

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.

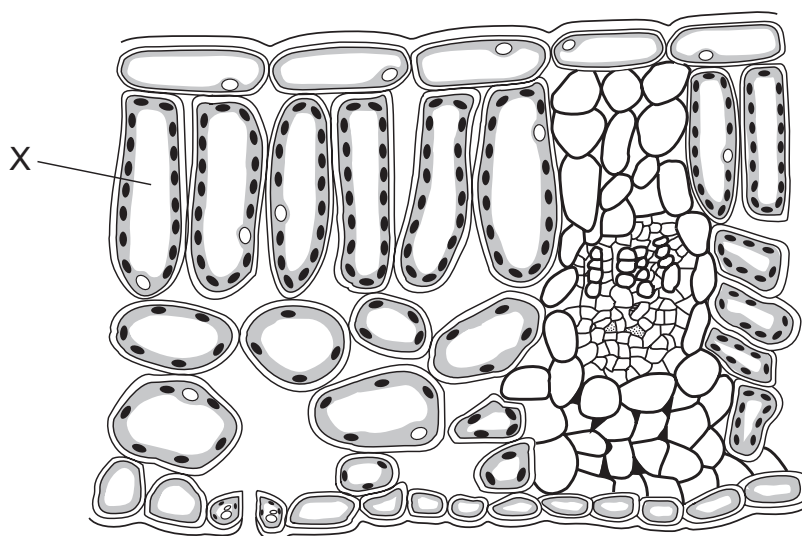
Which statements are correct descriptions of the two tissues?

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

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

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

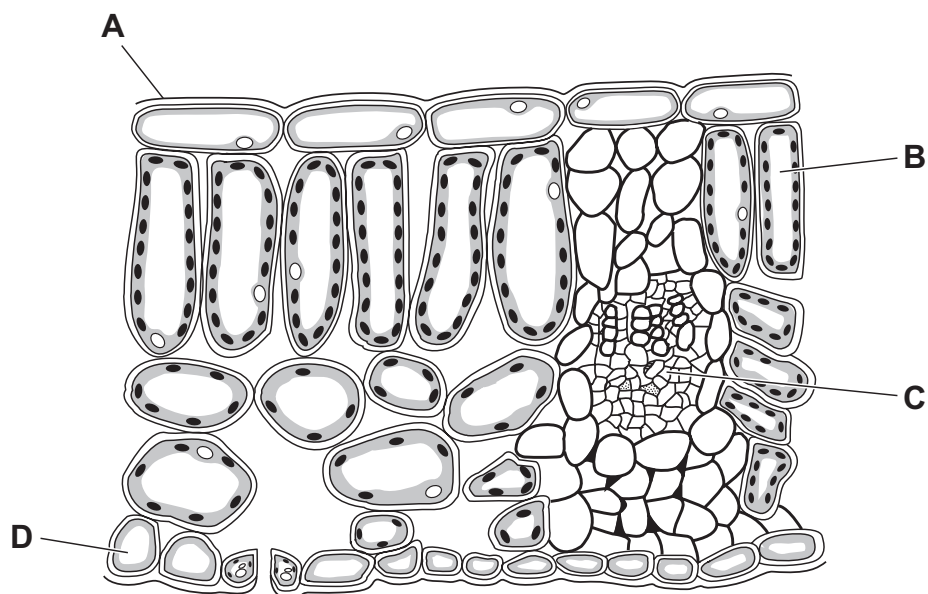


What is the cell labelled X?

- 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?



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.

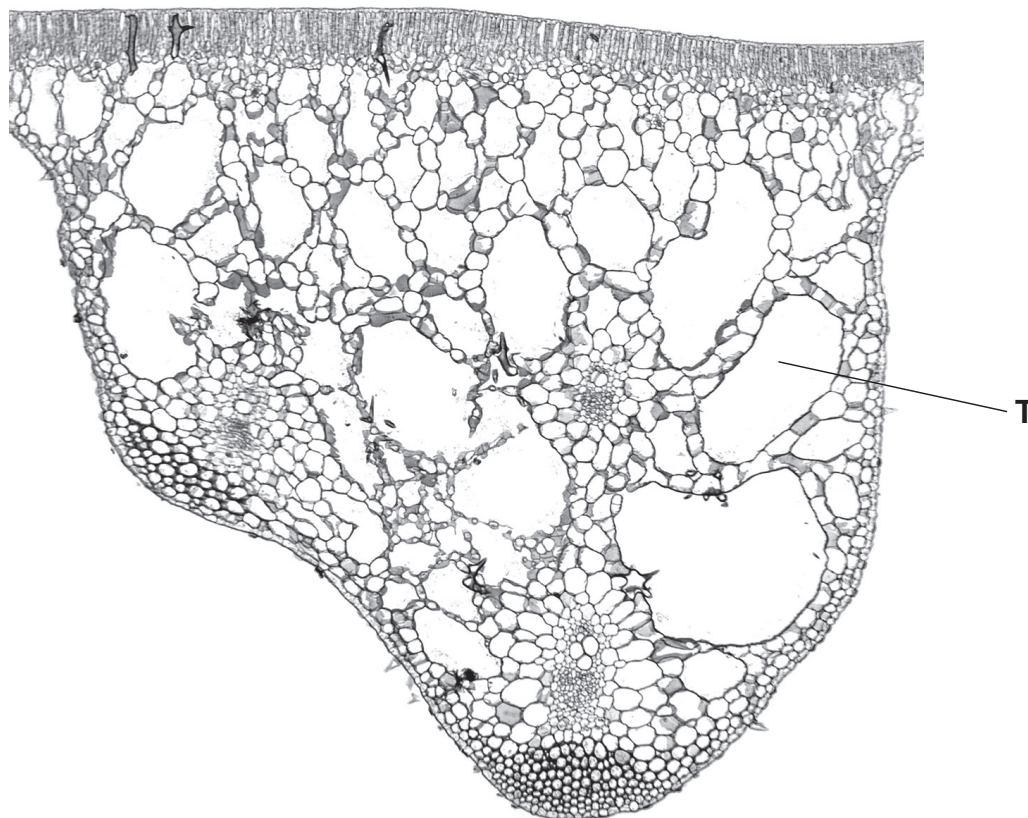


Fig. 5.1

- (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]
-
- (iv) Describe the functions of the tissues in a vascular bundle in a leaf.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(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.

.....

.....

..... [2]

[Total: 12]