Leaf Structure and Function

Letter		
A	Cuticle	Protective waxy covering produced only by the epidermal cells of leaves. They minimize water loss and effectively reduce pathogen entry due to their waxy secretion.
B	Upper Epidermis	Single-layered group of cells that cover plants' upper most area. It forms a boundary between the plant and the external world. This serves several functions; it protects against water loss, regulates gas exchange, and secretes metabolic compounds.
C	Palisade Mesophyll	Layer of elongated photosynthetic cells arranged in columns under the upper surface (*epidermis*) of a leaf. These cells contain many chloroplasts and are the primary site for photosynthesis.
D	Spongy Mesophyll	Layers of loosely packed photosynthetic cells with large air spaces between them under the lower surface of the leaf. These cells have fewer chloroplasts, are irregular in shape, and has large air spaces which allow for gas exchange between the mesophyll cells and the atmosphere through the stomata
E	Lower Epidermis	Single-layered group of cells that cover plants' lower boundary. It forms a boundary between the plant and the external world. This serves several functions; it protects against water loss, regulates gas exchange, and secretes metabolic compounds.
F	Xylem	The main vascular tissue in plants that contains fibres and water-conducting cells called **tracheids** and **vessels** that are dead at maturity. This tissue conducts water and minerals from the root the stem and leaves of the plant.
G	Phloem	This is a living tissue that contains sieve tubes that serve as a passageway and companion cells that direct the activities of the sieve tube .This vascular tissue transports sugars and other solutes throughout the plant body.
H	Stomata	Tiny pores found in the epidermis of leaves (mostly in the lower epidermis). These pores regulate the gas exchange between carbon dioxide and oxygen as well as allowing water vapour to escape from the leaf

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