Edexcel (B) Biology A-level

10.2 - Energy transfer through ecosystems

Flashcards

How is energy transferred between trophic levels?

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Only a small amount of the energy available to an organism is transferred to the next trophic level. Some is never taken in, some is lost before being transferred.

What is meant by net and gross primary productivity?

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Gross primary productivity= energy taken in by primary consumers.

Net primary productivity= energy transferred into biomass (available to the next trophic level).

Why is some energy never taken in at each trophic level?

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- Some parts of food aren't eaten.
- Some parts of food are indigestible.
- Plants can't use all light energy as some is in the wrong wavelength.

Why is some energy lost at each trophic level?

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Respiration; it is lost as heat.

How are nutrients recycled within an ecosystem?

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By microorganisms.

Outline the roles of microorganisms in the nitrogen cycle.

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- Nitrogen-fixing bacteria in roots/soil convert gaseous nitrogen into ammonia.
- Saprobionts decompose nitrogenous waste into ammonium compounds.
- Nitrifying bacteria convert ammonium compounds into nitrates and nitrites.