

Edexcel Biology GCSE

CP08 - Quadrats and Transects

Flashcards

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When should random sampling be used?



When should random sampling be used?

When the sampling area is regular i.e. organisms are mostly evenly distributed.



When is a transect line used?



When is a transect line used?

When the sampling site has an ecological gradient.



Outline the procedure to carry out random sampling.



Outline the procedure to carry out random sampling.

1. Set up 2 tape measures at right angles on the field.
2. Obtain coordinates using a random number generator.
3. Place the quadrat down at the coordinates using the tape measures as a guide.
4. Record the number of the required species in the quadrat.
5. Repeat to take 9 more samples.



State the formula to estimate population size.



State the formula to estimate population size.

Total area / area of quadrat x mean no.
of individuals in a quadrat



Why should a random number generator be used to find the coordinates?



Why should a random number generator be used to find the coordinates?

To avoid bias in random sampling.



Outline the procedure for systematic sampling using a transect line.



Outline the procedure for systematic sampling using a transect line.

1. Lay down a transect line along an ecological gradient.
2. Place the quadrat at the '0' end of the tape measure, touching the '0' mark with one corner.
3. Record the number of individuals of the required species.
4. Repeat every 5m up the tape measure until the end is reached.
5. Plot a graph of 'number of individuals' against the changing factor.



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 or cuts, wear gloves when handling.



How should organisms on the edge of quadrats be accounted for?



How should organisms on the edge of quadrats be accounted for?

Select two edges eg. top and right edges.

Organisms on the edge of those 2 edges will be recorded, while others will not.

