BIOLOGY YEAR 11 - MODULE 4 - LESSON 1

Introduction to Ecosystems — Components, Structure and the Web of Life

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

A single hectare of Australian coastal wetland contains over 10,000 species interacting through nutrient exchange, competition and predation. Every organism occupies a specific role, and the removal of just one species can reshape the entire community. Understanding how ecosystems are structured is the foundation of everything in Module 4.

- The definition of an ecosystem and its two main components
- Why ecosystems require a continuous energy input

2. Success Criteria

By the end, you should be able to:

- The definition of an ecosystem and its two main components
- The levels of biological organisation from individual to biosphere
- The major biotic and abiotic components of ecosystems

3. Key Terms

Ecosystem
A community of organisms interacting with each other and their non-living environment.

Biotic factor
A living or once-living component of an ecosystem (e.g. plants, animals, bacteria).

Abiotic factor
A non-living physical or chemical component of an ecosystem (e.g. sunlight, temperature, pH).

Producer
An organism that synthesises organic compounds from inorganic sources using energy (photoautotroph or chemoautotroph).

Consumer
An organism that obtains energy by eating other organisms (herbivore, carnivore, omnivore).

Decomposer
An organism that breaks down dead organic matter and returns nutrients to the soil or water.

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: "The definition of an ecosystem and its two main components". Use one specific example from the lesson.

BAND 3 2 MARKS

2. Apply this idea to a new example: "The levels of biological organisation from individual to biosphere". Show your reasoning clearly.

BAND 4 3 MARKS

3. Analyse why this idea matters for understanding Introduction to Ecosystems — Components, Structure and the Web of Life: "The major biotic and abiotic components of ecosystems".

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Introduction to Ecosystems — Components, Structure and the Web of Life 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 Introduction to Ecosystems — Components, Structure and the Web of Life?

☐ 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 Introduction to Ecosystems — Components, Structure and the Web of Life?

☐ 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: The definition of an ecosystem and its two main components

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: The levels of biological organisation from individual to biosphere

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: The major biotic and abiotic components of ecosystems

BAND 5 4 MARKS

One thing I still need help with: