

9 A student wrote some statements about the palisade mesophyll and spongy mesophyll tissues.

- 1 The spongy mesophyll tissue is near the stomata for gas exchange.
- 2 Only palisade mesophyll cells have chloroplasts for photosynthesis.
- 3 Palisade cells are closely packed but there are air spaces in the spongy mesophyll tissue.

Which statements are correct descriptions of the two tissues?

- A** 1, 2 and 3 **B** 1 and 2 only **C** 1 and 3 only **D** 2 and 3 only

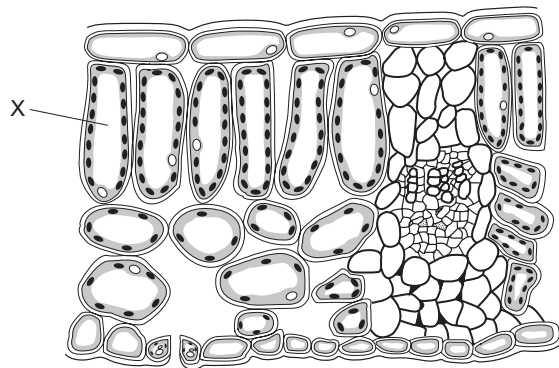
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8 Which descriptions of adaptations for photosynthesis are correct for spongy mesophyll tissue?

	air spaces for efficient gas exchange	long, rectangular cells to absorb light
A	yes	yes
B	yes	no
C	no	yes
D	no	no

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10 The diagram shows a cross-section of part of a leaf.

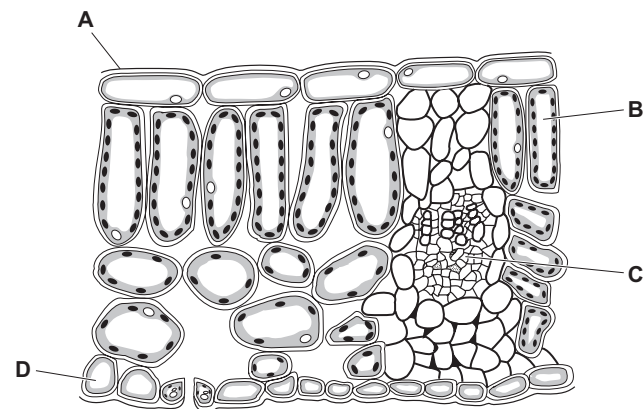


What is the cell labelled X?

- A** epidermis
B guard cell
C palisade mesophyll
D spongy mesophyll

9 The diagram shows part of a cross-section of a leaf.

Which structure is a palisade mesophyll cell?



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11 The photomicrograph shows part of the lower surface of a leaf.



What is the structure labelled X?

- A** guard cell
B palisade mesophyll cell
C spongy mesophyll cell
D xylem vessel

5 (a) Fig. 5.1 shows a cross-section of a leaf.

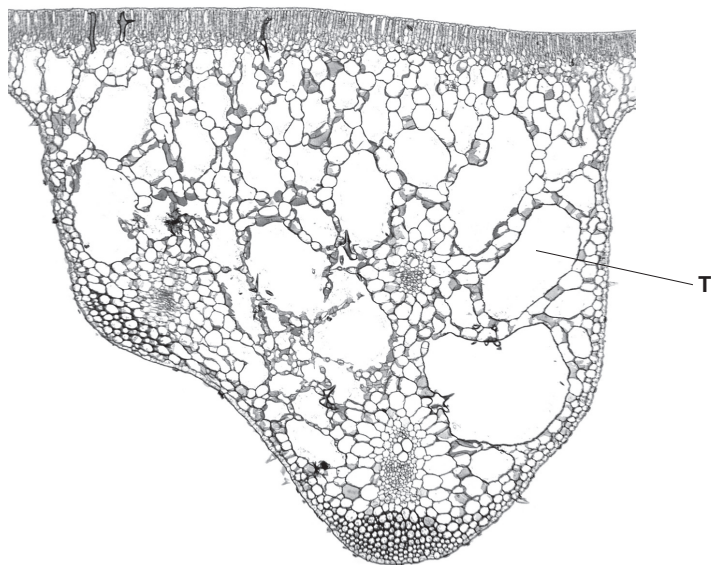


Fig. 5.1

- (i) On Fig. 5.1, draw a circle around **one** vascular bundle. [1]
- (ii) On Fig. 5.1, draw a label line and the letter **X** to identify the palisade mesophyll tissue. [1]
- (iii) State the name of the cell structure in palisade mesophyll cells where photosynthesis occurs. [1]
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- (iv) Describe the functions of the tissues in a vascular bundle in a leaf.

[illegible]

- (b) The leaf shown in Fig. 5.1 is from an aquatic plant adapted to live in water. The leaves float on the surface of the water.
- (i) State the term used to describe plants that are adapted to live in water.
- [1]
- (ii) Identify feature **T** shown in Fig. 5.1 **and** explain how this feature adapts the leaf to float on the surface of the water.
- feature **T**
- explanation
- [2]
- (iii) Explain **one** other adaptation of this group of aquatic plants.

feature T

explanation

[2]

Explain **one** other adaptation of this group of aquatic plants.

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..... [2]

[Total: 12]