BASIC PLANT PROCESSES

INFORMATION SHEET

I. Terms and definitions

A. Photosynthesis--The process of making sugars in green plants from water and carbon dioxide in the presence of sunlight

B. Respiration--The process of using the stored foods of a plant in which energy is obtained or released

C. Transpiration--The evaporation of water vapor from the stoma on the leaves of a plant

D. Absorption--The taking in of water and mineral nutrients through the roots of a plant

E. Stoma--A small opening in the epidermis of leaves and stems through which gases pass

F. Mesophyll--The photosynthetic tissue of a leaf, located between the layers of epidermis

G. Chlorophyll--The green pigment of plant cells; necessary for photosynthesis

H. Chloroplast--A cellular organelle in which chlorophyll is contained; site of photosynthesis

I. Phloem--Food conducting tissue of plants

J. Root hairs--Outgrowths of the epidermal cells of the root; greatly increase absorption area of the root system

K. Permeable membrane--A membrane through which liquid substances may diffuse, such as the plasma membrane of root hair cells

L. Epidermis--The outermost layer of cells of the leaf and of young stems and roots

M. Cortex--Cells of a stem or root bound externally by the epidermis and internally by the vascular system

N. Xylem--Tissue through which most of the water and minerals of a plant are conducted

O. Osmosis--The diffusion of water through a selectively permeable membrane