

WJEC England Biology

A-level

SP C1 05 - Sampling Techniques

Flashcards

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List 3 abiotic factors.



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Light intensity

Humidity

Temperature

Wind speed

Water supply

Day length

Nutrient supply

Rainfall



List 3 biotic factors.



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Competition for resources

Predation

Disease



How is percentage cover calculated?



How is percentage cover calculated?

Use a quadrat with squares. Count how many squares the required species is present in. Only count a square if more than half of the square is covered.



Outline the procedure to random sampling at 2 different sites.



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1. Choose an area to take samples from. Use a random number generator to generate 20 sets of random coordinates.
2. Use two tape measures to create a set of axes off which coordinates can be read.
3. Place the quadrat at each of the coordinates, placing the bottom left corner on the coordinate every time. Record the percentage cover for the chosen species.
4. After sampling at all 20 coordinates, repeat steps 1-3 at another different site.



How can the results from the 2 sites be tested?



How can the results from the 2 sites be tested?

Use a statistical test - T test, which compares 2 means.



In which type of area is the appropriate sampling method a transect?



In which type of area is the appropriate sampling method a transect?

A site where there is a clear ecological gradient.



Outline the procedure to sampling using a transect.



Outline the procedure to sampling using a transect.

1. Lay a tape measure along the ecological gradient.
2. Place a quadrat at the 0m mark and count the number of organisms, or find percentage coverage. Also take a measurement of the independent variable at the site, eg. light intensity.
3. Repeat step 2, placing the quadrat every 2 metres down the transect to take samples until you have taken 10 along the 20m line.
4. Repeat steps 1-3 in different areas at the site with the same environmental gradient being investigated.



Which statistical test is suitable for correlating the results from a transect line?



Which statistical test is suitable for correlating the results from a transect line?

Spearman's Rank Coefficient.

