

WJEC Wales Biology GCSE

SP1.5B - Transpiration

Flashcards

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What is transpiration?



What is transpiration?

The loss of water vapour from aerial parts of the plant.



State the factors affecting the rate of transpiration.



State the factors affecting the rate of transpiration.

Temperature

Light intensity

Wind speed

Humidity

Surface area



What does a potometer measure?



What does a potometer measure?

The rate of water uptake of a plant.



How is temperature controlled?



How is temperature controlled?

By placing the set-up in a thermostatically-controlled water bath or a temperature-controlled room.



How is wind speed controlled?



How is wind speed controlled?

By setting up a fan with variable speeds next to the potometer.



How is light intensity controlled?



How is light intensity controlled?

By setting up a lamp at different distances from the potometer.



How is humidity controlled?



How is humidity controlled?

By wrapping the leafy shoot in a plastic bag to create a humid environment.



How is surface area controlled?



How is surface area controlled?

By removing the leaves of the shoot.



How is the water taken up by the plant indicated on the potometer?



How is the water taken up by the plant indicated on the potometer?

It is indicated by an air bubble in the capillary tube, which moves as water is taken up by the plant.



How can the reliability of the results be improved?



How can the reliability of the results be improved?

By repeating the experiment at least twice more and take a mean value of the distance moved by the air bubble.



Why should the leafy shoot be cut underwater?



Why should the leafy shoot be cut underwater?

To prevent air bubbles from entering the vascular tissue of the shoot.

