

GCSE Biology A (Gateway)

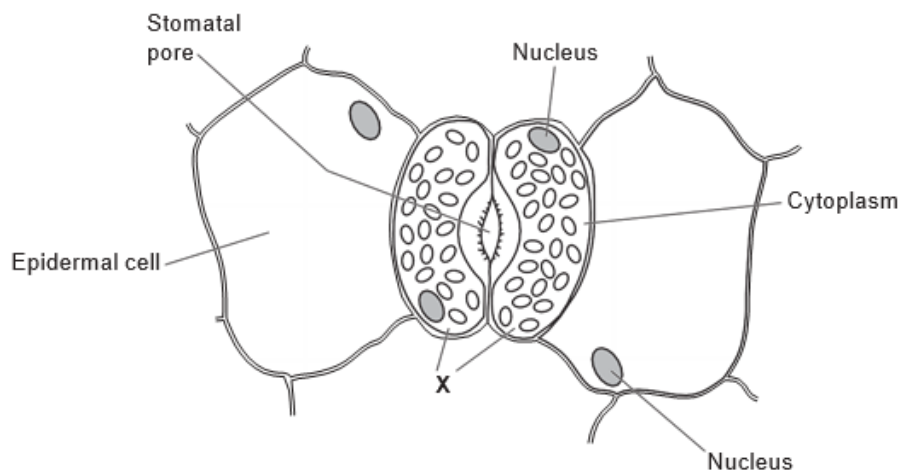
J247/01 B1-B3 and B7 Foundation (Foundation Tier)

Question Set 12

1

Stomata are found on the surface of leaves.

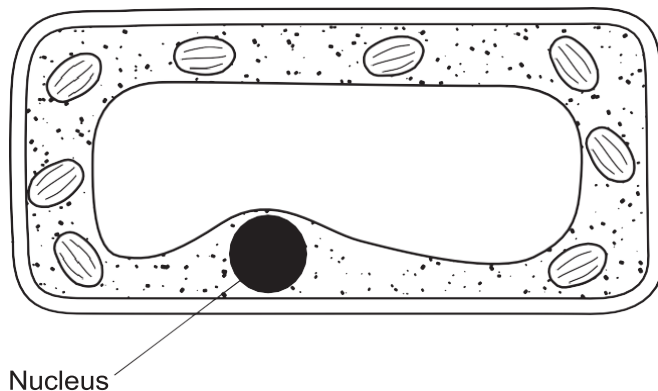
The diagram shows some of the surface cells of a leaf.



(a) (i) Write down the name of the cell labelled **X**. [1]

(ii) Describe **two** functions of stomata. [2]

(b) Look at the diagram showing a plant cell.

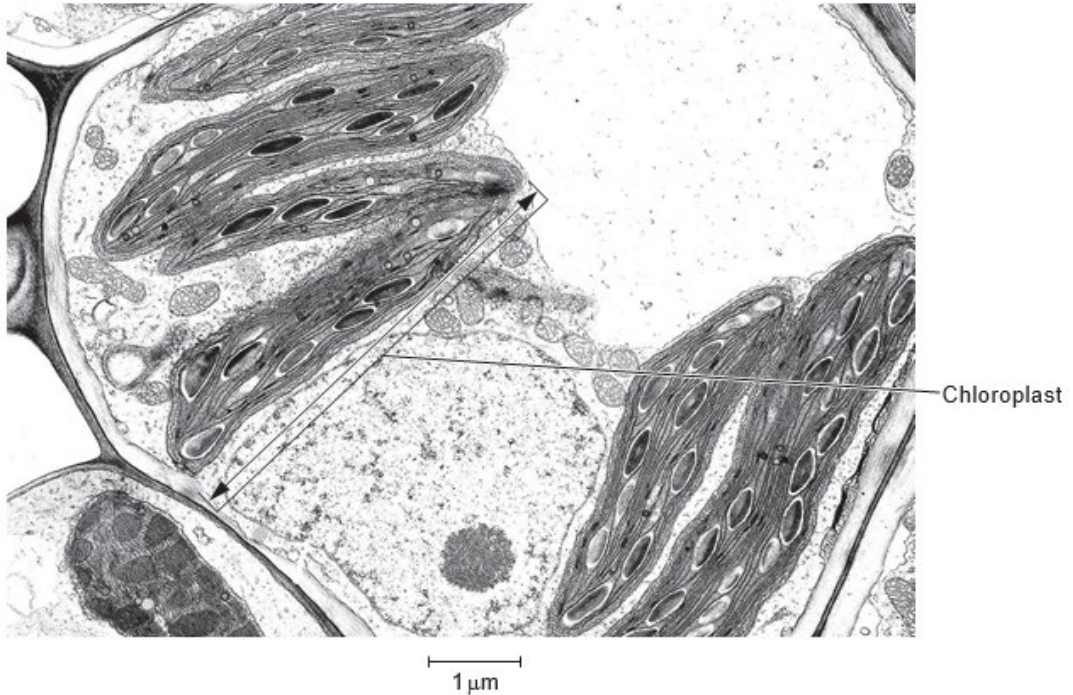


(i) The diameter of the nucleus in the diagram is 10 millimetres. The actual size of the nucleus is 10 **micrometres**.

Calculate the magnification of the diagram.

Answer = × [2]

- (ii) Look at the picture of part of a plant cell.

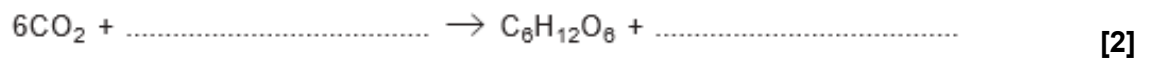


Use the arrow on the picture and the scale to estimate the length of the chloroplast.

Answer = μm [1]

- (c) Photosynthesis takes place inside chloroplasts.

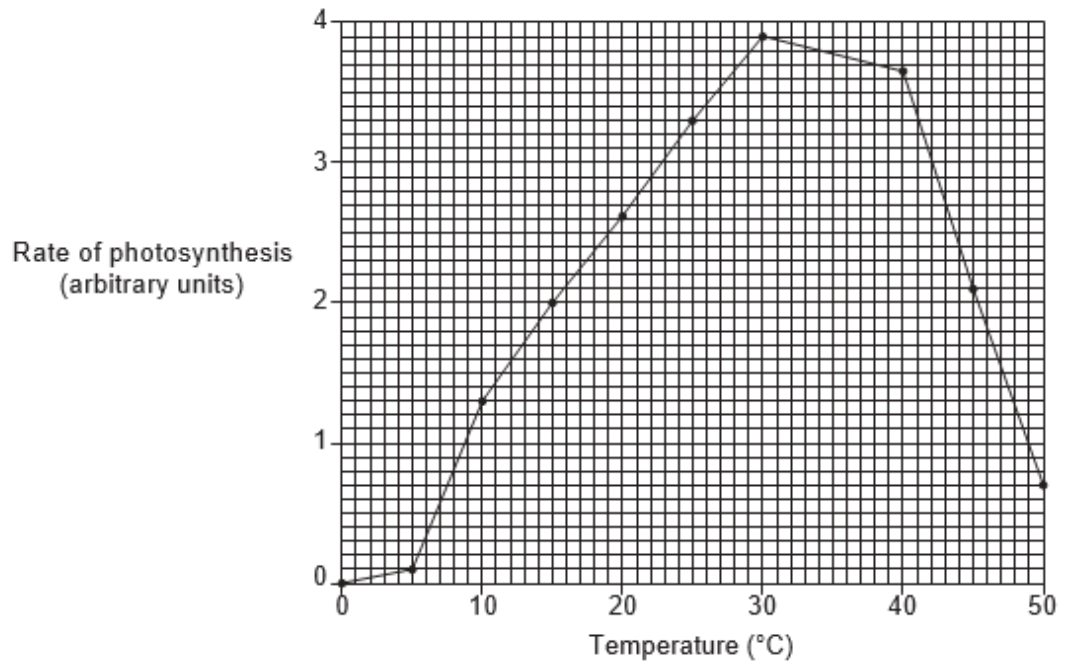
- (i) Complete the chemical equation for photosynthesis.



- (ii) Energy is taken in from the surroundings for photosynthesis to take place.

What name is used to describe reactions that take in energy? [1]

- (d) The graph is from an experiment to show the effect of temperature on the rate of photosynthesis.



- (i) What is the optimum temperature for photosynthesis in this experiment? [1]

- (ii) The rate of photosynthesis was recorded in 5 °C intervals.

The experiment could be improved to get a more **precise** value for the optimum temperature.

Explain how.

[2]

Total Marks for Question Set 12: 12

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