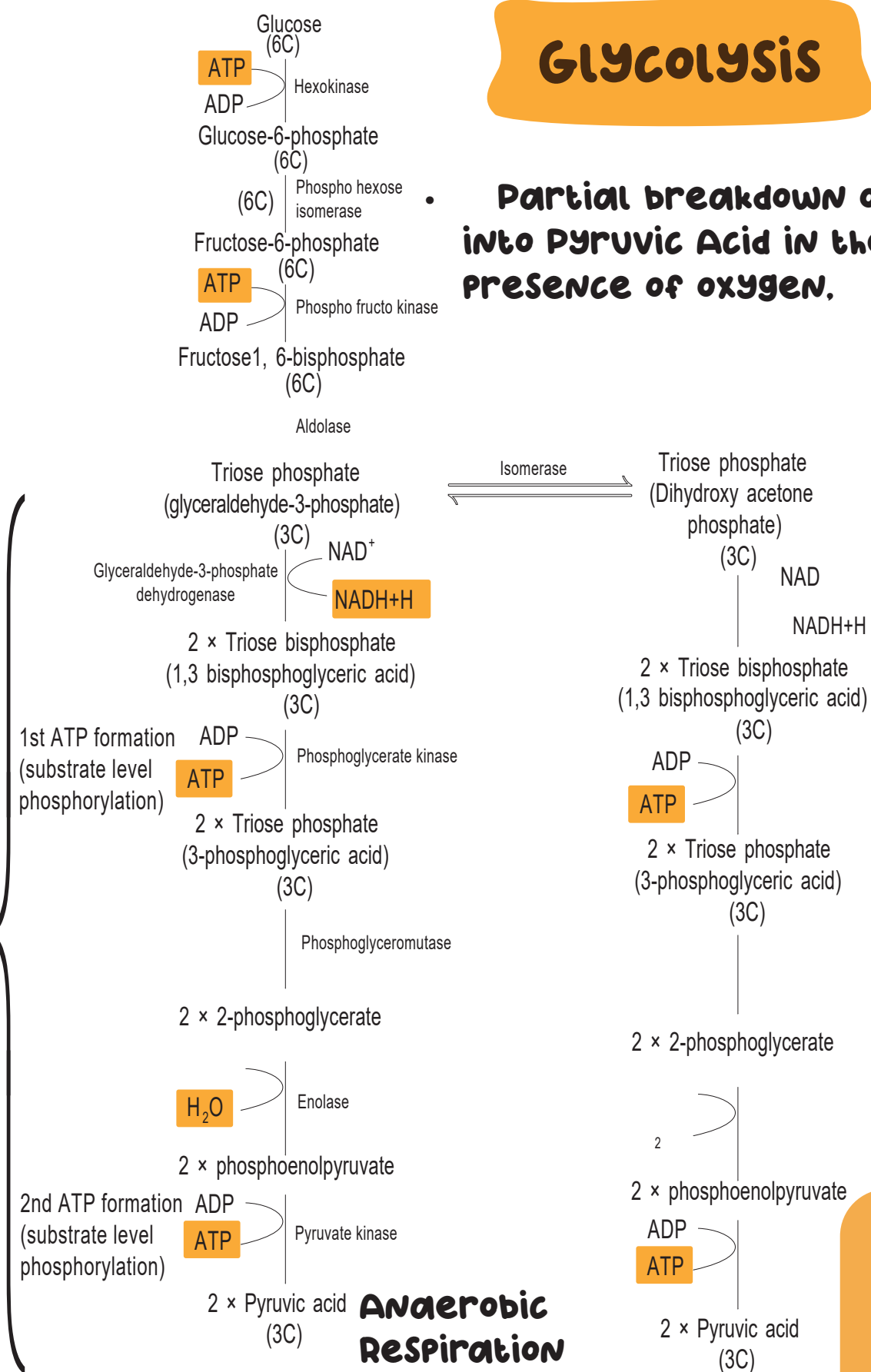


Preparatory phase

Pay off phase

Glycolysis

Partial breakdown of Glucose into Pyruvic Acid in the presence of oxygen.



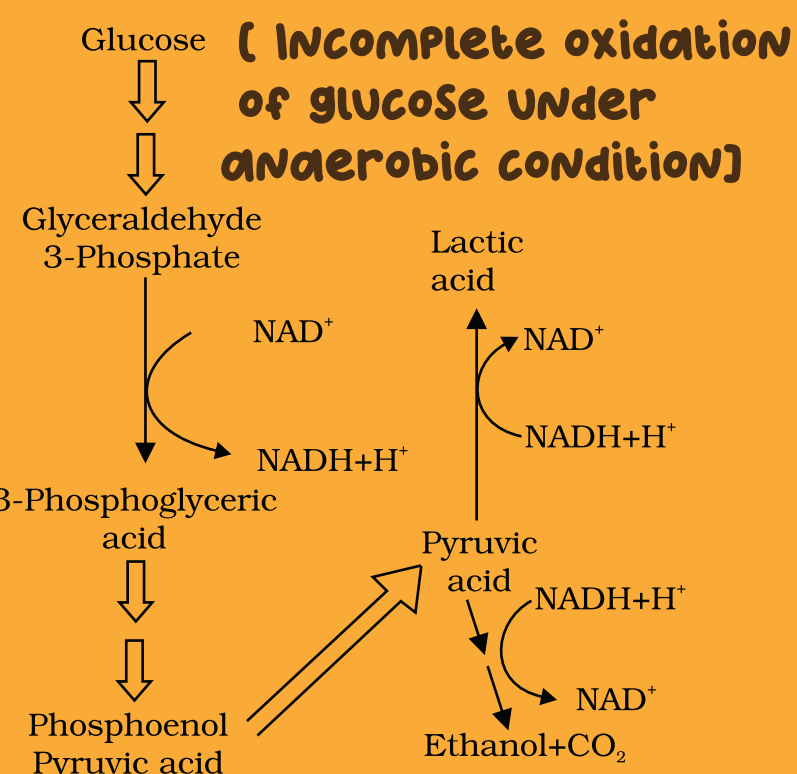
Anaerobic Respiration

Pyruvic Acid

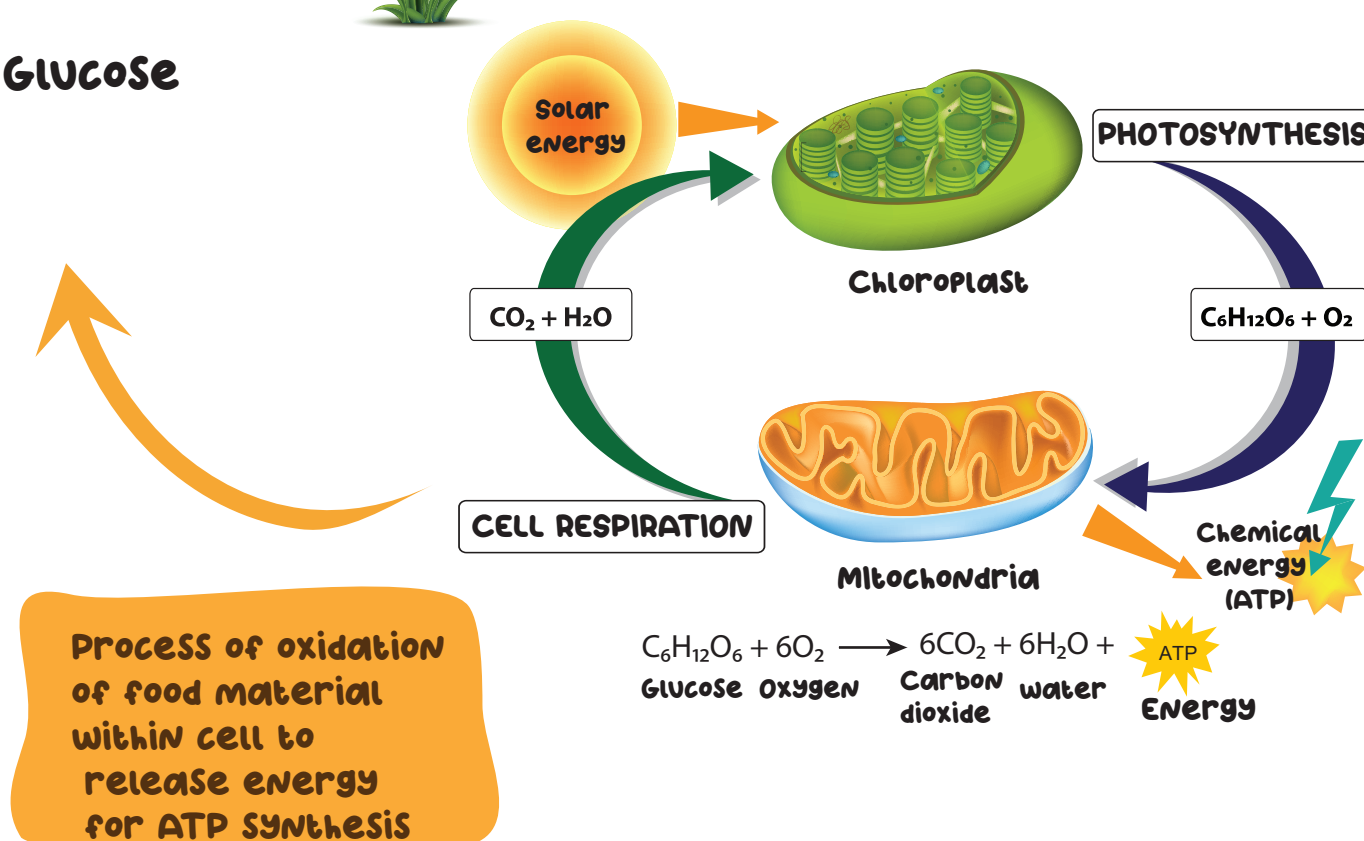
in absence of O₂

Fermentation

(Incomplete oxidation of glucose under anaerobic condition)



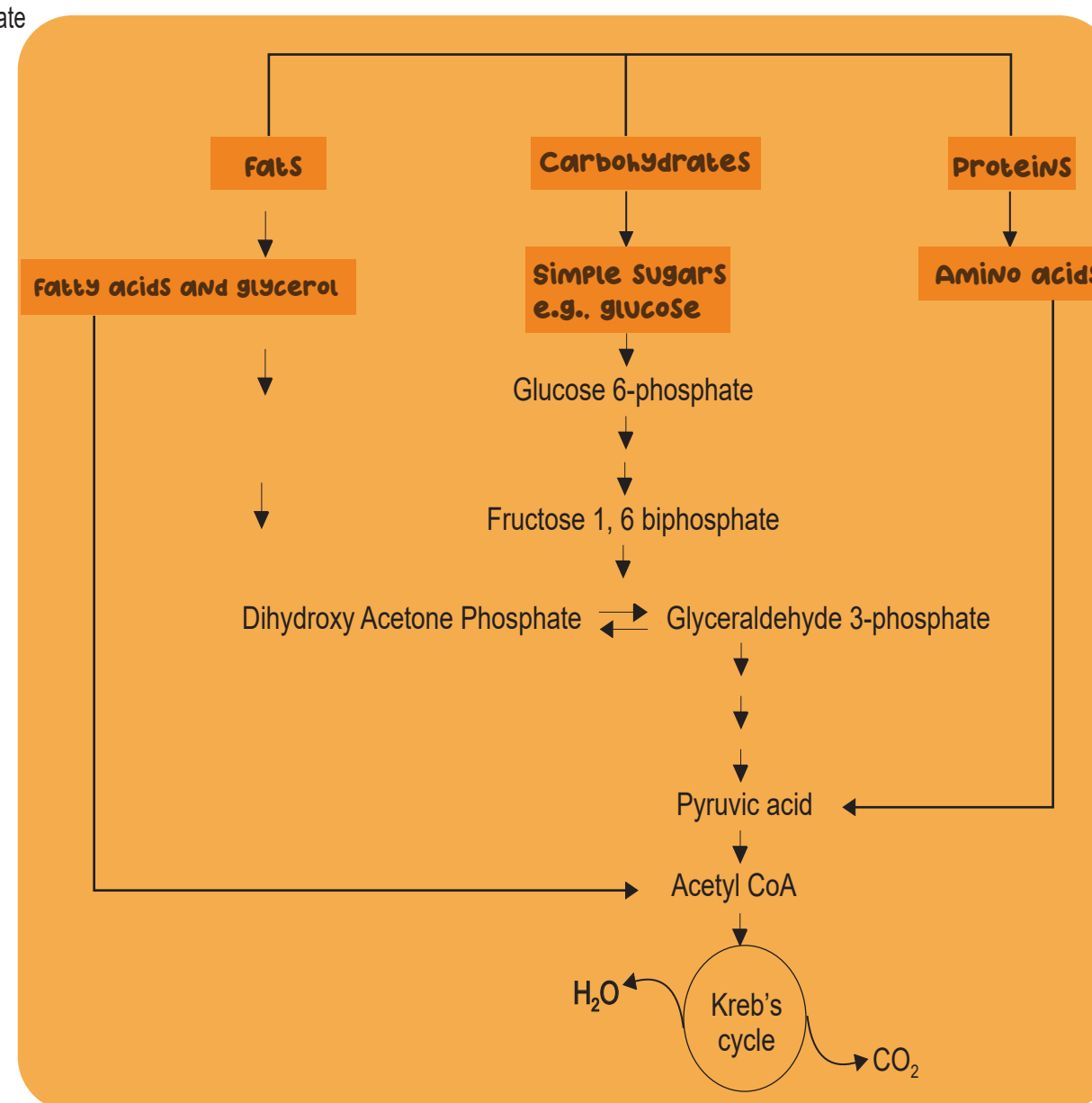
RESPIRATION IN PLANTS



Process of oxidation of food material within cell to release energy for ATP synthesis

Amphibolic Pathway

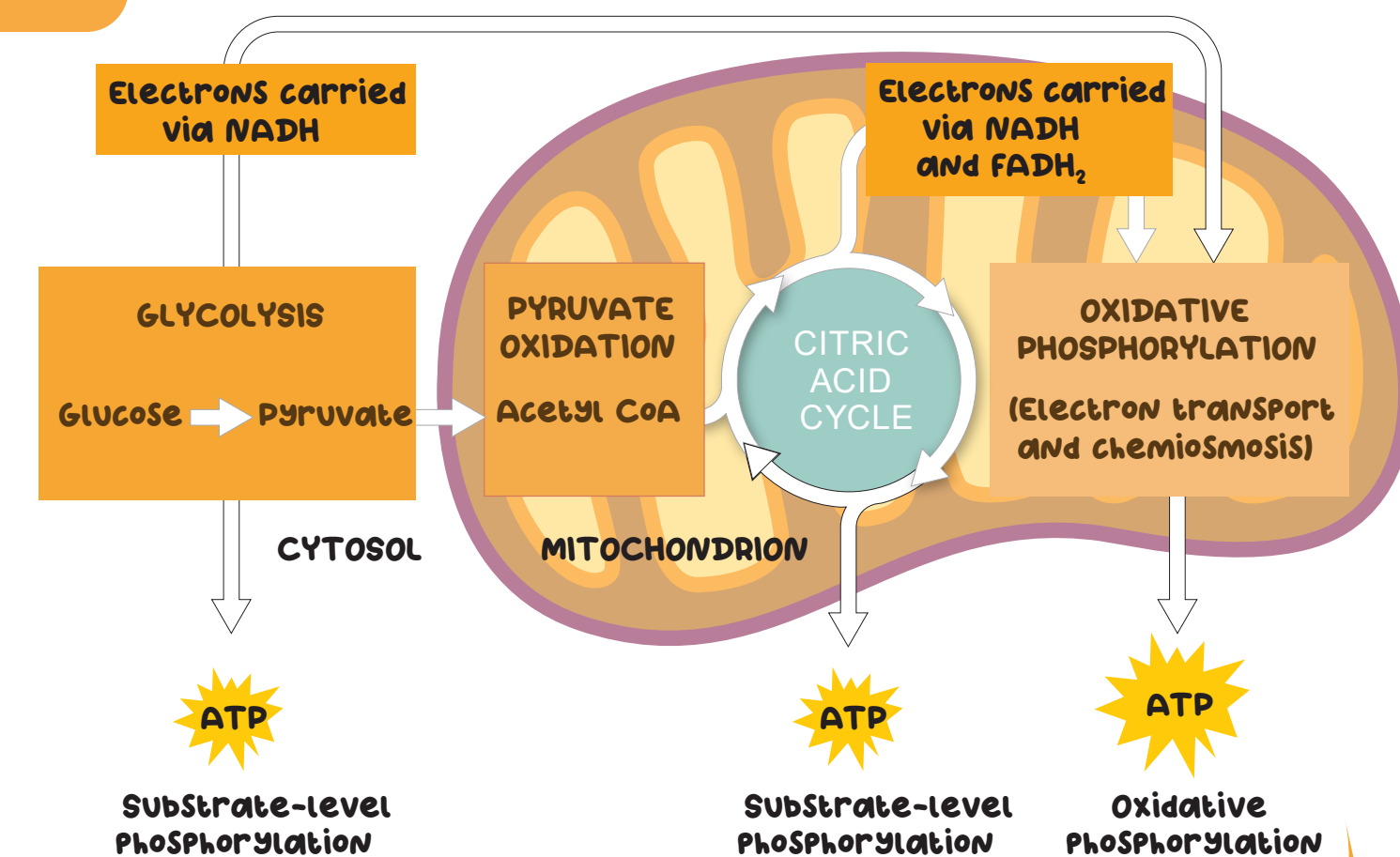
Respiration is referred as amphibolic pathway because it involves both anabolism and catabolism



Respiratory Quotient

$$RQ = \frac{\text{Volume of CO}_2 \text{ involved}}{\text{Volume of O}_2 \text{ Consumed}}$$

- RQ for Carbohydrates = $\frac{6\text{CO}_2}{6\text{O}_2} = 1$
- C₆H₁₂O₆ + 6O₂ → 6CO₂ + 6H₂O + Energy
- RQ for fats is less than 1
- RQ for proteins is usually 0.9



Inner mitochondrial membrane is the site of

ELECTRON TRANSPORT SYSTEM

Metabolic pathway through which electron passes from one carrier to another

OXIDATIVE PHOSPHORYCATION

- Electrons are passed from electron donors to electron acceptors
- Proton gradient is generated across the inner mitochondrial membrane

Electron Transport chain

