

Comparing Photosynthesis and Cellular Respiration

Comparison of Overall Reactions		
Reactants	organic molecules	CO_2 and H_2O
Products	CO_2 and H_2O	organic molecules
Organelle Structure and Function		
Organelle	Mitochondrion (cristae)	Chloroplast (thylakoid)
Inner membrane	ET, H^+ transport, ATP synthesis	ET, H^+ transport, ATP synthesis
Contains DNA, ribosomes etc. for replication	Yes	Yes
Location of H^+ reservoir	Intermembrane spaced	Thylakoid lumen
Location of ATP synthesis	Matrix	stroma