show energy flow. Include the Sun, algae or a plant, at least two animals that eat the algae or plant, and one predator. Show two different paths leading to the predator.



PART 1 • READ AND MARK

Underline each organism, then write 1, 2, and 3 above grass, grasshopper, and meadowlark to mark one path of food energy. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What does an arrow in this food web point toward?	It points toward the organism receiving food energy.
2	Write one energy path from the Sun to the red-tailed hawk that includes a rabbit.	Sun → grass → rabbit → red-tailed hawk.
3	Which two animals in the passage eat grasshoppers?	The western meadowlark and the garter snake eat grasshoppers.
4	How does the red-tailed hawk help make the feeding paths a web instead of one simple chain?	The hawk eats several kinds of prey, including rabbits, mice, meadowlarks, and snakes. This connects several energy paths.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Sun → algae → pond snail → sunfish; Sun → algae → tadpole → sunfish.

Accept arrows that point from food to eater and show energy beginning with the Sun, then a producer. For the drawing, accept any accurate pond organisms that form two connected energy paths to a predator.