

Edexcel Biology IGCSE

4.4B - Distribution and Biodiversity

Flashcards

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How should a field be set up for random sampling?



How should a field be set up for random sampling?

By laying two tape measures at right angles on the field to set up a coordinate system.



How should students decide where the quadrats are placed?



How should students decide where the quadrats are placed?

By using a random-number generation to produce coordinates. Place quadrat down at the coordinates using the tape measure as a guideline.



What is the formula for estimating population size?



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$$\left(\frac{\text{Total area}}{\text{area of quadrat}} \right) \times \text{mean number of individuals counted per quadrat}$$



State the controlled variables of this practical.



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- Size of quadrat
- Coordinate system
- Number of quadrats per site
- Area of sites



Why does a random number generator need to be used?



Why does a random number generator need to be used?

To avoid bias in random sampling.



State a hazard and safety precaution involved in this practical.



State a hazard and safety precaution involved in this practical.

Certain plants may cause allergic reactions. Wear gloves when if affected and wash hands after practical.



When is a transect used?



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When there is an ecological gradient in the sampling area.



Outline the procedure to sampling using a transect line.



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1. Lay down a tape measure along the ecological gradient.
2. Place the quadrat at the '0' mark. Record the number of the required species.
3. Repeat the process 5m up the tape measure until the end of the transect.
4. Plot a graph of 'number of individuals' against the selected factor.

