

3.1 Generalist and Specialist Species

Name: _____ Class: _____ Date: _____ **Total: 10 marks**

KEY WORDS generalist 广食性 • specialist 狭食性 • niche 生态位

Objective

Build the skills to answer exam questions on **generalist and specialist species**.

You must be able to:

- distinguish a **generalist** 广食性 from a **specialist** 狭食性 species
- link each to a broad or narrow **niche** 生态位
- predict which copes better with change

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.

■ Generalists vs specialists

- A **generalist** has a **broad niche** — eats many foods, lives in many habitats (e.g. raccoon, cockroach).
- A **specialist** has a **narrow niche** — depends on specific foods or conditions (e.g. panda eating bamboo, koala eating eucalyptus).

■ Coping with change

Generalists tolerate environmental change well because they have alternatives. **Specialists** are more vulnerable — if their one resource declines, they cannot switch.

■ Stable vs changing environments

Specialists often thrive in **stable** environments (efficient at their niche); generalists do better in **changing** or disturbed environments.

■ A worked prediction

If a forest is disturbed, a generalist raccoon adapts easily, but a specialist panda struggles because its bamboo may be lost.

2 Practice

Now apply the methods above.

2.1 Does a generalist have a broad or narrow niche? [1]

2.2 Give one example of a specialist species. [1]

2.3 Which type copes better with environmental change? [1]

3 Exam-style questions

3.1 A specialist species is most vulnerable to [1]



- A** a stable environment
- B** loss of its specific resource
- C** having many food options
- D** abundant resources

3.2 A panda eats almost only bamboo, while a raccoon eats many foods.

(a) Classify each as generalist or specialist. [2]

(b) Explain which is more likely to survive habitat disturbance. [2]

3.3 Explain why specialists can outcompete generalists in a stable environment. [2]