

WJEC England Biology

A-level

SP C3 01a - Stomatal Numbers

Flashcards

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What are stomata?



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Pores surrounded by 2 guard cells in the aerial parts of the leaf.



What is the function of stomata?



What is the function of stomata?

They open to allow gas exchange (carbon dioxide to diffuse in, oxygen to diffuse out) for photosynthesis.



How should leaf be prepared to find the number of stomata?



How should a leaf be prepared to find the number of stomata?

Peel off the epidermal layer of the leaf, or make a replica of the leaf using PVA glue or nail polish. Observe using a microscope.



How should the stomata distribution be estimated?



How should the stomata distribution be estimated?

Count the number of stomata 3 different fields of view and take a mean.

Find the area of the field of view.

Distribution = mean number of stomata in each field of view / area of field of view



How can the area of the field of view be calculated?



How can the area of the field of view be calculated?

Calibrate the eyepiece graticule using a stage micrometer.

Measure the diameter of the field of view.

Find the radius and use πr^2 to calculate the area.



State factors that may affect stomatal distribution.



State factors that may affect stomatal distribution.

Habitat of plant

Growth habit of plant

Upper/lower epidermis of leaf

