

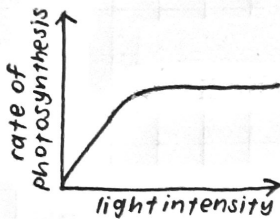
NUTRITION IN PLANTS

PHOTOSYNTHESIS

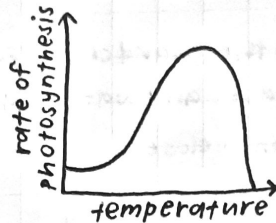
carbon dioxide + water $\xrightarrow[\text{chlorophyll}]{\text{light energy}}$ glucose + oxygen

factors

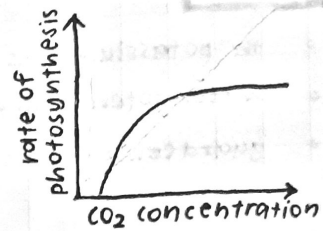
• light intensity



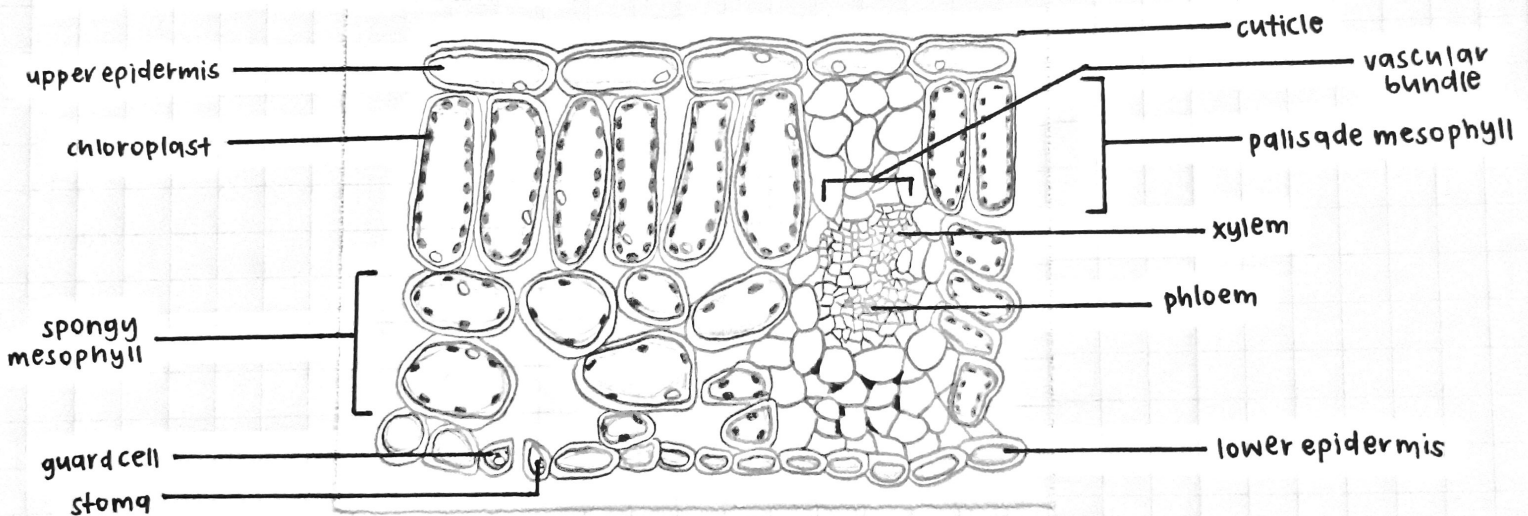
• temperature



• carbon dioxide concentration



INTERNAL STRUCTURE OF LEAF



• upper epidermis

- protected by cuticle which also prevents excessive water loss
- allows sunlight to pass through

• palisade mesophyll

- contain a lot of chloroplasts to increase absorption of sunlight for photosynthesis as it is closer to the surface

• spongy mesophyll

- have intercellular air spaces around them for fast diffusion of carbon dioxide
- have lesser chloroplasts than palisade mesophyll

• vascular bundle

- contain xylem and phloem

• guard cell

- control opening and closing of stoma which allows diffusion of oxygen and water vapour to escape through transpiration