

# WJEC Wales Biology

## A-level

### SP Unit 2 02a - Stomatal Numbers

#### Flashcards



# What are stomata?



## What are stomata?

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 a 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.

Use  $\pi r^2$  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

