

Every free-response point is a specific claim, a set-up with units, or a proposal someone could actually carry out. Everything below is a rule the readers apply.

Calculations and the task verbs

✗ Writing a percentage-change answer with no set-up.

✓ **Show the whole expression, including the multiplication by 100.**

The guidelines award a point for the correct set-up, and require the $\times 100$ to be visible.

SG 2 years

✗ Giving a calculated answer with no units.

✓ **Carry the units through the working and attach them to the answer.**

The guidelines state the set-up must include units to earn the point.

SG 2 years

✗ Answering IDENTIFY with a paragraph, or EXPLAIN with a name.

✓ **IDENTIFY names it; DESCRIBE gives its characteristics; EXPLAIN gives the cause; PROPOSE gives a specific action.**

The verbs are defined in the course and answering the wrong one earns nothing.

CED Skill 1

✗ Proposing a solution in general terms – ‘reduce pollution’.

✓ **Name the action, who does it, and what it changes: ‘mandate carbon monoxide detectors in all homes’.**

The guidelines print exactly that kind of specific, actionable proposal as the response that earns the point.

SG2023

✗ Justifying a solution by saying it helps the environment.

✓ **Name the drawback too, when asked: hydrogen fuel cells cost more to manufacture and their hydrogen takes energy to obtain.**

The guidelines print the accepted disadvantages, and a one-sided answer misses the point that asks for them.

SG2023

■ Where a question supplies data, use its numbers in your answer. A claim without them cannot earn the analysis point.

CED Skill 5

1 · The Living World: Ecosystems

✗ Saying energy ‘cycles’ through an ecosystem.

✓ **Energy FLOWS through and is lost as heat; matter cycles.**

The distinction is foundational and reversing it makes the trophic reasoning wrong.

CED 1.8

✗ Using 10% efficiency without saying what it is 10% of.

✓ **About 10% of the energy at one trophic level is available at the next.**

The rule is only usable when the levels are named.

CED 1.9

2 · The Living World: Biodiversity

✗ Saying an ecosystem with more organisms has higher biodiversity.

✓ **Biodiversity depends on the number of SPECIES and their evenness, not the head count.**

Richness and evenness are the assessed components of the measure.

CED 2.1

✗ Treating primary and secondary succession as the same process.

✓ **Primary starts with no soil; secondary follows a disturbance that left the soil.**

The starting condition determines the timescale, which is what questions ask about.

CED 2.5

3 · Populations

✗ Reading an age-structure diagram without checking the base.

✓ **A wide base means rapid growth; a narrow one means decline.**

The shape is the answer, and it is read from the youngest cohorts.

CED 3.6

✗ Calculating a doubling time without the rule of 70.

✓ **Doubling time in years is approximately 70 divided by the percentage growth rate.**

It is one of the few formulas the course expects from memory.

$$= 70 \div$$

CED 3.5

5 · Land and Water Use

✗ Describing a land-use practice without its environmental consequence.

✓ **Name the practice and the effect: tilling exposes soil, so erosion increases.**

The consequence is what the explanation point is for.

CED 5.3

6 · Energy Resources and Consumption

✗ Calling all non-fossil energy renewable.

✓ **Nuclear is non-renewable; check the fuel, not the emissions.**

The classification is by whether the source is replenished, which is a standard discriminator.

CED 6.4

7 · Atmospheric Pollution

✗ Confusing tropospheric with stratospheric ozone.

✓ **In the stratosphere it shields us; near the ground it is a pollutant.**

The two are the same molecule with opposite significance, and questions rely on that.

CED 7.7

✗ Saying a thermal inversion causes pollution.

✓ **It TRAPS pollution that is already being emitted, by preventing vertical mixing.**

The mechanism is the point; the inversion produces nothing itself.

CED 7.5

8 · Aquatic and Terrestrial Pollution

✗ Explaining eutrophication as ‘fertiliser kills fish’.

✓ **Nutrients feed an algal bloom, the algae die, decomposers use the oxygen, and the fish suffocate.**

Every step in that chain is a separate scored idea.

CED 8.6

✗ Saying a substance biomagnifies because there is a lot of it.

✓ **It biomagnifies because it is persistent and fat-soluble, so it concentrates up the food chain.**

The properties are what the question is testing.

CED 8.9

9 · Global Change

✗ Using ozone depletion and the greenhouse effect interchangeably.

✓ **They are separate problems with separate causes and separate treaties.**

Conflating them is a named misconception and makes both answers wrong.

CED 9.4

✗ Saying the greenhouse effect is harmful.

✓ **The natural effect keeps the planet habitable; the ENHANCED effect is the problem.**

The distinction is course content and the unqualified claim is scored as incorrect.

CED 9.3

4 · Earth Systems and Resources

✗ Naming a soil horizon without saying what is in it.

✓ **O is organic litter, A is topsoil with humus, B is the zone of accumulation, C is weathered parent rock.**

The horizons are assessed content and questions ask what each contains.

CED 4.5

✗ Confusing weather with climate.

✓ **Weather is the condition now; climate is the pattern over decades.**

The distinction underlies the global-change unit and is a standard discriminator.

vs

CED 4.4

✗ Explaining El Niño as ‘warm water’.

✓ **Weakened trade winds let warm water move east, changing rainfall on both sides of the Pacific.**

The mechanism is what lets you predict the regional effects the question asks for.

CED 4.8

5 · Land and Water Use

✗ Saying irrigation is bad for soil.

✓ **Name the process: evaporation leaves salts behind, so salinisation reduces fertility.**

The mechanism is the explanation point.

CED 5.6

✗ Describing overfishing as ‘catching too many fish’.

✓ **Catching faster than the stock can reproduce, so the population and the catch both fall.**

The rate comparison is what makes it unsustainable.

CED 5.12

6 · Energy Resources and Consumption

✗ Comparing energy sources by cost alone.

✓ **Compare on several axes: emissions, land use, reliability, and cost.**

The trade-off questions expect more than one dimension.

CED 6.6

✗ Saying a power station is ‘inefficient’ with no figure.

✓ **State the conversion: useful energy out over energy in, as a percentage.**

Efficiency is a calculated quantity in this course.

CED 6.3

7 · Atmospheric Pollution

✗ Confusing primary and secondary air pollutants.

✓ **A primary pollutant is emitted directly; a secondary one forms in the atmosphere, like tropospheric ozone.**

The control measure depends on which it is.

CED 7.2

✗ Explaining acid rain as ‘pollution making rain acidic’.

✓ **Sulfur and nitrogen oxides react with water to form sulfuric and nitric acid.**

The named reactants are the scored content.

CED 7.9

9 · Global Change

✗ Saying an invasive species is ‘bad for nature’.

✓ **Say what it does: outcompetes a native species for a resource, so native populations fall.**

The competitive mechanism is the explanation point.

CED 9.9