

# Biodiversity — Measurement, Importance and Ecosystem Stability

Use this worksheet after reading the lesson to practise the key ideas and prove you can meet the success criteria.

Name \_\_\_\_\_  
Date \_\_\_\_\_  
Class \_\_\_\_\_

## 1. Key Ideas

Since European settlement, Australia has lost 34 mammal species — the highest mammal extinction rate of any country in the world. Each loss was not just a name struck from a list. The lesser bilby, gone. The toolache wallaby, gone. The desert rat-kangaroo, gone. These species were pollinators, seed dispersers, soil engineers, and prey for larger animals. Their extinction has weakened the ecosystems they left behind. This lesson asks why biodiversity matters and how we measure what we are losing.

- Key facts and terms for Biodiversity — Measurement, Importance and Ecosystem Stability
- How the main ideas in Biodiversity — Measurement, Importance and Ecosystem Stability connect

## 2. Success Criteria

By the end, you should be able to:

- Key facts and terms for Biodiversity — Measurement, Importance and Ecosystem Stability
- Where this lesson fits in Module 4
- How the main ideas in Biodiversity — Measurement, Importance and Ecosystem Stability connect

## 3. Key Terms

### Key idea

The central concept from Biodiversity — Measurement, Importance and Ecosystem Stability.

### Evidence

Information, observations or calculations used to support an answer.

### Explain

Give a reasoned answer that links cause and effect.

### Apply

Use a learned idea in a new example, problem or scenario.

## 4. Activity: Build the Lesson Map

Use the lesson to complete the table. Keep answers brief but specific.

Prompt	Your answer
Main concept	
Important example	
Common mistake to avoid	
How this links to the next lesson	

## 5. Short Answer Questions

1. Q1. A rainforest has 200 tree species, each represented by roughly the same number of individuals. A plantation has 10 tree species, with one species making up 90% of all individuals. Predict which forest would recover faster after a cyclone, and explain your reasoning using the concept of redundancy.

**BAND 3** **3 MARKS**

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2. Q2. Australia has lost 34 mammal species since 1788. Predict three ecological consequences of these extinctions, other than the simple absence of those animals. Consider their roles in food webs and ecosystems.

**BAND 4** **3 MARKS**

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3. Q1. A rainforest has 200 tree species, each represented by roughly the same number of individuals. A plantation has 10 tree species, with one species making up 90% of all individuals. Predict which forest would recover faster after a cyclone, and explain your reasoning using the concept of redundancy.

**BAND 5** **3 MARKS**

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## 6. Extend: Apply the Idea

BAND 5/6

5 MARKS

**A student gives a memorised answer about Biodiversity — Measurement, Importance and Ecosystem Stability but does not use evidence or reasoning.**

Improve the answer by writing a stronger response that uses accurate terminology, a relevant example and a clear explanation.

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## 7. Multiple Choice

1. What is the best first step when answering a question about Biodiversity — Measurement, Importance and Ecosystem Stability?

- A. Identify the key concept being tested
- B. Write every fact from memory
- C. Ignore the command word
- D. Skip examples and evidence

2. Which answer would show stronger understanding of Biodiversity — Measurement, Importance and Ecosystem Stability?

- A. An answer with accurate terms and reasoning
- B. A copied definition only
- C. A single-word response
- D. An answer with no example

3. What should you do if a question asks you to explain?

- A. Link the idea to a reason or cause
- B. List unrelated facts
- C. Only draw a diagram
- D. Write the shortest possible answer

## 8. Success Criteria Proof

Finish with evidence that you can do each success criterion.

### SUCCESS CRITERION 1

**Prove that you can: Key facts and terms for Biodiversity — Measurement, Importance and Ecosystem Stability**

**BAND 3** **2 MARKS**

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### SUCCESS CRITERION 2

**Prove that you can: Where this lesson fits in Module 4**

**BAND 4** **3 MARKS**

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### SUCCESS CRITERION 3

**Prove that you can: How the main ideas in Biodiversity — Measurement, Importance and Ecosystem Stability connect**

**BAND 5** **4 MARKS**

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**One thing I still need help with:**

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