

Photosynthesis vs Respiration

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Photosynthesis

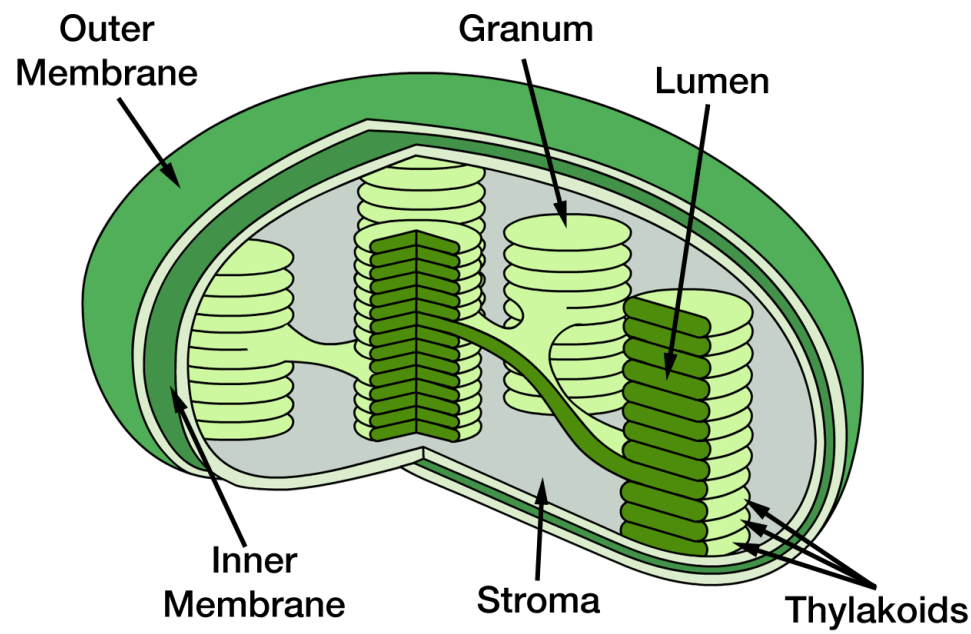
- Chloroplast – a symbiont
- Create organic matters with the consumption of solar energy & CO₂

Respiration

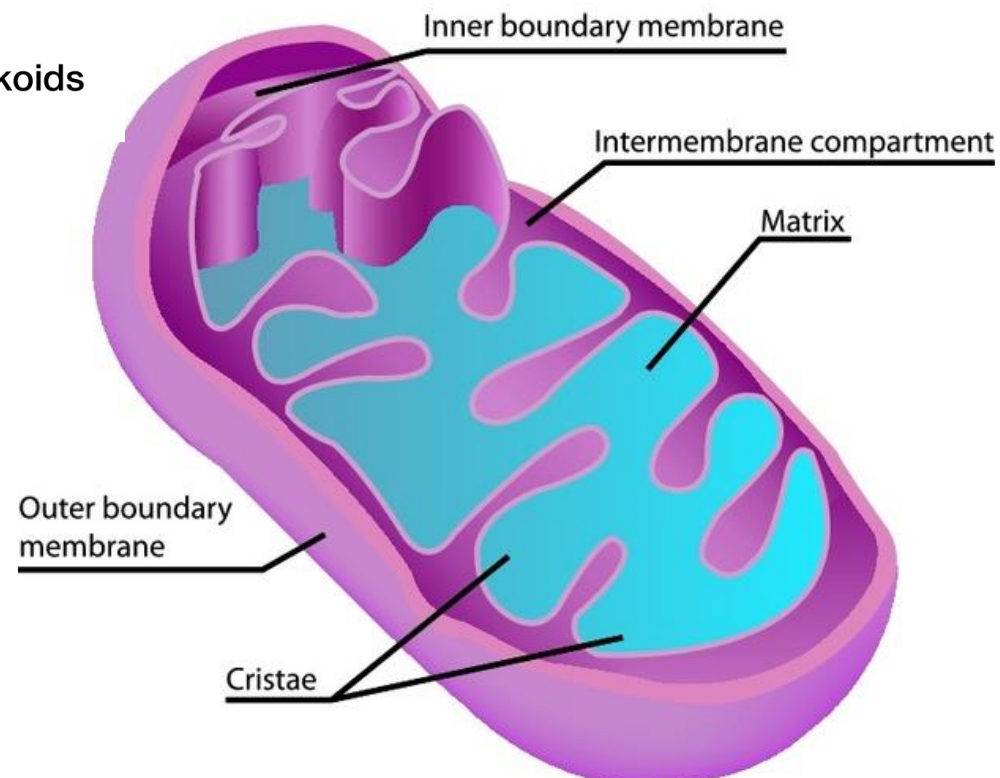
- Mitochondria – a symbiont
- Convert organic matters into energy & CO₂ with the consumption of O₂

Both symbionts were captured by the eukaryotic cells about the same time in the evolutionary history. These 2 seemingly different cellular events in fact share many similarities...

Chloroplast



Mitochondrion



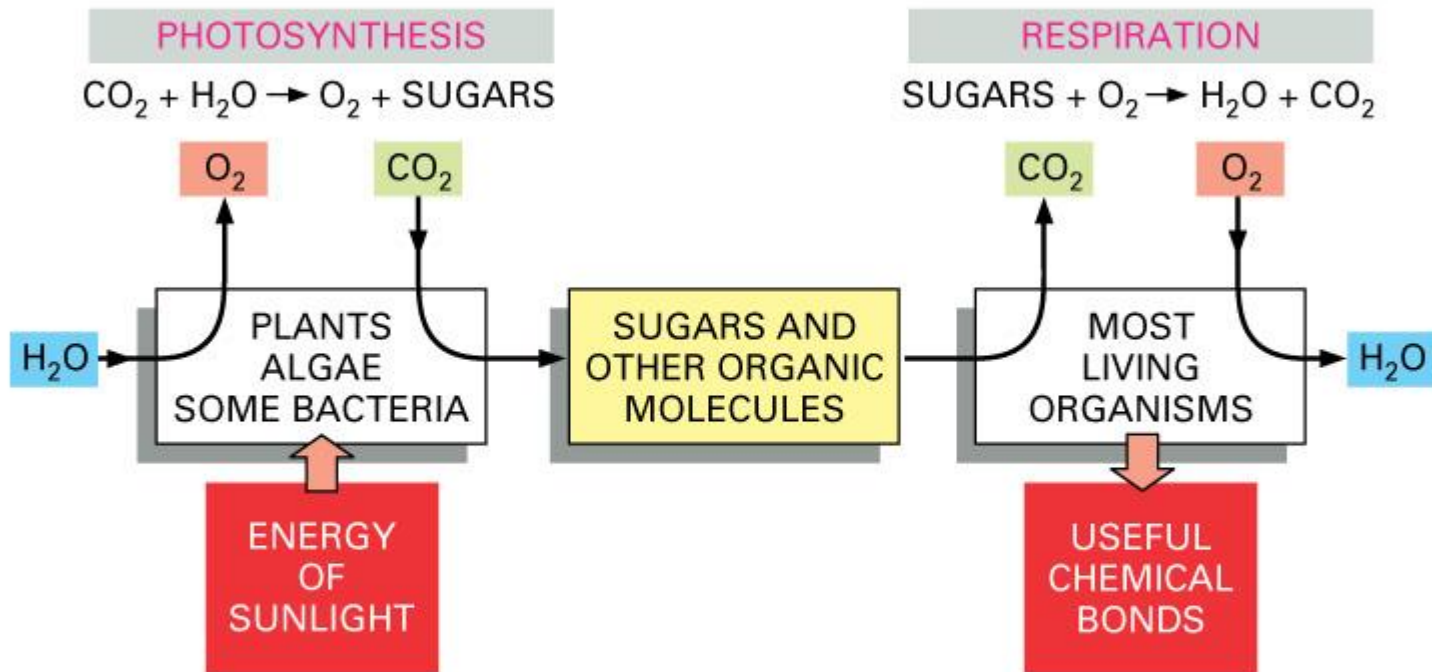
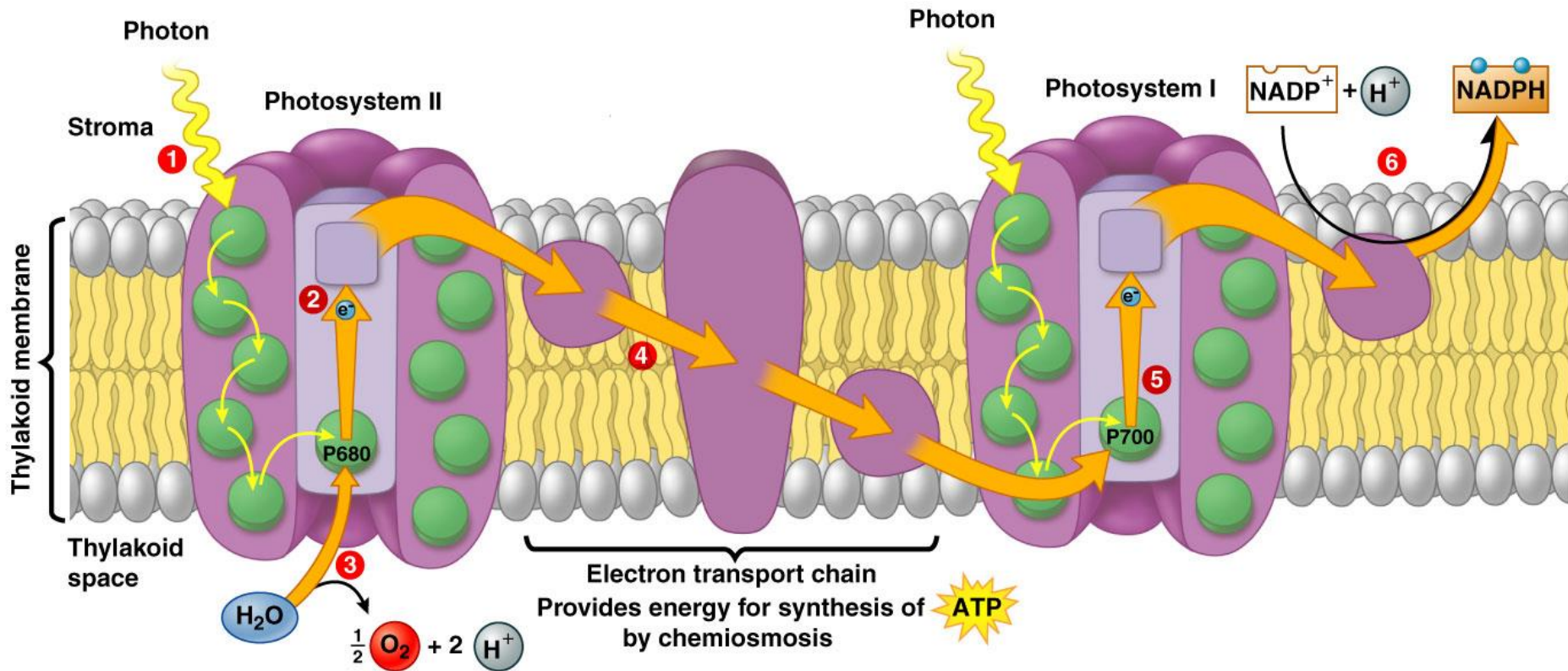
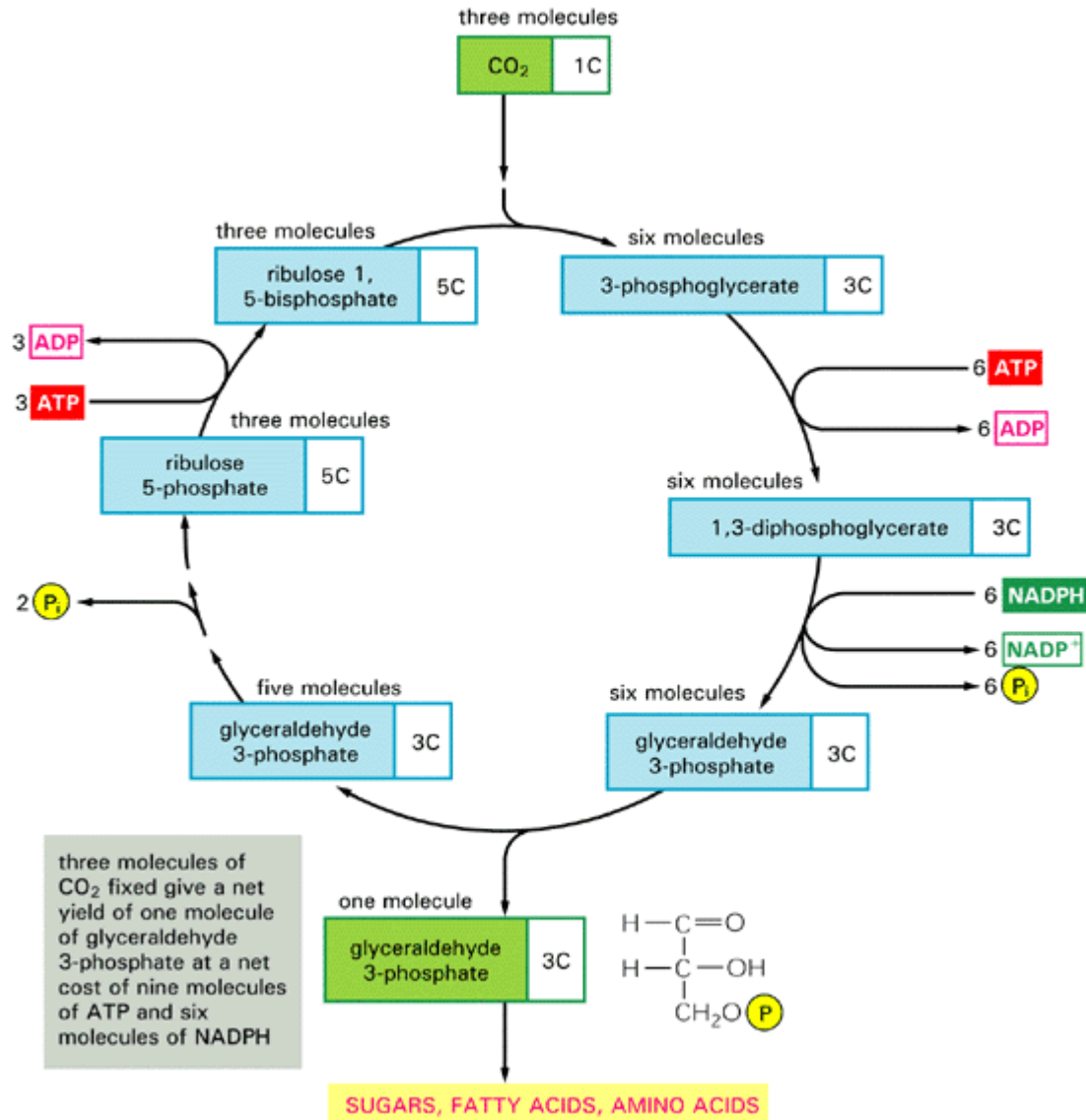


Figure 3-10 Essential Cell Biology, 2/e. (© 2004 Garland Science)

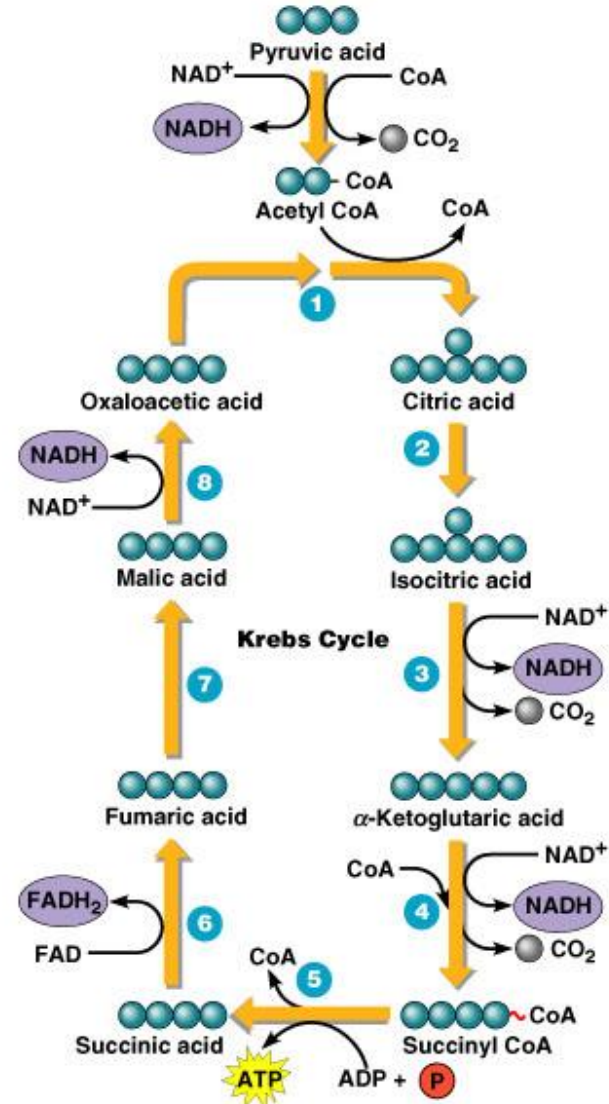
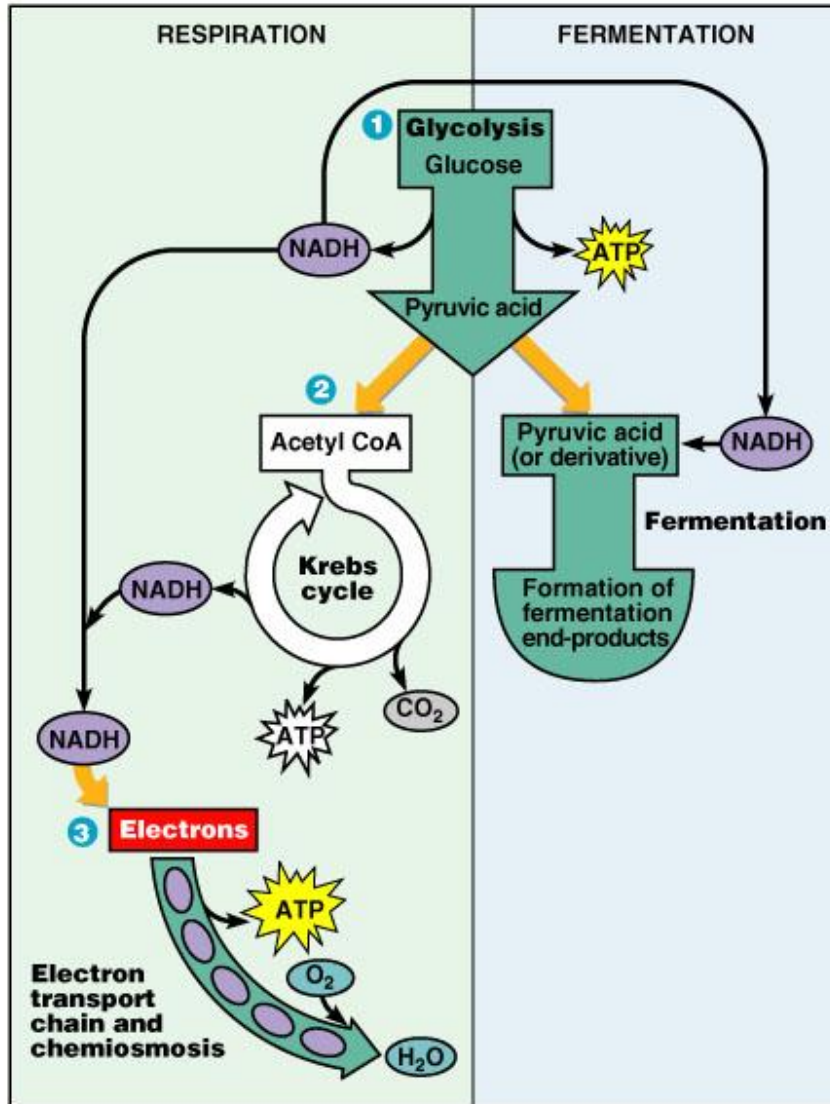
Photosystem 2 & 1



The Calvin Cycle of Photosynthesis



Cellular Respiration



Compare & Name **FIVE**

Differences

- 1
- 2
- 3
- 4
- 5

Similarities

- 1
- 2
- 3
- 4
- 5