

Cellular

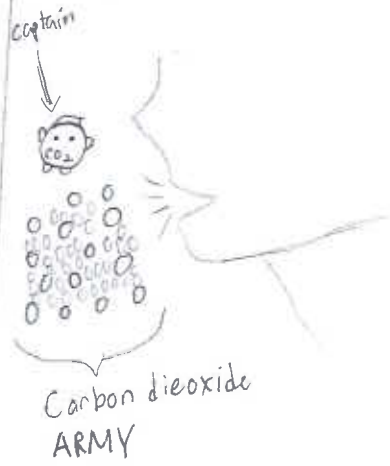
MY Respiration

COMIC

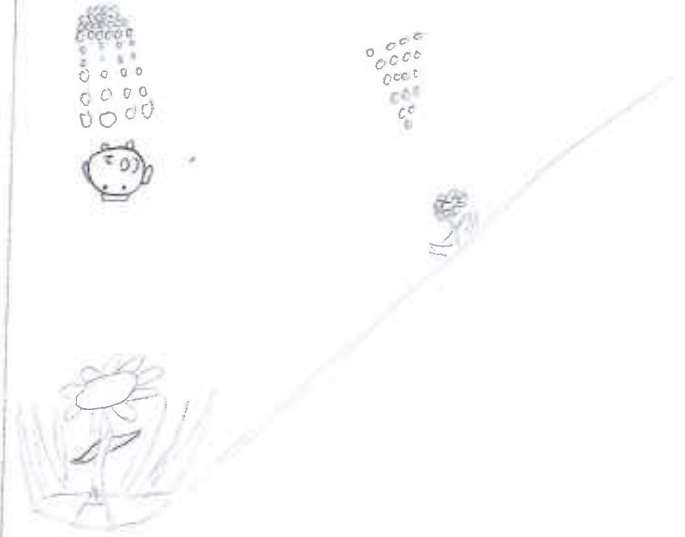
By: ELIJAH J. DASIL



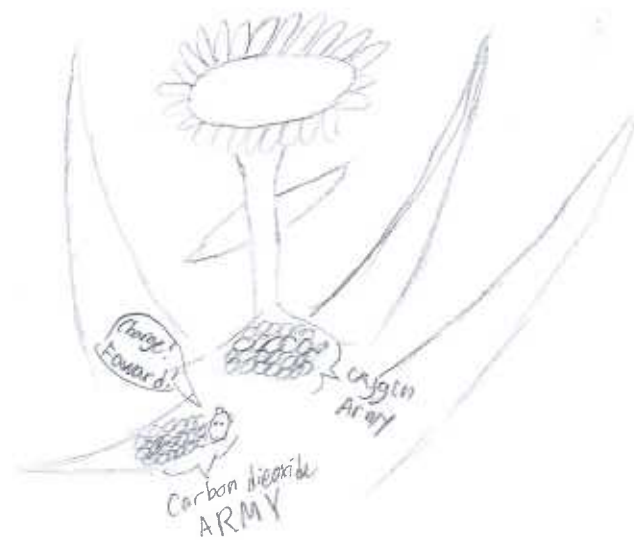
1



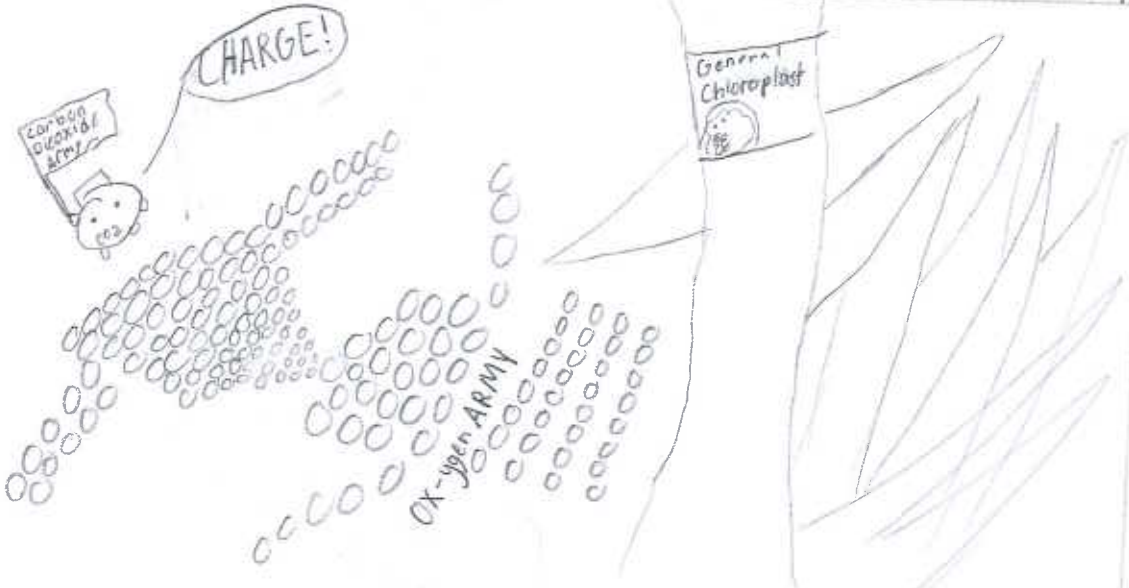
2



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Everyone retreat!

CO₂

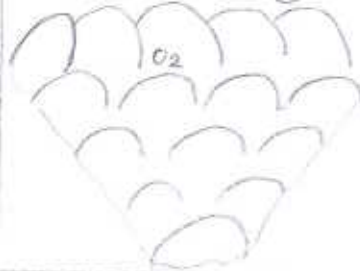


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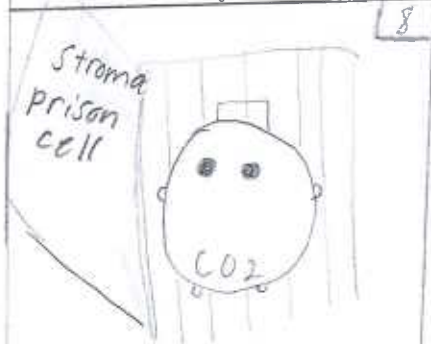
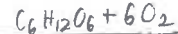
Gave up, you lost

General chloroplast



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intro of photosynthesis:
- glucose comes from the calvin cycle
- photosynthesis: $6CO_2 + 6H_2O$



Stroma Prison cell

You are going to blow off some smoke. And become the sweetest person you'll ever be.

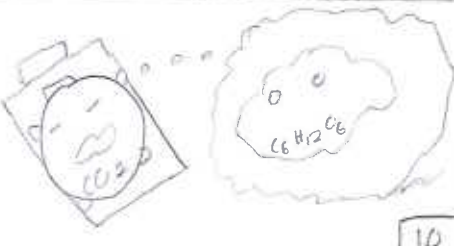
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You'll only eat these bars

Captain CO₂ ate his first bar. When he slept he started to feel changes.

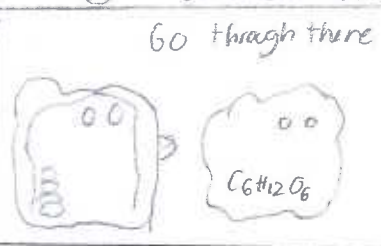
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Next morning

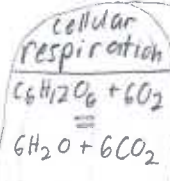


You changed, you are free!



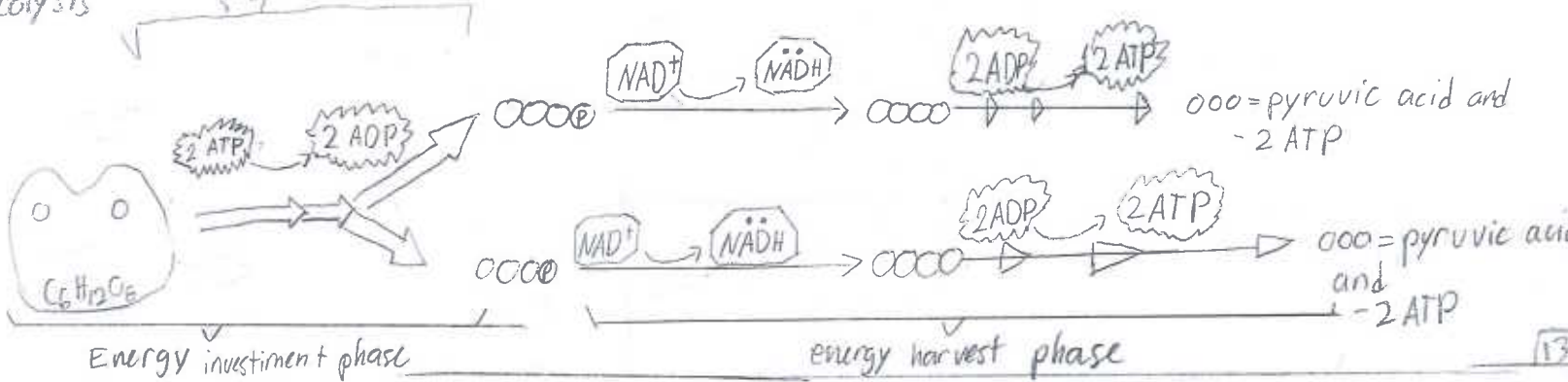
Go through there

3 stage correction facility
- glycolysis
- kreb cycle
- electron transport train (chain)



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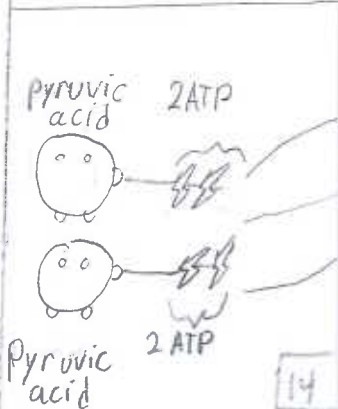
Welcome to glycolysis Mr. glyco you can split your body in half, I can magically change your form, so can the others.



Energy investment phase

energy harvest phase

Next = kreb cycle



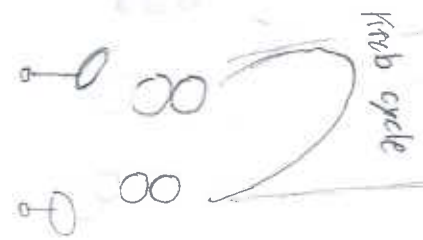
Pyruvic acid

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Glycolysis: breaks down glucose and produces 2 pyruvic acid, 2 net ATP, and 4 ATP.
- this all happens in the cytoplasm.

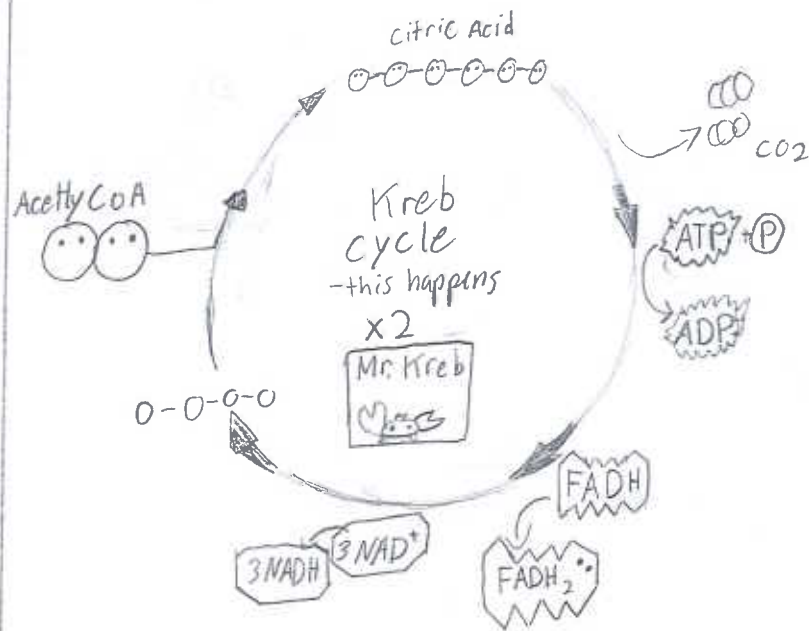
Entering the Mitochondria specifically the MATRIX

x2 Pyruvic acid (3 carbon atoms)



before the Krebs cycle begins, the 3 carbon atoms split up and combine with an enzyme known as CoA. The product of the reaction is acetyl CoA (2 carbon atom)

The Krebs cycle: happens in the Mitochondrial matrix



Krebs cycle info:

reactants:

- pyruvic acid becomes Acetyl CoA becomes Citric acid

- NAD⁺ and FAD⁺

- ADP

Products:

- CO₂

- NADH and FADH₂

- 2 net ATP

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summary: 8-steps of chemical reactions where 2 pyruvate molecules from glycolysis are chemically converted in this cycle to make 2 ATP (and some 8 NADH and 2 FADH₂ releases carbon dioxide as a waste product

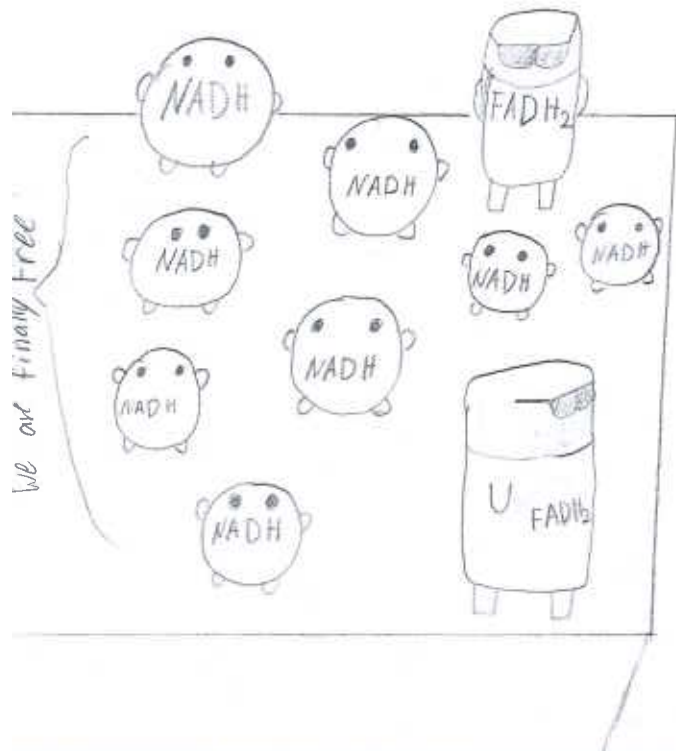
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The Krebs cycle is Aerobic (requires oxygen)

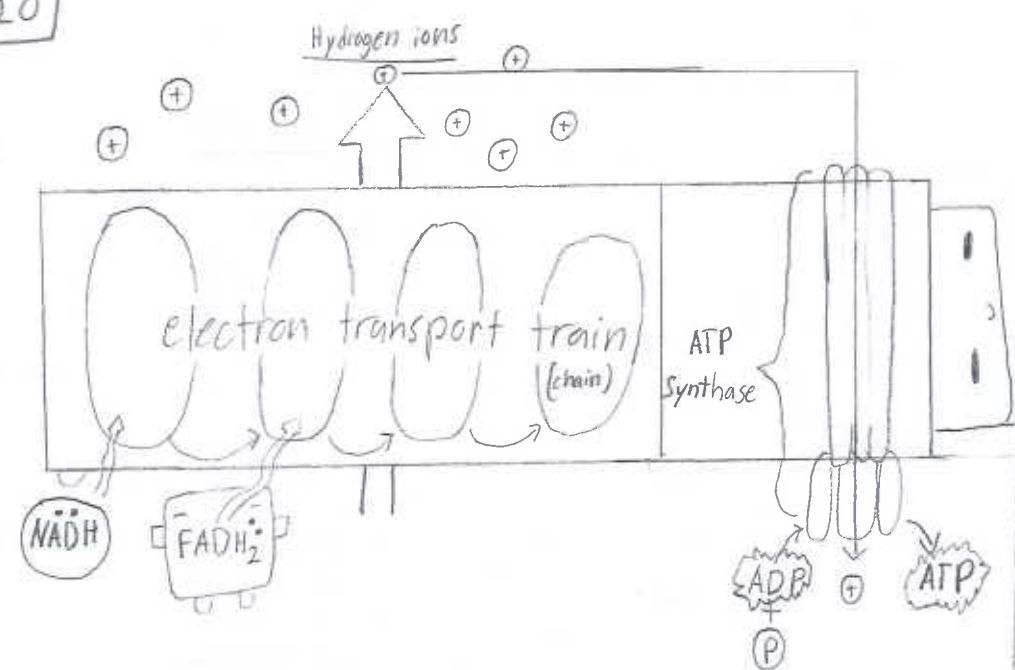


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The electron transport chain:
occurs in the inner membrane of the mitochondria specifically the Cristae.

reactants

- NADH
- FADH₂
- O₂

product

- NAD⁺
- H₂O
- 34 ATP!

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summary

Don't have enough space. GO to next page

Summary of the Electron transport chain

- two stages:
 1. Oxidative phosphorylation
 2. Chemiosmosis

• process - series of reactions using the electrons and hydrogens carried by NADH and FADH₂

• In the end, electrons combine with H⁺ ions and oxygen to form water.

• Creating 34 frickin' ATP!

In the end of Aerobic respiration

36-38 ATP

- 2 ATP from glycolysis
- 2 ATP from Krebs cycle
- 34 ATP from electron transport chain

creator: now the cycle will restart

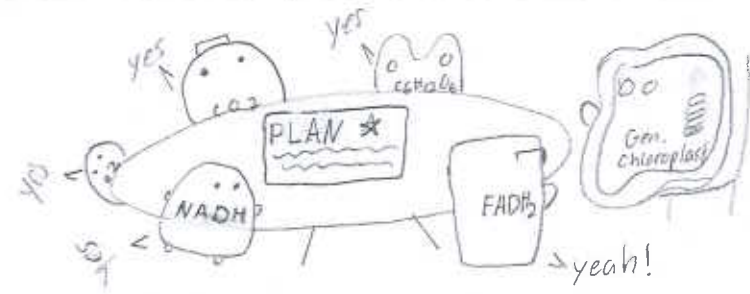
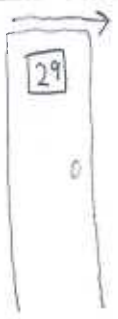


creator: Let us go at it

AGAIN!

characters: What!?

Conference ROOM



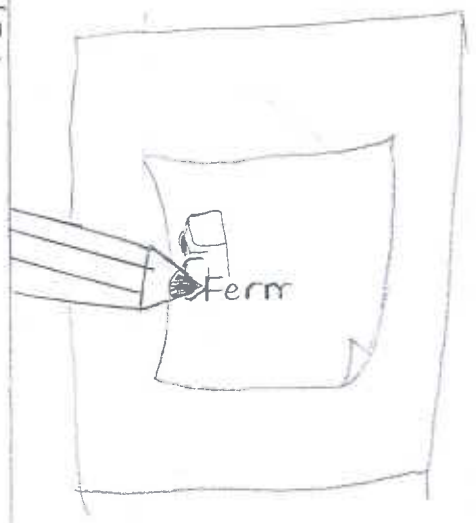
we must break the creator's pencil!

Who is with me!



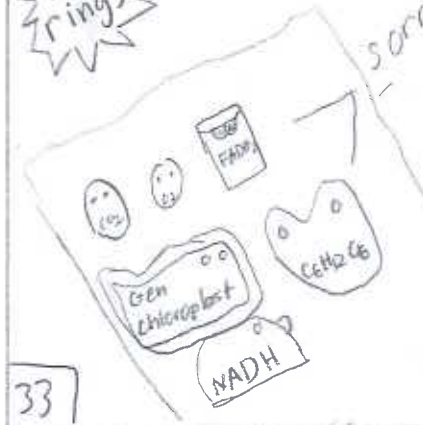
What a bout fermentation?

creator: thanks for reminding me.



MY one and only sharp pencil! NOOOOO!

Bell Rings



sorry!

This is due in 2 minutes!

My cellular respiration Comic Mrs. Dzyk

THE END creator: Elijah J. Dasil