# Edexcel (B) Biology A-level

## 10.1 - The nature of ecosystems

Flashcards

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# Define ecosystem.



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# Define ecosystem.

All the organisms living in a particular area, and all the non-living conditions found there. Can vary from very large e.g. biome, to very small e.g. microhabitat.



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# Define and name the trophic levels.



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# Define and name the trophic levels.

Describes an organism's feeding relationships with other organisms i.e. its position in a food chain. Producer, primary consumer, secondary consumer, tertiary consumer, decomposer.



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Give three ways can we represent ecosystem structure.



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Give three ways can we represent ecosystem structure.

- Pyramids of number (counting)
- Pyramids of biomass (weighing)
- Pyramids of energy



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Give pros and cons of the three pyramids.



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Give pros and cons of the three pyramids.

- Number = easiest to measure, but can be distorted by large organisms.
- Biomass = more accurate, but dry mass has to be used.
- Energy = most accurate, but hardest to measure.



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Suggest methods of assessing abundance and distribution of organisms.


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Suggest methods of assessing abundance and distribution of organisms.

- Quadrats; square frames placed at random in area to be investigated.
- Transects; line or belt that runs across the area to be investigated.



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Suggest different ways abundance can be quantified.



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Suggest different ways abundance can be quantified.

- Percentage cover
- Frequency (individual counting)
- ACFOR scale (abundant, common, frequent, occasional, rare)



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# Why might we calculate a Spearman's rank correlation coefficient?


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# Why might we calculate a Spearman's rank correlation coefficient?

To measure correlation between two variables, i.e. the extent to which changing one variable affects the other variable.



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# Explain how Spearman's rank results are interpreted.



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# Explain how Spearman's rank results are interpreted.

Closer to 1= more positive correlation.

Closer to -1= more negative correlation.

Around 0= no correlation.



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# Why might we calculate a t-test?



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# Why might we calculate a t-test?

To determine if the means (averages) of two sets of data are significantly different from each other.



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# Explain how t-test results are interpreted.



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# Explain how t-test results are interpreted.

The t value obtained is compared to a critical value (found in a table) for a particular p value chosen by the researcher. If the t value is greater than the critical value, the difference is said to be statistically significant.


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