BIOLOGY YEAR 11 - MODULE 3 - LESSON 15

Measuring Biodiversity

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

If Daintree has 180 bird species and Kosciuszko has 60, does that automatically make Daintree more biodiverse? Not necessarily. This lesson shows why biodiversity measurement needs both richness and evenness, and how Simpson's Index lets us compare communities quantitatively instead of relying on raw species counts alone.

- Key facts and definitions for Measuring Biodiversity
- The concepts and principles underlying Measuring Biodiversity

2. Success Criteria

By the end, you should be able to:

- Key facts and definitions for Measuring Biodiversity
- Relevant terminology and conventions
- The concepts and principles underlying Measuring Biodiversity

3. Key Terms

community and the rest
rare, what do you predict happens to its biodiversity score?

How evenly individuals
distributed across the species present

Why quantitative indices
useful but incomplete

Homeostasis
the body stays exactly the same all the time

Understanding how systems interact
essential for HSC success

how balanced the community
across those species

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. Explain this lesson goal in your own words: "Key facts and definitions for Measuring Biodiversity". Use one specific example from the lesson.

BAND 3 2 MARKS

2. Apply this idea to a new example: "Relevant terminology and conventions". Show your reasoning clearly.

BAND 4 3 MARKS

3. Analyse why this idea matters for understanding Measuring Biodiversity: "The concepts and principles underlying Measuring Biodiversity".

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Measuring Biodiversity 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.

7. Multiple Choice

1. What is the best first step when answering a question about Measuring Biodiversity?

☐ 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 Measuring Biodiversity?

☐ 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 definitions for Measuring Biodiversity

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: Relevant terminology and conventions

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: The concepts and principles underlying Measuring Biodiversity

BAND 5 4 MARKS

One thing I still need help with: