

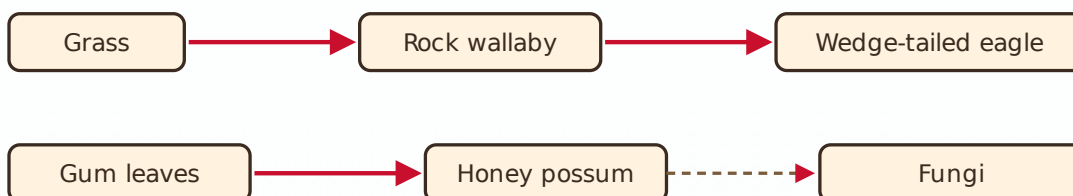
Marking Guide and Model Answers — Build an Ecosystem (A1-BIO)

Teacher marking pack for the Biological sciences summative 'Build an Ecosystem'. Contains a full model answer / exemplar response for every part of the task, a comprehensive annotated marking guide showing how to apply each of the four rubric criteria (with what High, Sound and Limited look like and common evidence to look for), a worked example of an on-balance judgement, and notes on marking adjusted (ABLEWA) responses. For teacher and moderation use only — not given to students.

This pack supports fair, consistent marking of the **Build an Ecosystem** task. It contains a model exemplar, an annotated marking guide for each rubric criterion, a worked on-balance judgement, and notes for marking adjusted responses. It is for teacher and moderation use — it is not shown to students before the task.

Model exemplar response (a "High" answer)

Part A — the diagram. A tree-based bush ecosystem showing: a gum tree and grass (producers); a honey possum and a rock wallaby (consumers) and a wedge-tailed eagle (a second-level consumer); and a mushroom/fungus and an earthworm (decomposers). Two clear food chains are drawn with arrows pointing to the eater:



Part B — roles table (model):

Living thing	Role
Gum tree / grass	Producer
Rock wallaby / honey possum	Consumer
Wedge-tailed eagle	Consumer (eats other animals)
Fungus / earthworm	Decomposer

Part C (model). "The grass is a producer — it uses energy from the Sun to make its own food. The rock wallaby is a consumer that eats the grass, so energy passes from the grass to the

wallaby. The wedge-tailed eagle eats the wallaby, so the energy passes on again. The fungus is a decomposer: when a plant or animal dies it breaks the body down and returns the nutrients to the soil, which the grass uses to grow. So energy and nutrients keep cycling."

Part D (model). "If the grass disappeared, the rock wallaby would have much less to eat, so there would be fewer wallabies. Then the wedge-tailed eagle would have fewer wallabies to hunt, so it might go hungry or leave. The whole ecosystem is connected, so removing one producer affects the animals above it in the chain."

Comprehensive marking guide — applying the four criteria

1. ROLES: PRODUCERS, CONSUMERS AND DECOMPOSERS (30)

Band	What you should see
High (5–6)	Ecosystem includes producers, consumers <i>and</i> at least one decomposer, all correctly labelled with roles.
Sound (3–4)	All three types present; most roles labelled correctly (a slip or two).
Limited (1–2)	Some living things present; few or incorrect role labels; decomposer often missing.

Look for / common issues: the decomposer is the most-often-omitted role; a "Limited" script frequently has only plants and one animal. Do not penalise unusual but valid choices (e.g. a beetle as a decomposer).

2. FOOD CHAINS AND THE FLOW OF ENERGY (30)

Band	What you should see
High (5–6)	Two or more accurate chains; arrows correctly point to the eater; energy flow explained beginning with the Sun.
Sound (3–4)	Chains with mostly correct arrows; energy flow described but may not start at the Sun.
Limited (1–2)	A simple chain; arrows may be reversed; energy flow unclear.

Look for / common issues: reversed arrows are the single most common error — check direction carefully. Crediting "starts with the Sun" distinguishes High from Sound.

3. ECOLOGICAL RELATIONSHIPS AND CHANGE (25)

Band	What you should see
High (5–6)	Clear decomposer role (returns nutrients) <i>and</i> well-reasoned flow-on effects when a living thing is removed.
Sound (3–4)	Explains the decomposer's role and describes one likely effect of removal.
Limited (1–2)	States a role and/or an effect with little reasoning.

Look for: the word "because" and a traced consequence ("fewer grass → fewer wallabies → hungry eagle") signals High reasoning.

4. COMMUNICATION AND SCIENTIFIC VOCABULARY (15)

Band	What you should see
High (3)	Clear, logical ideas using correct terms (producer, consumer, decomposer, energy, nutrients, ecosystem) throughout.
Sound (2)	Clear with some scientific vocabulary.
Limited (1)	Unclear, or little scientific vocabulary.

Worked on-balance judgement

A student draws two correct chains with right-way arrows and all roles labelled including a worm (Roles 6/6, Food chains 5/6), explains energy from the Sun and the worm's job well, and gives a two-step removal effect (Ecological relationships 5/6), using good vocabulary but with a couple of vague sentences (Communication 2/3). Total ≈ 18/21 → **High** overall. The occasional vague sentence does not pull a strong, accurate response down to Sound.

Marking adjusted (ABLEWA) responses

Where a student used the additional-support approach (card-based build, AAC, scribed or symbol-choice answers), mark the *science evidence*, not the mode. A correctly placed card chain with an arrow to the eater is valid evidence for the Food-chain criterion; a yes/no reasoned response to a "what if" is valid for Ecological relationships at an emerging level. Record the adjustments beside the result so the judgement can be moderated. Refer to the lesson's additional-support approach for the Stage A–D descriptors.

Before marking the class set, mark 3–4 scripts across the range together and agree annotations, so "High / Sound / Limited" mean the same thing for everyone.