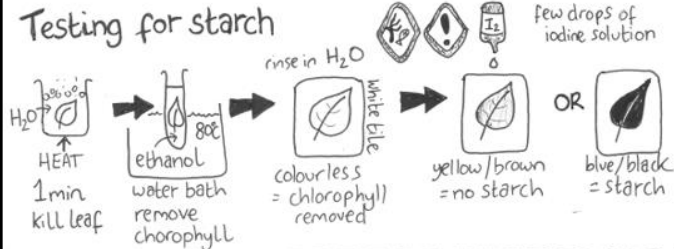


Testing for starch



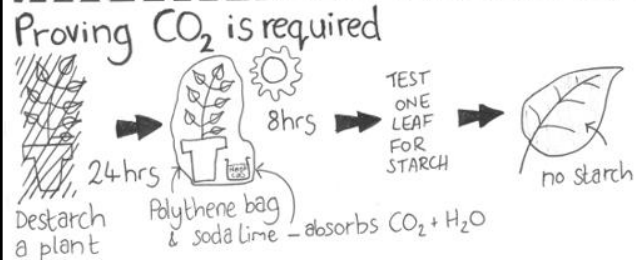
Proving chlorophyll is required



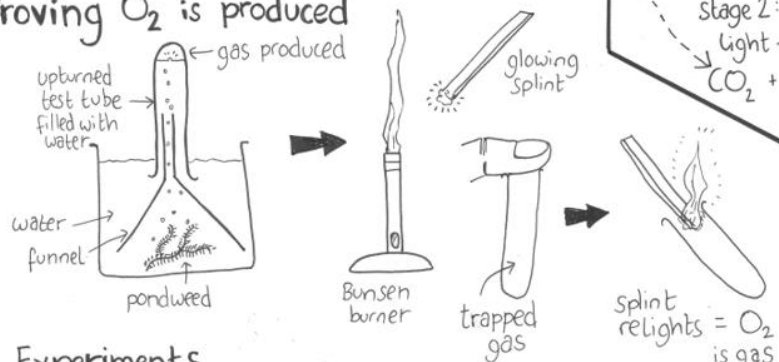
Proving light is required



Proving CO₂ is required



Proving O₂ is produced



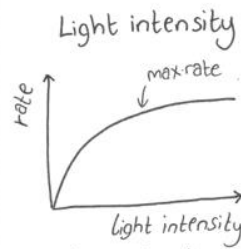
2. Experiments

3. Limiting Factors

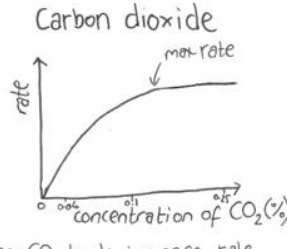
$$\text{rate} = \frac{1}{t} \text{ (s}^{-1}\text{)}$$

how fast photosynthesis happens

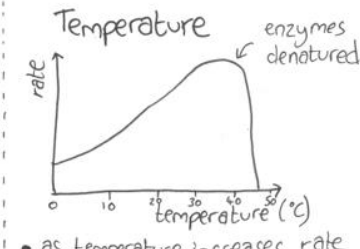
time taken for reaction to occur i.e. "for 1cm³ of O₂ to be produced"



- as light intensity increases, rate of photosynthesis increases until maximum rate

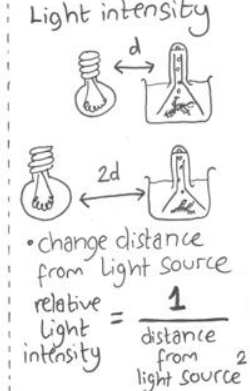
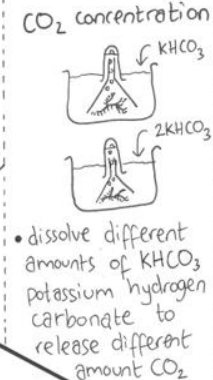
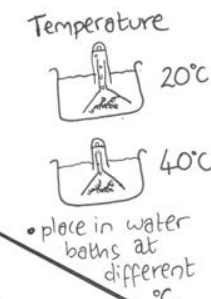


- as CO₂ levels increase, rate of photosynthesis increases until maximum rate. CO₂ concentration in atmosphere is only 0.04% so farmers increase CO₂ to increase yield



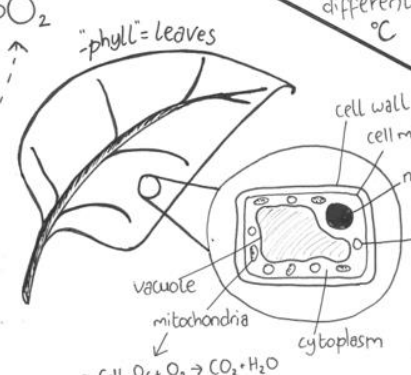
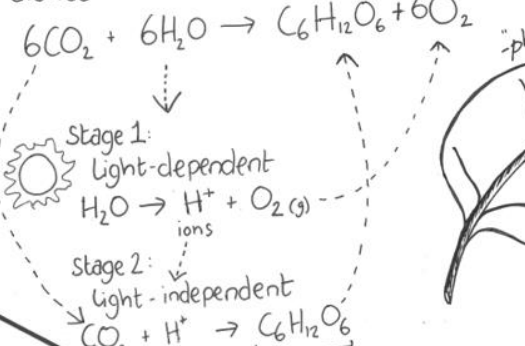
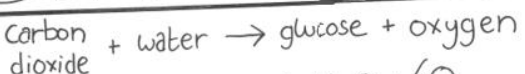
- as temperature increases, rate of photosynthesis increases until ~40°C where enzymes become denatured and chemical reactions cannot occur

4. Interaction of factors - investigate each factor separately until rate of photosynthesis no longer increases.



B1.4 Photosynthesis

OCR Gateway GCSE Biology



- Used for:
- glucose in respiration
 - sucrose stored in fruit
 - starch stored in roots
 - cellulose in cell walls
 - add nitrogen to form proteins
 - fats + oils as food store and growth

chloroplast

chlorophyll (pale-green gas)

chlorophyll DOES NOT contain CL, they just derive their names from same place (Greek chloros)

one who forms

contains chlorophyll, a pale-green pigment that allows plants to absorb energy from light

Endothermic - absorb energy, endo="in" like "entrance"

1. Photosynthesis