

AQA Biology GCSE

RP9 - Field investigation

Flashcards

This work by [PMT Education](https://www.pmt.education) is licensed under [CC BY-NC-ND 4.0](https://creativecommons.org/licenses/by-nc-nd/4.0/)



How would you use random sampling to estimate the population size of a plant species?



How would you use random sampling to estimate the population size of a plant species?

- Create a grid of the area using tape measures
- Use a random number generator to generate coordinates
- Set down quadrat at coordinates and record number of required species within quadrat
- Repeat using many sampling sites
- Estimate population size: $\text{area sampled} / \text{total area} \times \text{number of plants species counted}$



Why would you use a random number generator to determine coordinates?



Why would you use a random number generator to determine coordinates?

To avoid bias and obtain representative results



What is random sampling?



What is random sampling?

Sampling technique in which each sample has an equal probability of being chosen



What is systematic sampling?



What is systematic sampling?

Sampling technique where there is a fixed, periodic interval between consecutive samples



Describe how you would use continuous sampling to investigate the effect of an abiotic factor in the distribution of a plant species



Describe how you would use continuous sampling to investigate the effect of an abiotic factor in the distribution of a plant species

- Create hypothesis on the effect of the change in an abiotic factor on the distribution of a plant species
- Lay tape measure along an area with an ecological gradient
- Place quadrat at start and count number of plants
- Repeat at 5m intervals along the transect
- Record the value of the abiotic factor eg. light intensity at each sampling site
- Produce a graph of plant numbers (y) against the abiotic factor (x)

