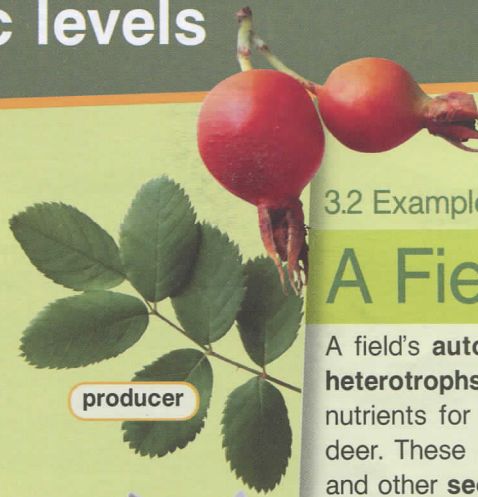


4 Trophic levels



omnivore



producer



primary consumer



secondary consumer



decomposer

3.2 Examples of Ecosystems

A Field Ecosystem

A field's **autotrophs** are grasses and shrubs. The **heterotrophs** are mostly animals. The plants provide nutrients for **primary consumers** like rabbits and deer. These creatures provide nutrients for wolves and other **secondary consumers**.

Some animals fit into more than one **trophic level**. For example, **omnivores** eat **producers** as well as other **consumers**. Foxes and bears are examples of a field's omnivores.

Other creatures only eat plants and animals that are dead. In a field, these **detritus feeders** are small creatures like insects. Very small bacteria and fungi are **decomposers**. They break down dead material to feed producers.

Vocabulary

3 Match the words (1-5) with the definitions (A-E).

- 1 ___ autotroph 4 ___ secondary consumer
 2 ___ heterotroph 5 ___ primary consumer
 3 ___ trophic level

- A any organism that eats other organisms
 B an organism that eats producers
 C an organism's position in a food chain
 D an organism that eats consumers
 E an organism that utilizes nonliving compounds

4 Place the words and phrases from the word bank under the correct heading.

Word BANK

producer omnivore decomposer
 consumer detritus feeder

Get ready!

1 Before you read the passage, talk about these questions.

- 1 What is an example of a producer?
- 2 What type of consumer is a wolf?

Reading

2 Read the textbook entry. Then, mark the following statements as true (T) or false (F).

- 1 ___ Wolves are examples of primary consumers.
- 2 ___ Producers sometimes eat foxes and bears.
- 3 ___ Detritus feeders and decomposers use similar food sources.

Utilizes nonliving compounds	_____
Eats living organisms	_____
Eats dead organisms	_____

- 5 Listen and read the textbook entry again. What are grasses and shrubs?

Listening

- 6 Listen to a conversation between two scientists. Choose the correct answers.

- 1 What is the main idea of the conversation?
- A how to reduce the number of producers
 - B why there are too many rabbits in a population
 - C which trophic level an organism belongs to
 - D how the loss of a consumer affects the ecosystem
- 2 Which organism gets its nutrients from decomposers?
- A rabbit
 - B wolf
 - C hawk
 - D grass

- 7 Listen again and complete the conversation.

Scientist 1: Do you know anything about the crisis in Greenfield Meadow?

Scientist 2: Yes, I'm studying it. 1 _____ rabbits were killed by hunters last year.

Scientist 1: That can't be good for the ecosystem. They're the 2 _____.

Scientist 2: I know. Now the secondary consumers don't have 3 _____.

Scientist 1: That must affect the 4 _____ of wolves and hawks.

Scientist 2: It does. And without those animals, the 5 _____ won't have much to eat either.

Scientist 1: And then the producers, 6 _____, don't get enough nutrients. Wow, that's bad.

Scientist 2: Yeah, we really need to increase the rabbit population.

Speaking

- 8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

That can't be good ...

Now the ... don't have enough ...

That must affect ...

Student A: You are a scientist. Talk to Student B about:

- a problem in an ecosystem
- how the problem affects trophic levels
- what needs to be done

Student B: You are a scientist. Talk to Student A about a problem in an ecosystem.

Writing

- 9 Use the textbook entry and the conversation from Task 8 to fill out the environmental report.

Public Environmental Report

Area: _____

Recent changes in the ecosystem: _____

How changes affect trophic levels in the ecosystem: _____

detritus feeder

autotroph