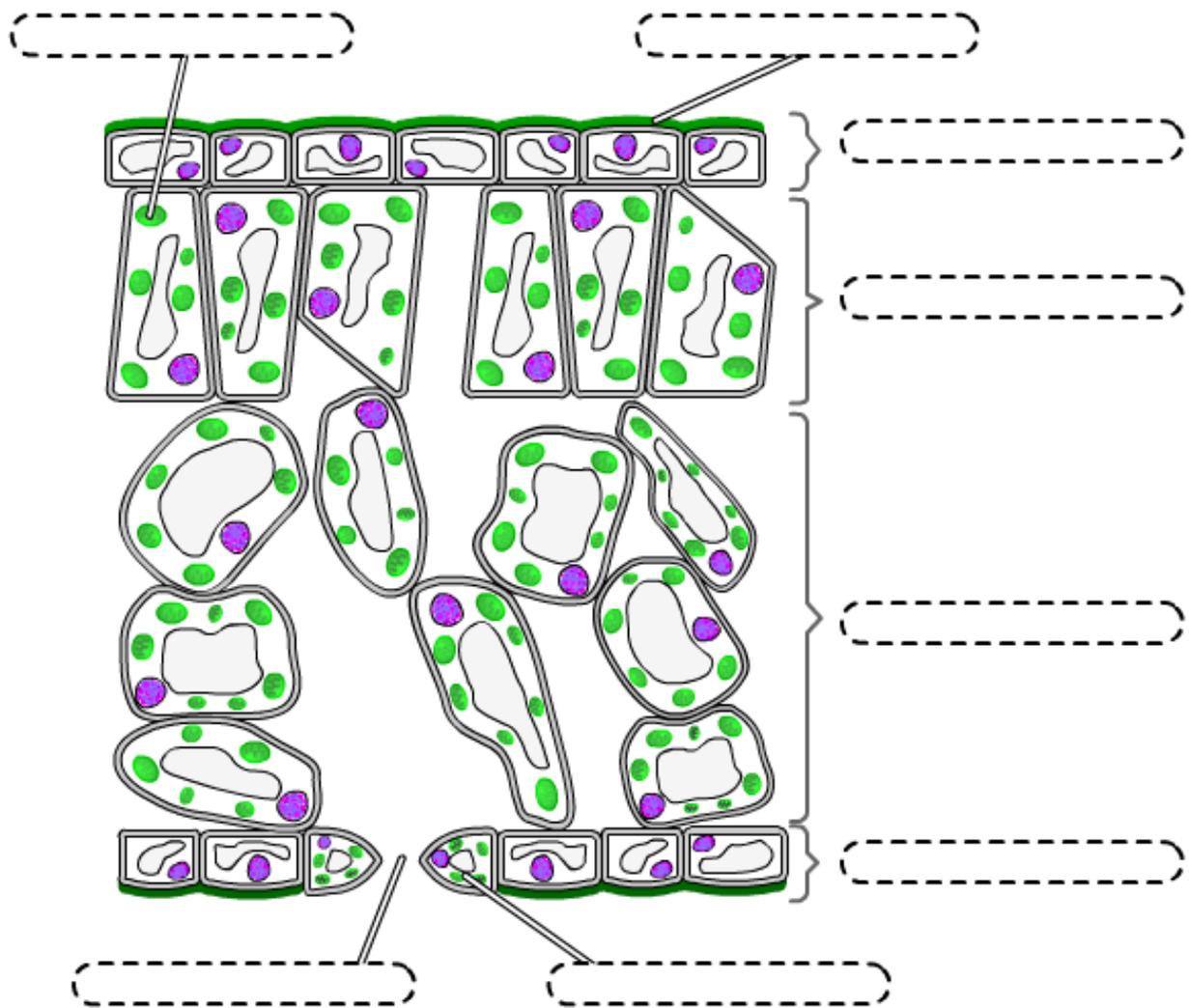


The structure of a leaf



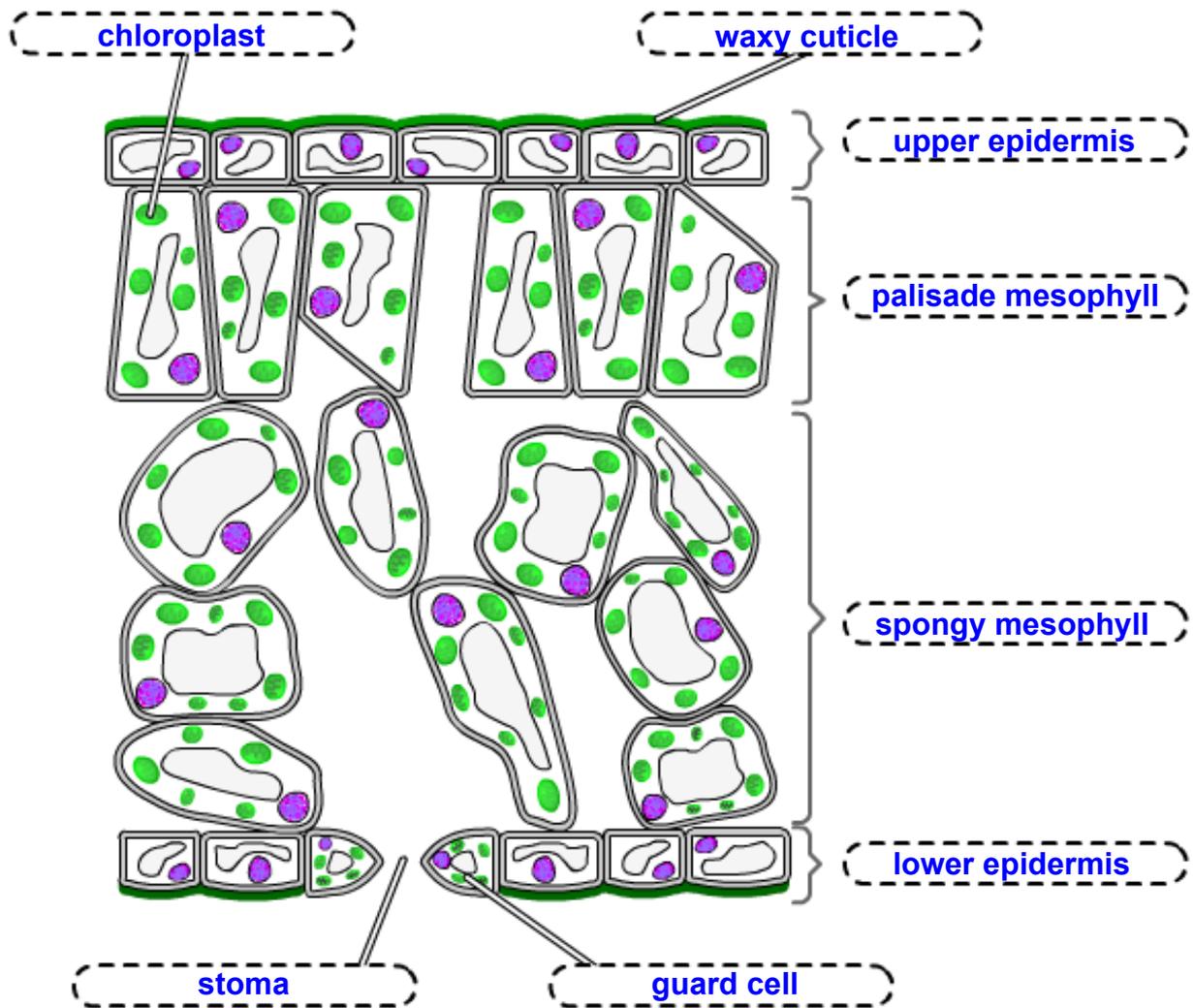
Put the following terms into the correct positions on the diagram:

stoma spongy mesophyll upper epidermis waxy cuticle
guard cell chloroplast lower epidermis palisade mesophyll

Use the terms above to fill in the gaps in the sentences below:

- 1 The cells in the _____ contain no chloroplasts and are transparent to allow light to penetrate into the leaf.
- 2 The _____ cells are packed tightly together near the top of the leaf to collect as much sunlight as possible. They contain many chloroplasts and most photosynthesis takes place in these cells.
- 3 The _____ cells contain air spaces to allow the movement of gases (i.e. carbon dioxide and oxygen) throughout the leaf.
- 4 The _____ helps to regulate the movement of gases into and out of the leaf. They also help to control the loss of water vapour (transpiration).
- 5 The stomata are found in the _____. Besides the guard cells the cells in this layer contain no chloroplasts.

The structure of a leaf (Answers)



Put the following terms into the correct positions on the diagram:

stoma spongy mesophyll upper epidermis waxy cuticle
guard cell chloroplast lower epidermis palisade mesophyll

Use the terms above to fill in the gaps in the sentences below:

- 1 The cells in the **upper epidermis** contain no chloroplasts and are transparent to allow light to penetrate into the leaf.
- 2 The **palisade mesophyll** cells are packed tightly together near the top of the leaf to collect as much sunlight as possible. They contain many chloroplasts and most photosynthesis takes place in these cells.
- 3 The **spongy mesophyll** cells contain air spaces to allow the movement of gases (i.e. carbon dioxide and oxygen) throughout the leaf.
- 4 The **guard cell** helps to regulate the movement of gases into and out of the leaf. They also help to control the loss of water vapour (transpiration).
- 5 The stomata are found in the **lower epidermis**. Besides the guard cells the cells in this layer contain no chloroplasts.