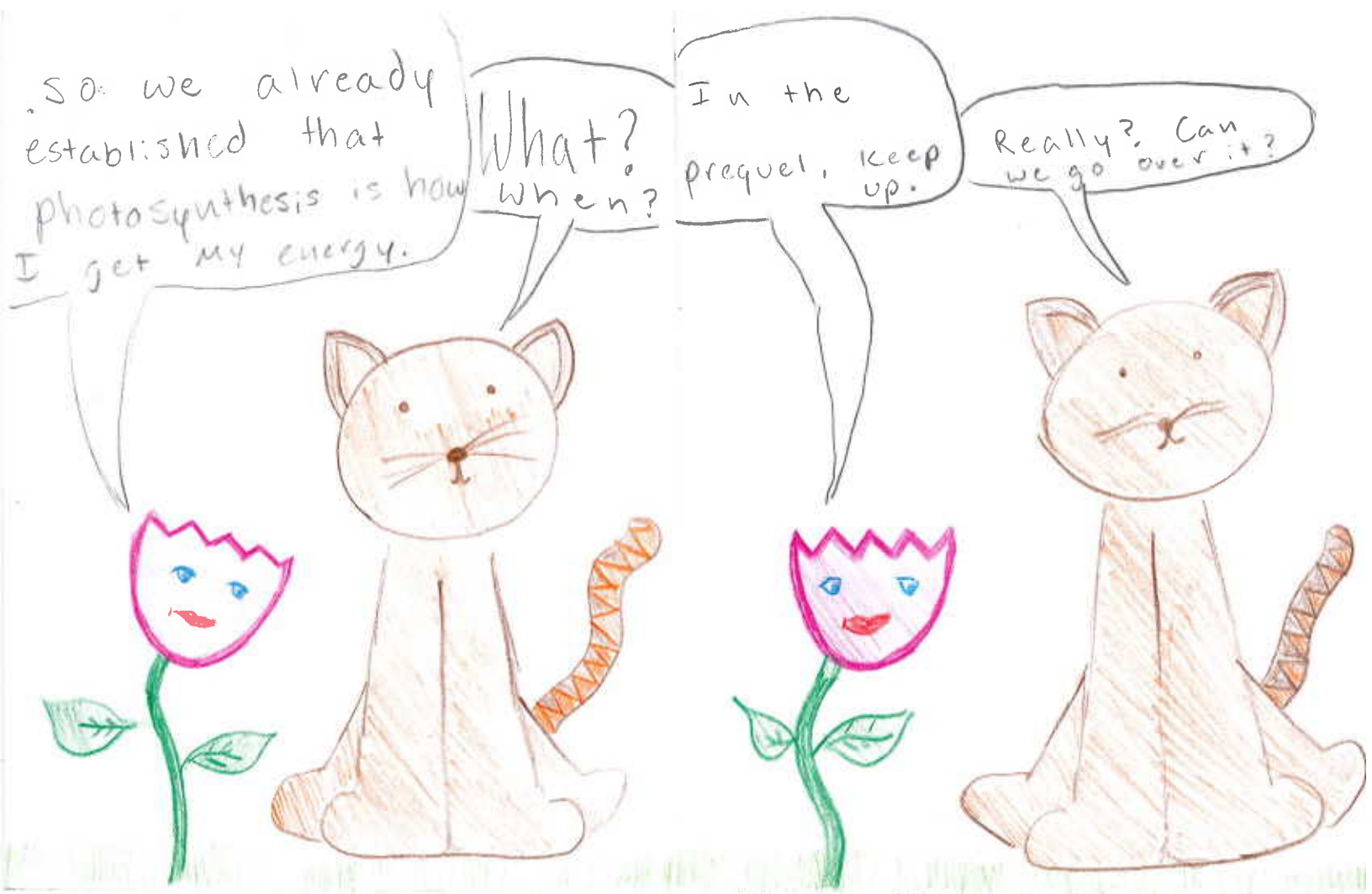
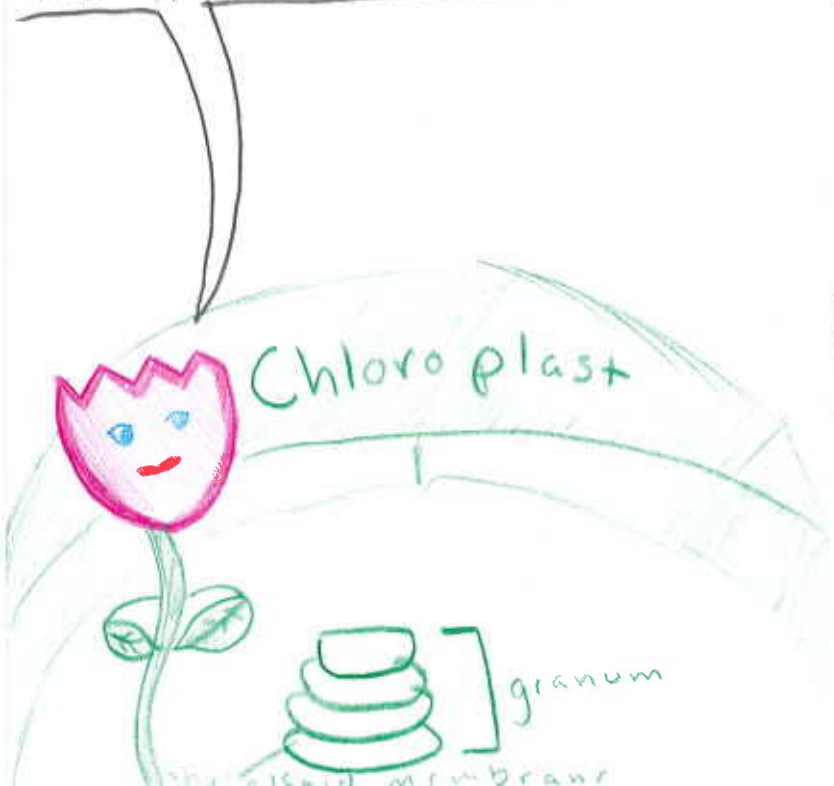
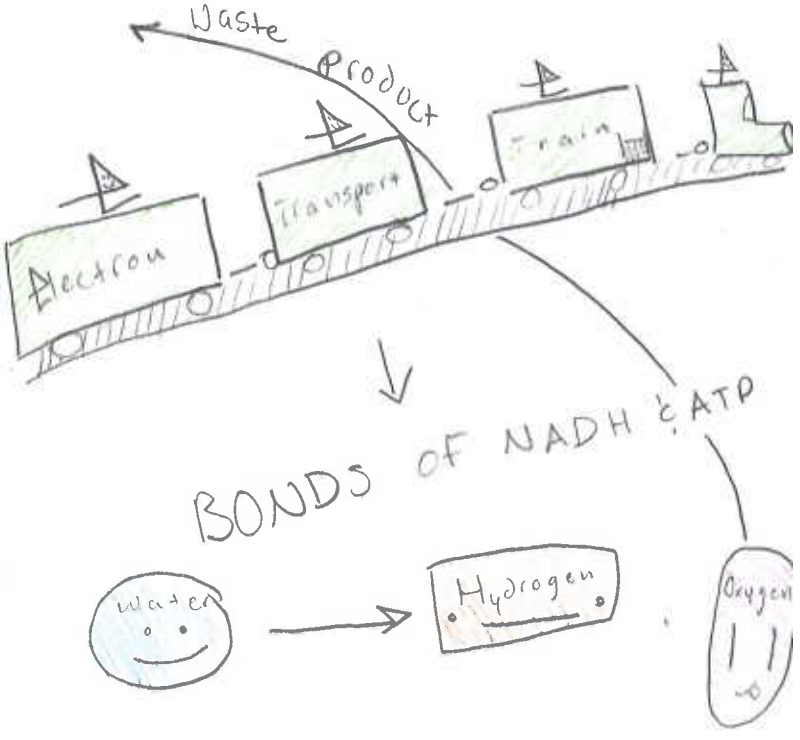


Well, inside the chloroplast, in a plant cell like myself, I get food from photosynthesis. Light energy is captured by chlorophyll and it feels the beginning of the process.

In the Grana, Energy from the sun is passed down the Electron Transport Train and stored in the bonds of ATP and NADH. Water molecules are split into H and O. O is released as a waste product. ATP, NADH, and H+ go to the stroma next.

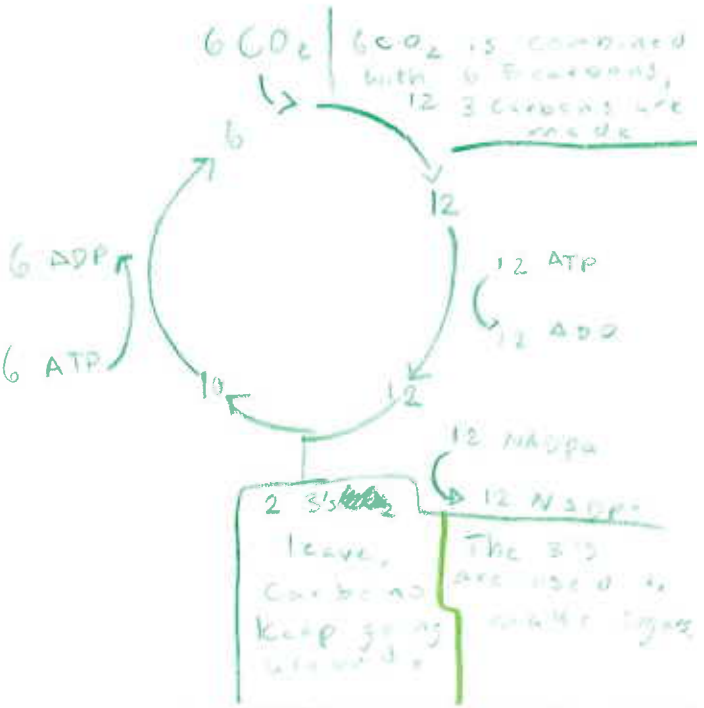




This all happened in photosystem 2 and 1, after these stages in the light dependent reaction we went to the . . .

DARK REACTION

In the dark reaction, NO LIGHT is necessary I use the energy from the energy carrying molecules to make glucose with the Calvin Cycle. This happens in and around the stroma. In the calvin cycle, chemical reactions powered by ATP and NADPH combine H+ with CO_2 to form sugar molecules.



Oh! Mine, in respiration, is $C_6H_{12}O_6 \rightarrow 6H_2O + 6CO_2 + ATP$. Can I tell them about respiration now?

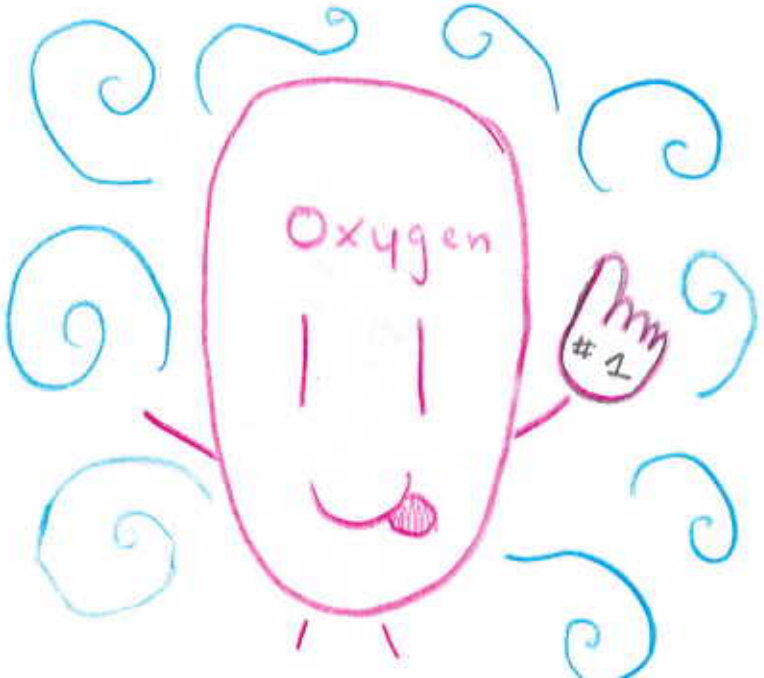
What's the reaction of your process for energy? Mine is $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + O_2$.

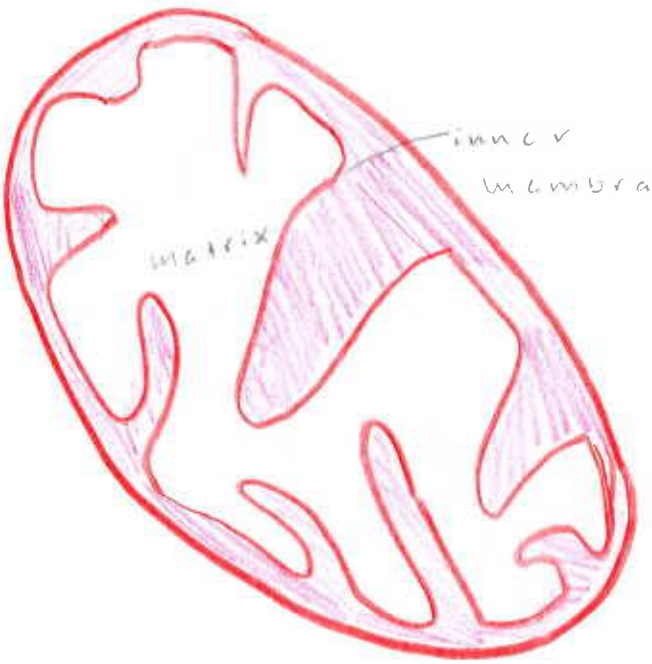
That's what I was looking for.

Respiration is how animals obtain energy. It happens in the mitochondria.

There are two words used to classify the stages in Respiration. Anerobic means there is no oxygen. Glycolysis is Anerobic. Aerobic means there is oxygen. the Krebs cycle and Electron transport train are Aerobic

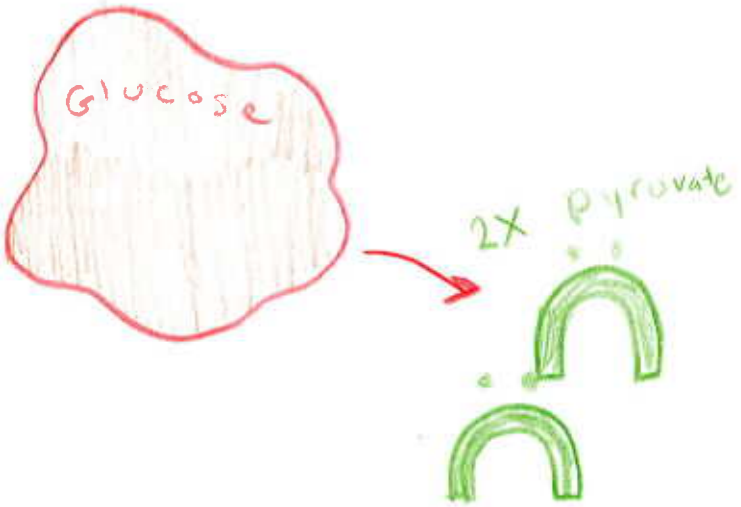
There are two parts of the mitochondria, the inner membrane (cristae) and the matrix.

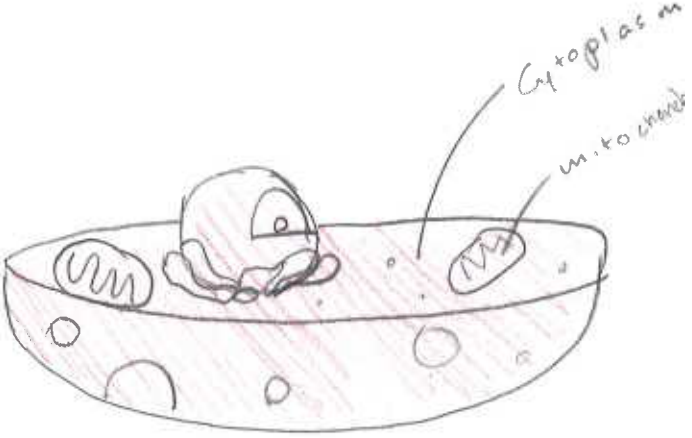




Glycolysis happens in the cytoplasm Glucose is broken down from 6 carbons into 2 3 carbons called pyruvate. It also produces 2 NADPH.

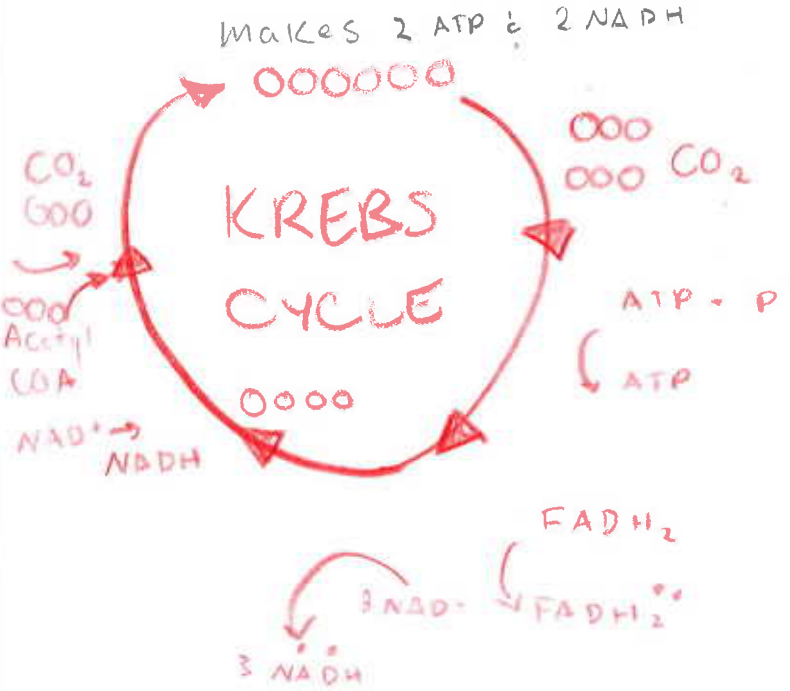
Glycolysis is the only anerobic process and the only process to happen in the cytoplasm.

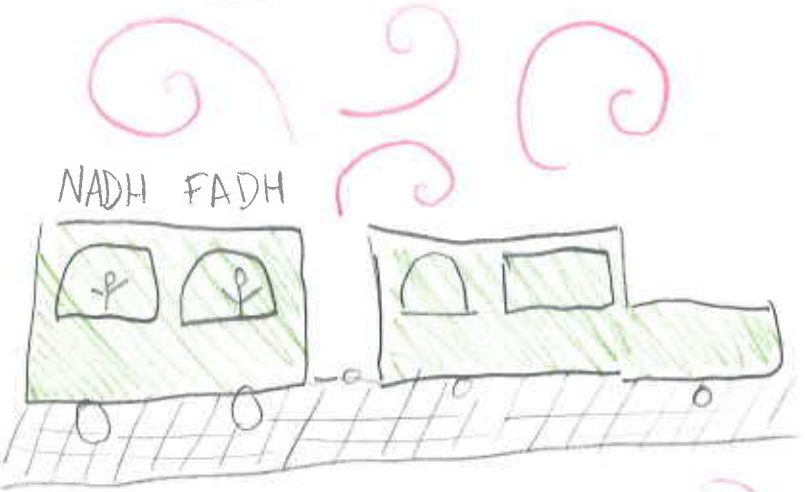




Next we move to the Krebs Cycle which is Anerobic. It happens in the matrix. In the cycle, Electron carriers move NADH and FADH to the electron transport train.

Next NADH and FADH go to the Electron Transport Train. A series of reactions in which O combines with H and makes water as a waste product. It also makes A LOT of ATP.





ATP and ADP are the major energy carrying molecules. Adenine Tri Phosphate is what ATP stands for, meaning it can turn into ADP (Adenine DI phosphate) by losing one phosphate group. ADP stores more energy then ATP.

Photosynthesis and Respiration are related by their products and reactants.