

1.9 Trophic Levels

Name: _____ Class: _____ Date: _____ **Total: 9 marks**

KEY WORDS decomposers 分解者 • producers 生产者 • consumers 消费者
• trophic levels 营养级

Objective

Build the skills to answer exam questions on **trophic levels**.

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

1 Worked examples

Study these first. Each one shows the method for a question type used later — follow the steps and you can do the Practice and Exam-style questions yourself.

■ 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.

■ 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).

■ 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.

■ A worked chain

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

2 Practice

Now apply the methods above.

2.1 What is a producer? [1]

2.2 Classify a rabbit that eats grass. [1]

2.3 What is the role of decomposers? [1]

3 Exam-style questions

3.1 An organism that breaks down dead matter and recycles nutrients is a [1]

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

3.2 In the chain grass → grasshopper → frog → snake:

(a) Identify the producer and the secondary consumer. [2]

(b) State the trophic level of the snake. [1]

3.3 Explain why decomposers are essential for nutrient cycling. [2]

Solutions

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

2.2 Primary consumer (herbivore).

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

3.1 C — decomposer.

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

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