

Exercise walk-through

Trophic Levels ■ 1.9

eXercise

You must be able to

- name the trophic levels (**producers** 生产者, **consumers** 消费者, **decomposers** 分解者)
- classify an organism by its level
- explain the role of decomposers

Method — The trophic levels

- **Producers** (autotrophs) — make their own food (plants, algae).
- **Primary consumers** — herbivores that eat producers.
- **Secondary/tertiary consumers** — carnivores that eat other consumers.
- **Decomposers** — break down dead matter, recycling nutrients.

Method — Classifying an organism

Ask what it eats: a rabbit eats plants (primary consumer); a fox eats the rabbit (secondary consumer); a mushroom breaks down dead matter (decomposer).

Method — Decomposers recycle nutrients

Decomposers (bacteria, fungi) release nutrients from dead organisms back into the soil/water, making them available to producers again — essential for nutrient cycles.

Method — A worked chain

grass (producer) → grasshopper (primary consumer) → frog (secondary consumer) → snake (tertiary consumer).

Practice 2.1 ■ 1 mark

What is a producer?

Solution 2.1

Worked steps

An organism that makes its own food (e.g. by photosynthesis) **B1**.

Practice 2.2 ■ 1 mark

Classify a rabbit that eats grass.

Solution 2.2

Method: Classifying an organism

Worked steps

Primary consumer (herbivore) **B1**.

Practice 2.3 ■ 1 mark

What is the role of decomposers?

Solution 2.3

Worked steps

They break down dead matter and recycle nutrients back to the environment **B1**.

Exam-style 3.1 ■ 1 mark

An organism that breaks down dead matter and recycles nutrients is a

- A** producer
- B** primary consumer
- C** decomposer
- D** tertiary consumer

Solution 3.1

Method: Classifying an organism

- A producer
- B primary consumer
- C decomposer
- D tertiary consumer



Worked steps

C — decomposer.

Exam-style 3.2 ■ 2 marks

In the chain grass → grasshopper → frog → snake:

- (a) Identify the producer and the secondary consumer.
- (b) State the trophic level of the snake.

Solution 3.2

Method: A worked chain

Worked steps

(a) Producer: grass; secondary consumer: frog **B1** **B1**. (b) Tertiary consumer **B1**.

Exam-style 3.3 ■ 2 marks

Explain why decomposers are essential for nutrient cycling.

Solution 3.3

Method: Decomposers recycle nutrients

Worked steps

They release the nutrients locked in dead organisms back into the soil/water, making them available to producers again, so the cycle continues **M1** **A1**.