

DO NOW

- Turn in your venn diagram worksheet to the bin
- Get ready to D E A R!
- Grab a book 😊

DO NOW!

- Turn in your venn diagram worksheet to the bin
- Pick up the paper from the front table
- Scan these two links to watch the videos that you need to complete this worksheet (links also on my website):



Photosynthesis

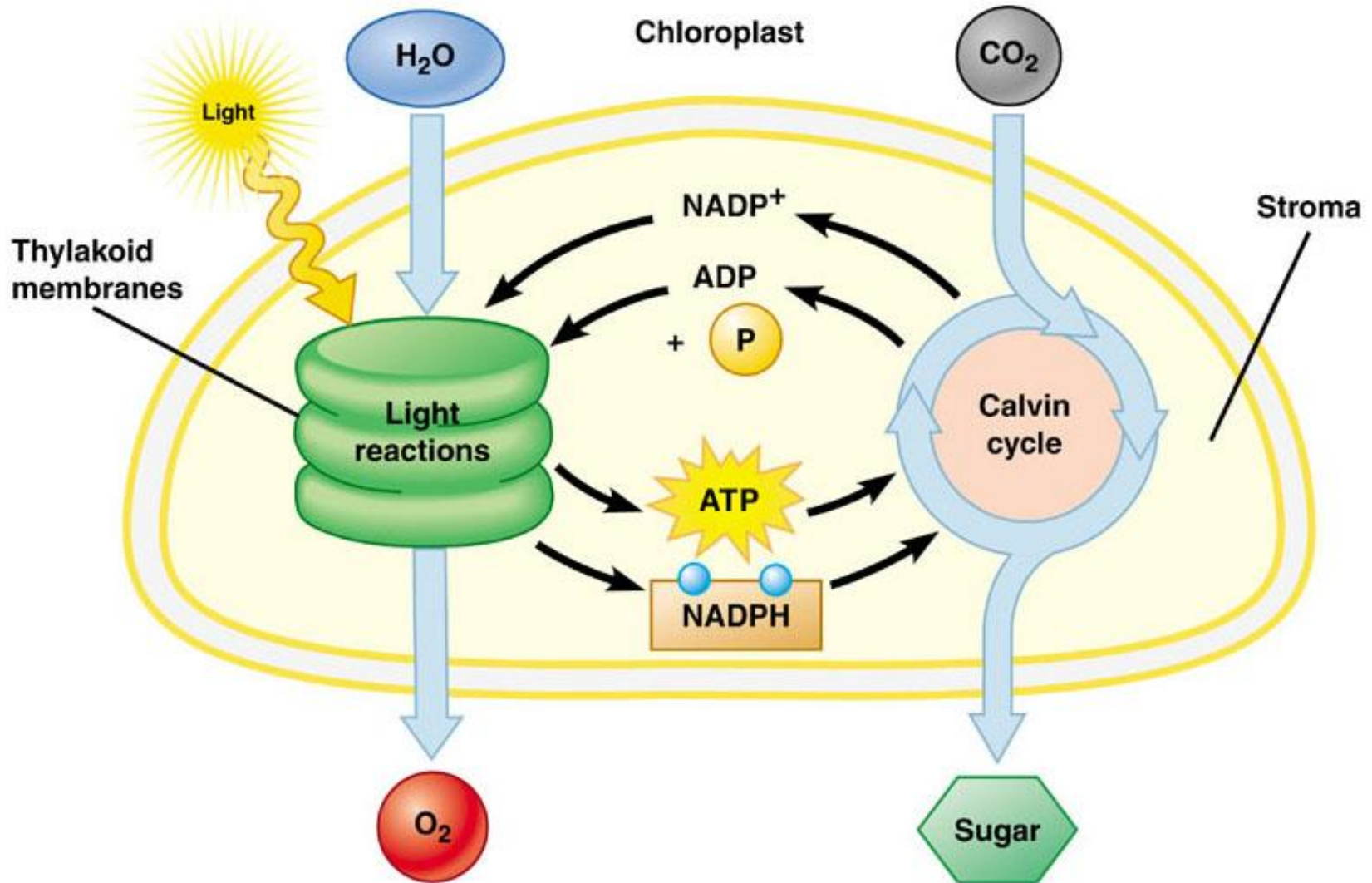


Respiration

HOW TO PREPARE FOR YOUR TEST:

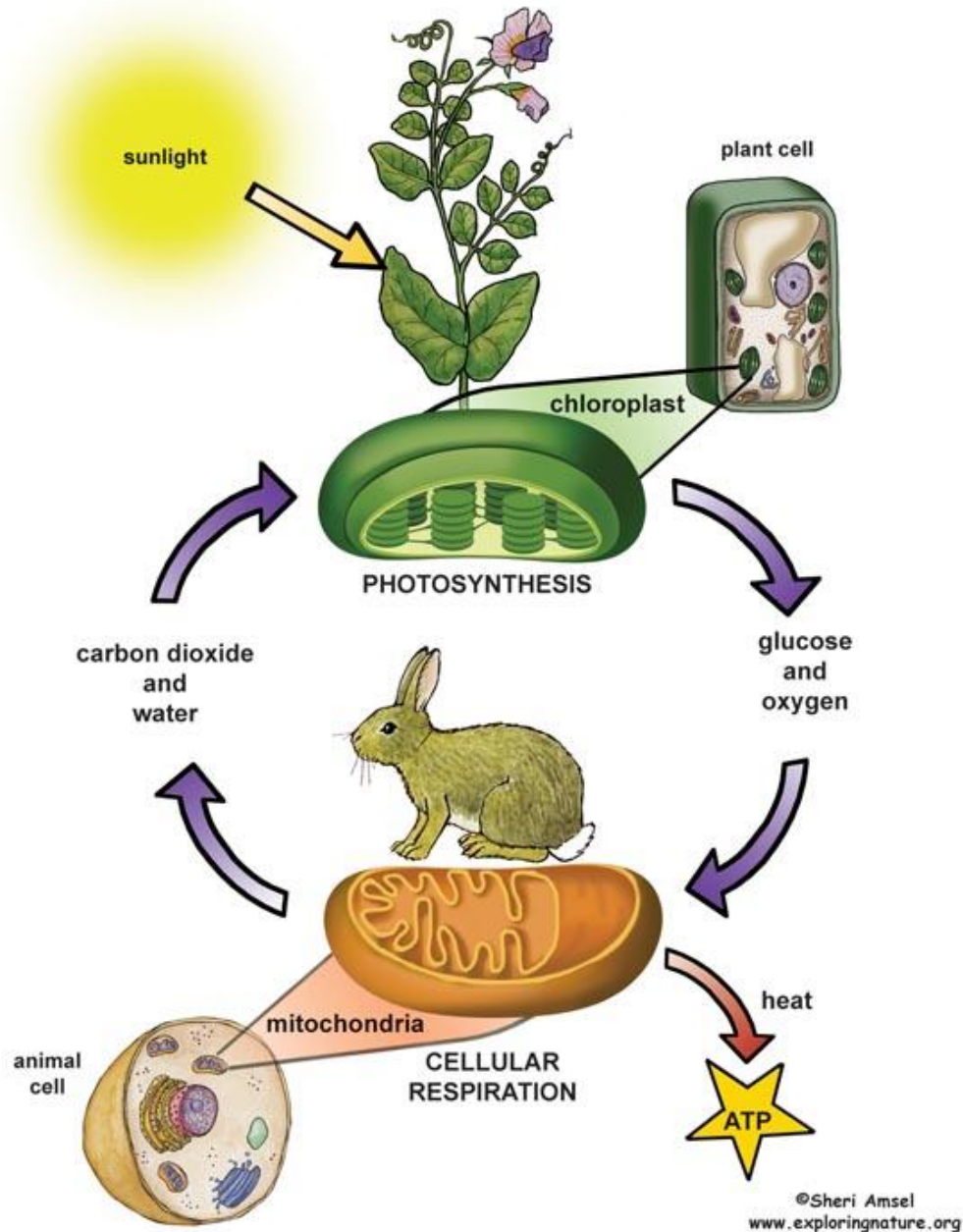
1. Make sure your notebook is in order! Notebook check on Friday!
2. Study your notebook (& PPT's online)
3. Complete USA Test Prep by midnight on Thursday!
4. Complete your study guide (turn in on test day for extra points)
5. Watch the videos under the extra help tab on my website

AN OVERVIEW OF PHOTOSYNTHESIS (BOTH LIGHT REACTION AND CALVIN CYCLE TOGETHER)...



CELLULAR RESPIRATION

Photosynthesis and Cellular Respiration



IT'S ALL A SCANDAL, REALLY...



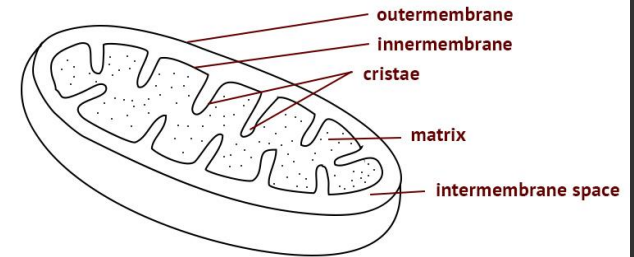
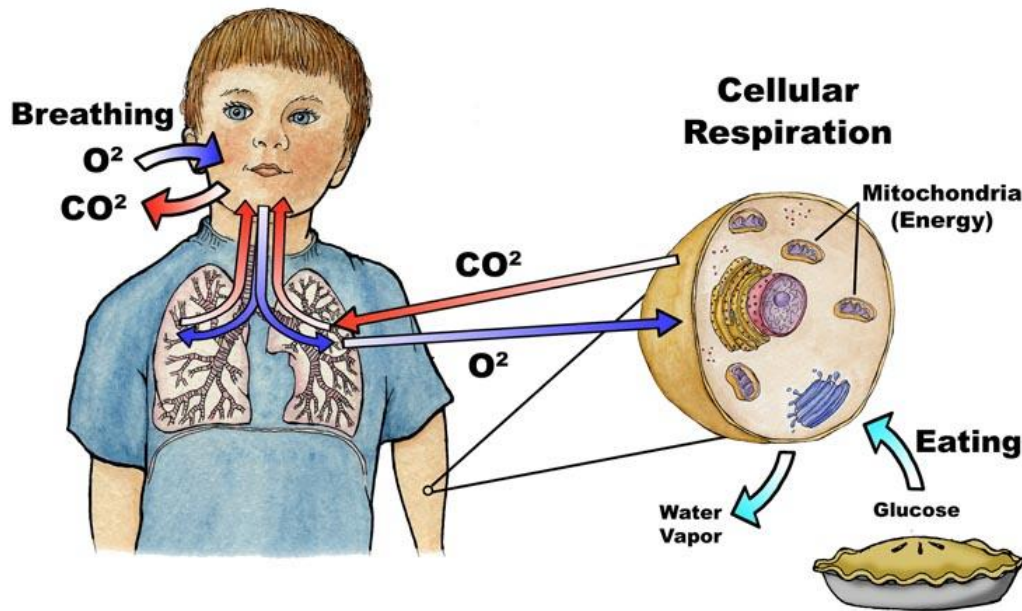
FUNCTION

- To make ATP from the energy stored in glucose



WHERE?

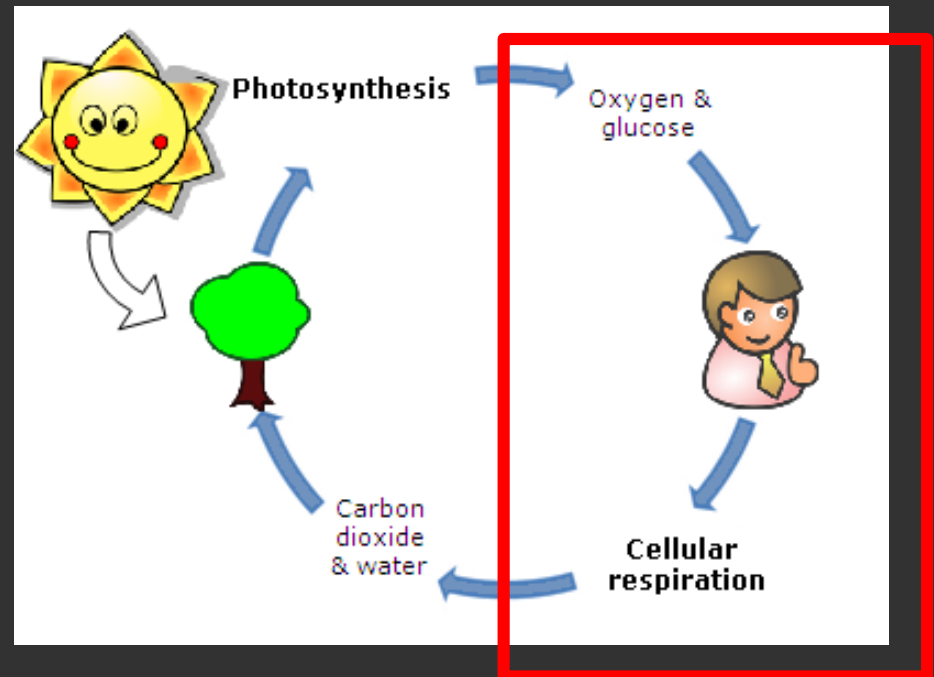
- In mitochondria (eukaryotic (plant & animal) cells)



REACTANTS

What goes into the mitochondria?

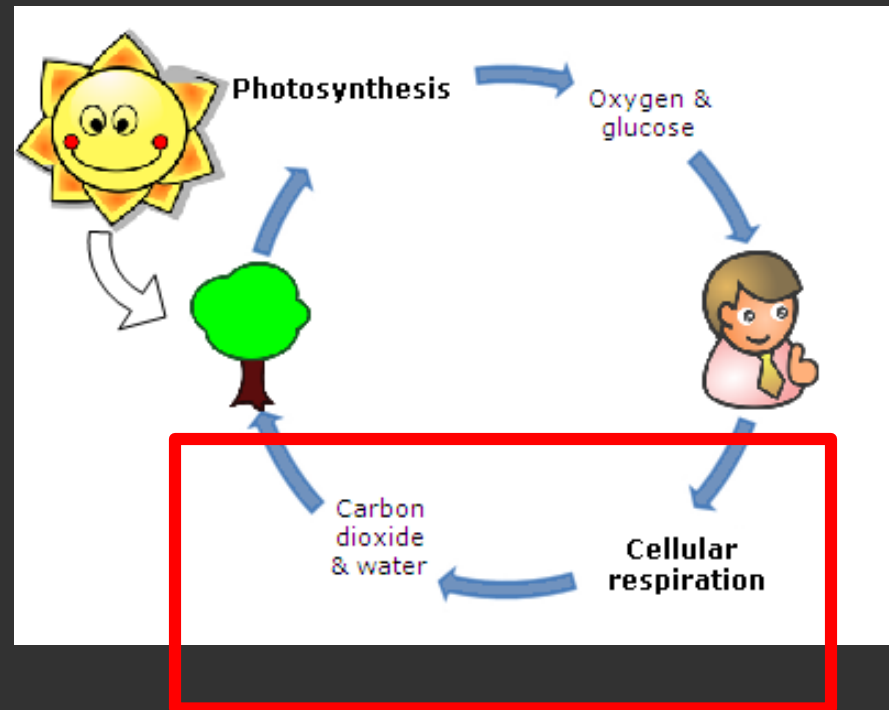
- O_2
- Glucose ($C_6H_{12}O_6$)



PRODUCTS

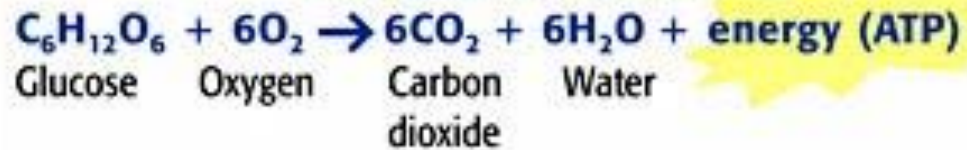
What comes out of the mitochondria?

- CO_2
- H_2O
- ATP!



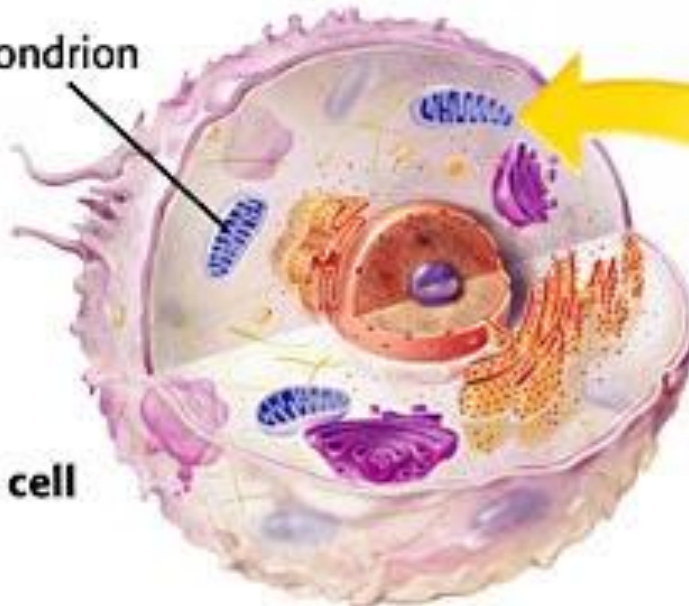
FORMULA:

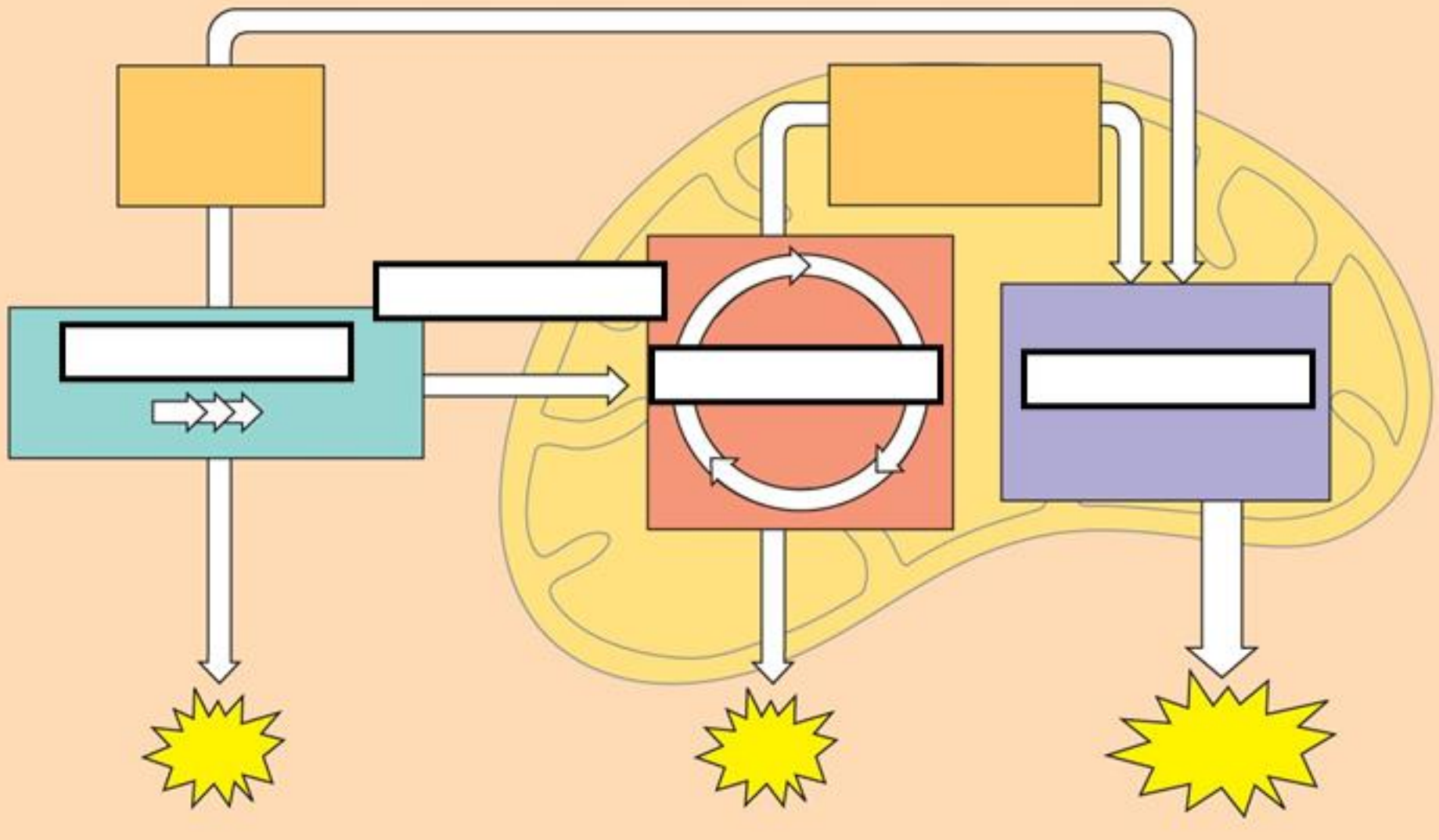
Cellular respiration

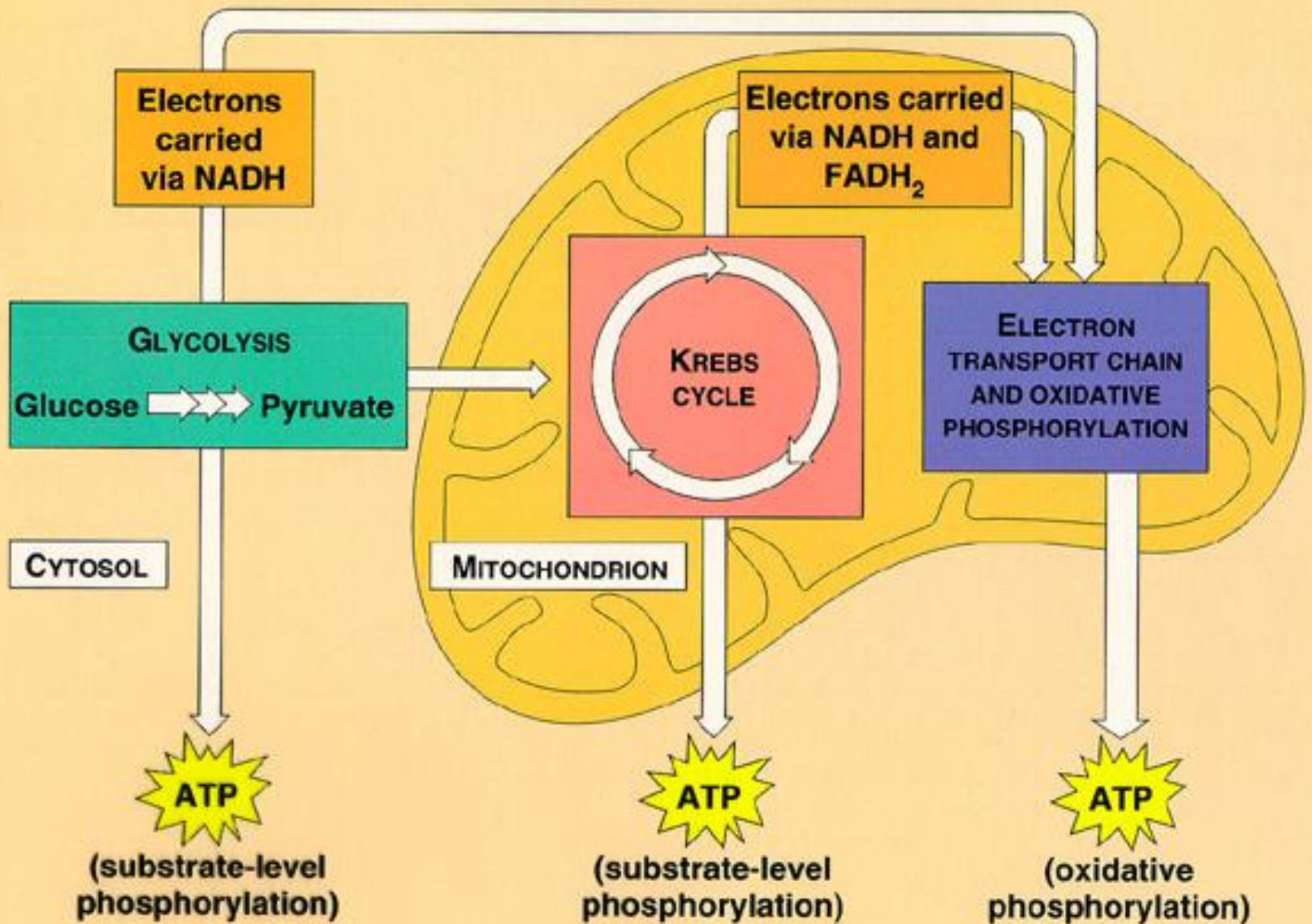


Mitochondrion

Animal cell







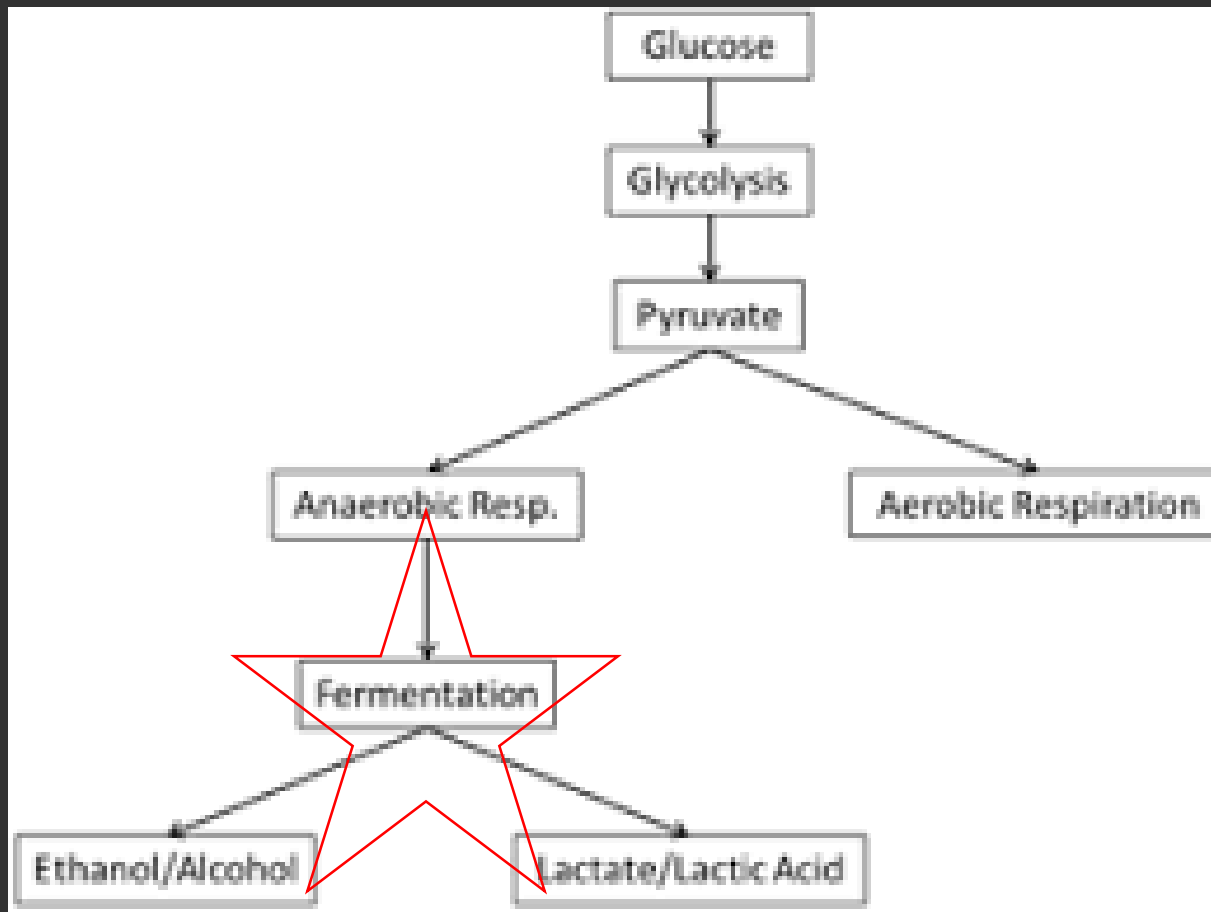
TOTALS

- Glycolysis 2 ATP
- Krebs Cycle 2 ATP
- Electron Transport Chain
32 ATP
- Total = 36 ATP

- 36 ATPs = A whole lot of
ENERGY from 1 glucose!!!



WHAT HAPPENS IF THE CELL RUNS OUT OF OXYGEN?



FERMENTATION

Alcoholic Fermentation



Lactic Acid Fermentation



FERMENTATION

- Releases energy from glucose without the presence of oxygen.
- There are two types of fermentation: alcoholic and lactic acid.
- **Alcoholic fermentation is done by yeasts and some microorganisms. It produces alcohol & Carbon Dioxide**
- **Lactic Acid is produced by muscles during rapid exercise when the body cannot supply enough oxygen.**

COMPARING PHOTOSYNTHESIS & RESPIRATION

Photosynthesis

Cellular Respiration

	Photosynthesis	Cellular Respiration
Function	Energy Storage	Energy Release
Location	Chloroplasts	Mitochondria
Reactants	CO ₂ and H ₂ O	C ₆ H ₁₂ O ₆ and O ₂
Products	C ₆ H ₁₂ O ₆ and O ₂	CO ₂ and H ₂ O
Equation	Sun "E" + 6CO ₂ + 6H ₂ O → C ₆ H ₁₂ O ₆ + 6O ₂	C ₆ H ₁₂ O ₆ + 6O ₂ → 6CO ₂ + 6H ₂ O + "E" (ATP)