

ENERGY TRANSFORMATION COMPARISON

FEATURE	PHOTOSYNTHESIS	CELLULAR RESPIRATION
Function	Energy capture and storage (Glucose production)	Energy release and usage (ATP production)
Organelle	Chloroplast	Mitochondrion
Reactants	Carbon Dioxide, Water, Light Energy	Glucose, Oxygen
Products	Glucose, Oxygen	Carbon Dioxide, Water, ATP (Energy)
Equation	$6\text{CO}_2 + 6\text{H}_2\text{O} + \text{Light} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$	$\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 \rightarrow 6\text{CO}_2 + 6\text{H}_2\text{O} + \text{ATP}$
Organisms	Plants, Algae, some Bacteria	All living organisms
Metabolic Path	Anabolic (Building up)	Catabolic (Breaking down)

