

<b>CHAPTER 5</b>	<b>Flow of Energy Between Photosynthesis and Cellular Respiration</b>	<b>BLM 5.3.6</b>
<b>HANDOUT</b>		

1. Complete the chart below to identify the basic steps for photosynthesis and cellular respiration.

### The Energy Processes

Photosynthesis			Cellular Respiration		
Energy Used or Released	Reactions	Location	Energy Used or Released	Reactions	Location
Light energy captured	Water splits, forms oxygen; NADP reduced to form NADPH			Glycolysis	
	Chemi-osmosis			Pyruvate is used to make acetyl CoA	
	Synthesis of PGAL			Krebs cycle	
	Synthesis of RuBP from PGAL		Many ATP produced using energy from proton gradient	Chemi-osmosis	

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2. Add the following labels to the diagrams of the mitochondrion and the chloroplast. Some labels may be used more than once.

**Labels:**

ATP

Calvin-Benson cycle

carbon dioxide

cristae

cytoplasm

glucose synthesis

glycolysis

Krebs cycle

light energy

matrix

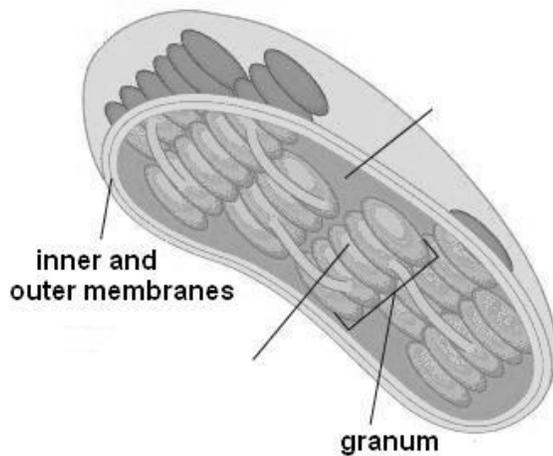
oxygen

PGAL

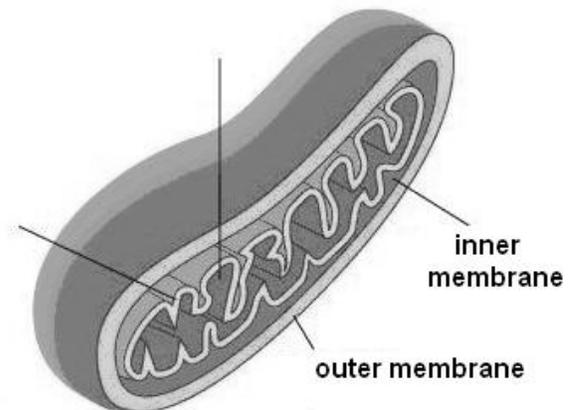
pyruvate

stroma

thylakoid



cytoplasm



3. Make a detailed flow chart showing the flow of energy between photosynthesis and cellular respiration.