

**Subject:** Biology

**Topic:** Photosynthesis

**Subtopic:** Structural adaptation of a leaf as a photosynthetic organ.

**Level:** S.4

**Background information:**

This is the fifth lesson in a series of six. The activity is in the middle of a double lesson. The teacher has introduced the names of different parts of a transverse section of a leaf. Students have also observed a section of a leaf under a microscope.

**Learning objectives:**

1. Content

Students should be able to state the structural adaptations of a leaf as a photosynthetic organ

2. Language:

Students should be able to write a short paragraph to state the structural adaptations of a leaf as a photosynthetic organ.

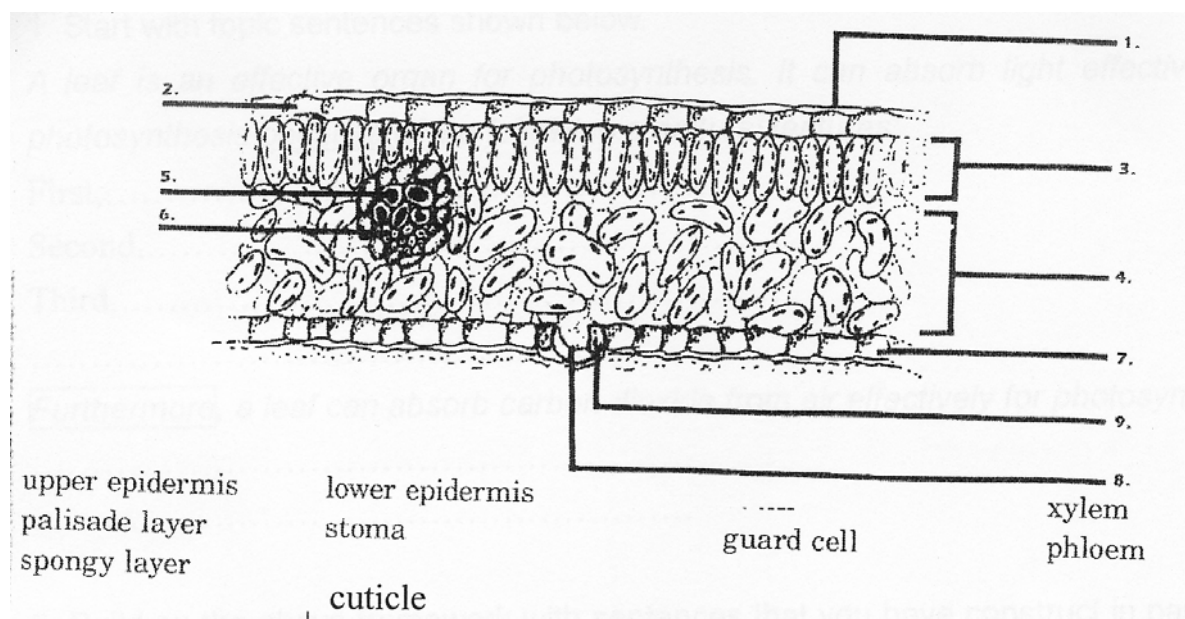
# **S.4 Biology** **Photosynthesis** **Worksheet 3**

Name: \_\_\_\_\_ Class: \_\_\_\_\_ No: \_\_\_\_\_ Date: \_\_\_\_\_



## **Part 1**

Label the following diagram.



## **Part two**

Complete the following table using information from your textbook.

Structures	Special feature(s) of the structures	Function in photosynthesis
Leaf blade	• E.g. broad	• E.g. a large surface area for light absorption
Cuticle	•	•
Epidermis	••	•
Palisade mesophyll	• •	•
Spongy mesophyll	• •	•

### Part three

Work in pairs. Take turns to tell the function of each part of a leaf to your partner using the following sentence pattern:

The \_\_\_\_\_ is/has \_\_\_\_\_ so/so that \_\_\_\_\_

e.g. *The leaf blade is broad so that there is a large surface area for light absorption.*

### Part four

Write a short paragraph to state the structural adaptations of a leaf as a photosynthetic organ.

Instructions:

1. Start with the topic sentence shown below.

*A leaf is an effective organ for photosynthesis. It can absorb light effectively for photosynthesis because of the following structural features.*

**First**.....

**Second**,.....

**Third**.....

**Furthermore, a leaf can absorb carbon dioxide from air effectively for photosynthesis**

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2. Build on the above framework with sentences that you have used in Part 3 with appropriate connectors (e.g. 'since', 'also' etc)