



STUDENT WORKSHEET
FOR MICRO SLIDE™ LESSON SET 59
PHOTOSYNTHESIS

STUDENTS NAME _____ CLASS _____ DATE _____

INTRODUCTION

In this unit we will study how a plant functions as a remarkable food factory using a process called photosynthesis.

Read and follow the directions for the use of the Micro Slide Viewer and the Micro Slide on the envelope attached to the text folder that is holding the slides.

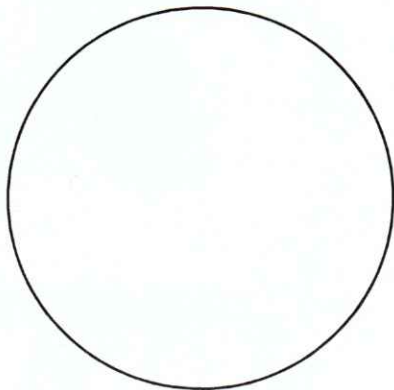
Examine each slide and study the description in the text folder. After studying each slide and the printed text, answer the question for that slide on this worksheet. If you don't know the answer, go on to the next slide and question. You may find the answer as you learn more about the subject. Draw what you see in the space provided.

Slide 1 - GREEN LEAF

- a. The two important gases that circulate through the air spaces of a leaf are _____

_____.
- b. Water and dissolved minerals are delivered to all parts of the leaf by _____
_____.

SLIDE 2 - GREEN LEAF

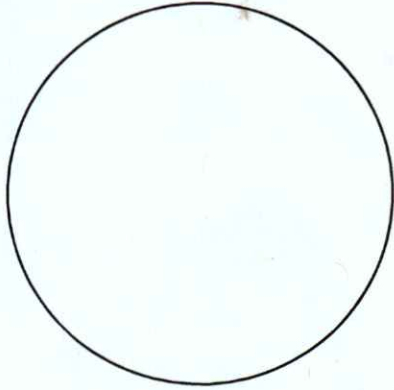


- a. Label the following leaf parts on your diagram: Chloroplasts, Air Space, Upper Epidermis.
- b. The green chemical present in chloroplast is called _____.
- c. Enzymes help the chloroplasts convert light energy into _____
_____.
- d. The two raw materials needed by the cell to produce sugar are _____
_____.
- e. When the guard cells open the stomates what enters the leaf? _____
_____.
- f. The "waste gas" that leaves the stomates during photosynthesis is _____
_____.

SLIDE 3 - ROOT HAIR

Root hairs give the root an enormous surface. This permits rapid absorption of _____ and dissolved _____.

SLIDE 4 - VASCULAR BUNDLES



- a. Vascular bundles are found in the _____ of a leaf.
- b. The larger cells in the vascular bundle called xylem carry _____ from the roots to the leaves.
- c. How do humans benefit from plant cells that store food? _____

SLIDE 5 - LEAF - WITH AND WITHOUT SUNLIGHT

Which part of the leaf is the control for the experiment? (with sunlight) (without sunlight) Underline your choice.

SLIDE 6 - LEAF - VARIEGATED

- a. List your observations: _____
- b. What does this experiment prove? _____

SLIDE 7 - STARCH GRAINS

Name three plant foods that are starchy?

SLIDE 8 - BEAN SEED

a. The part of the seed that stores the food for the new plant is called the _____.

b. What does the dark iodine stain indicate? _____.

SUMMARY:

1. The four main plant elements used in food manufacturing are _____, _____, _____, and _____.
2. _____ and _____ are provided by water and dissolved minerals.
3. _____ and _____ are provided by the air.

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