

Foundation Separate version — Higher Tier (★) questions removed.

Q1. Explain why removing a keystone predator can have wide-ranging ecosystem effects.

[3 marks]

Q2. Explain why only ~10% of energy transfers from one trophic level to the next.

[3 marks]

Total: 6 marks

Q1 (3 marks)

Explain why removing a keystone predator can have wide-ranging ecosystem effects.

- Prey species increase without predation pressure [1]
- Prey may overgraze/over-consume producers → collapse of vegetation [1]
- Other species depending on the same resources also affected — cascade through food web [1]

Q2 (3 marks)

Explain why only ~10% of energy transfers from one trophic level to the next.

- Energy lost through respiration (heat) [1]
- Energy used for movement and other metabolic processes [1]
- Energy lost in undigested waste (faeces) — not available to next level [1]