OCR (A) Biology GCSE

PAG 03 - Sampling Techniques

Flashcards

How should a field be set up for random sampling?

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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?

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

How is the population size for the site measured?

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Population size = total area / area of quadrat x mean number of individuals counted in a 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 or stings. Wear gloves when handling.

When is a transect used?

When is a transect used?

When there is an ecological gradient in the sampling area.

State the two types of sampling using a transect.

State the two types of sampling using a transect.

Continuous and interrupted.

Give an example of an abiotic factor that may change along a transect.

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Light intensity

Compacting

Soil pH

Moisture content

Temperature

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.