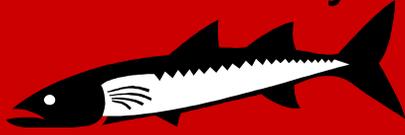


Attitude is Everything!



Fri, Nov 4, 2016

PHONES & EAR BUDS away Please!

Pick up: self check

Today you will:

1. Review Energy Processes/DSQs
2. Self Check
3. Photo/Respiration Comparison Chart

Homework/Planner:

- Quiz yourself, use interactive textbook, prepare for Monday's Quiz
- Honors-Case Study Due Wednesday

Energy Vocab Square

- With a partner, review the vocab squares (9)
- Determine how you would arrange them so related concepts, terms & definitions match up
- When finished, you should have something that looks like this



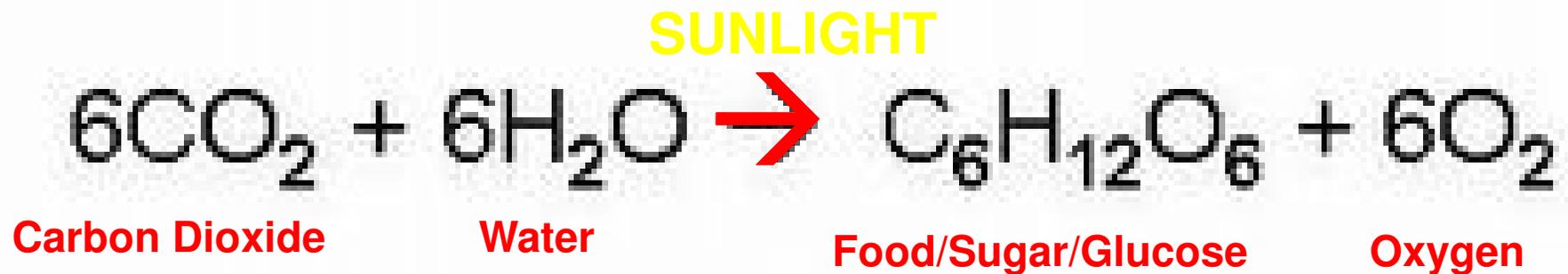
InterventionCentral

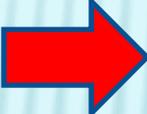
5-Minute 'Count Down' Timer

05:00

www.interventioncentral.org

A) The Equation



Reactants  Products

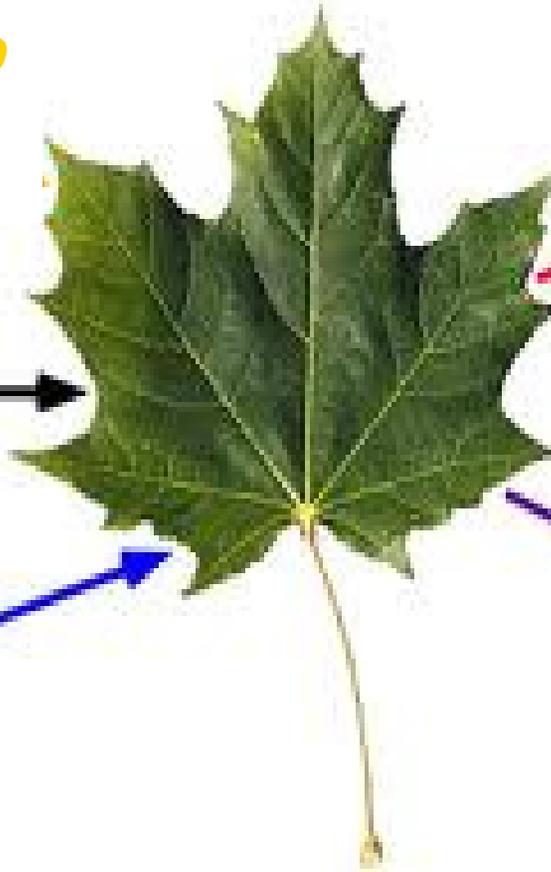
B) Energy for PHOTOSYNTHESIS...?



Carbon
Dioxide



Water



Oxygen

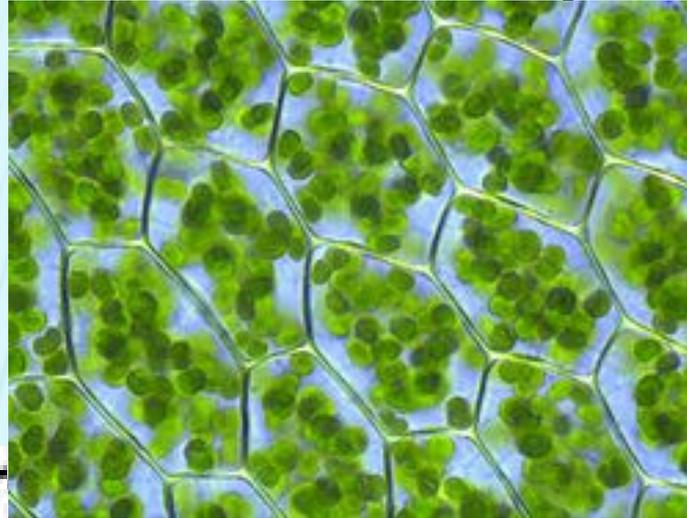
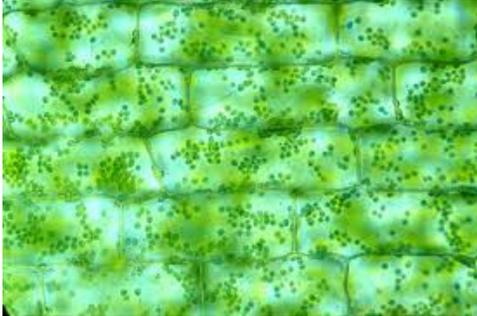


Glucose

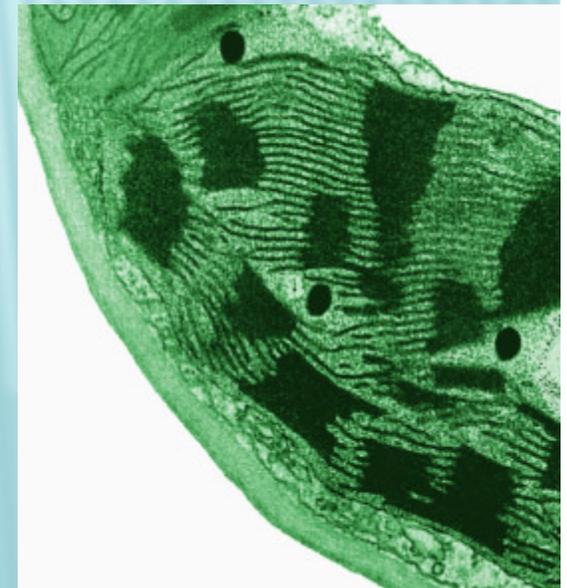
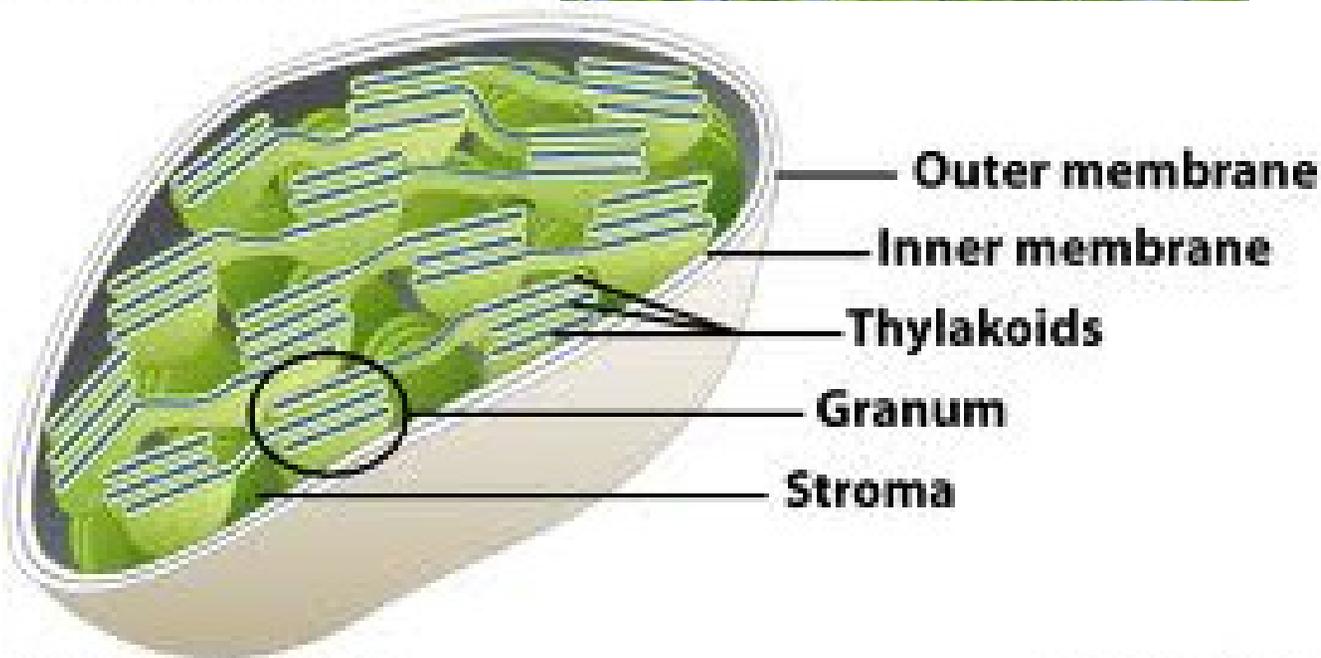


C) Chloroplasts/Chlorophyll

organelles that conduct photosynthesis



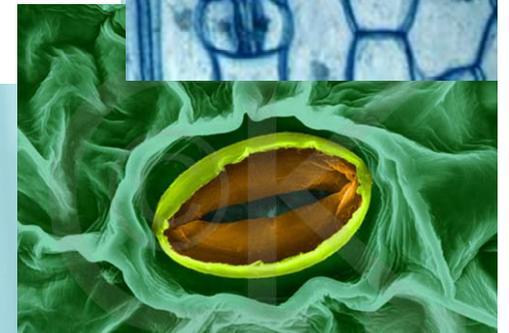
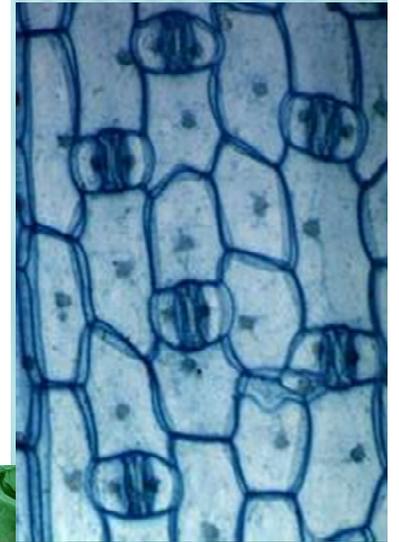
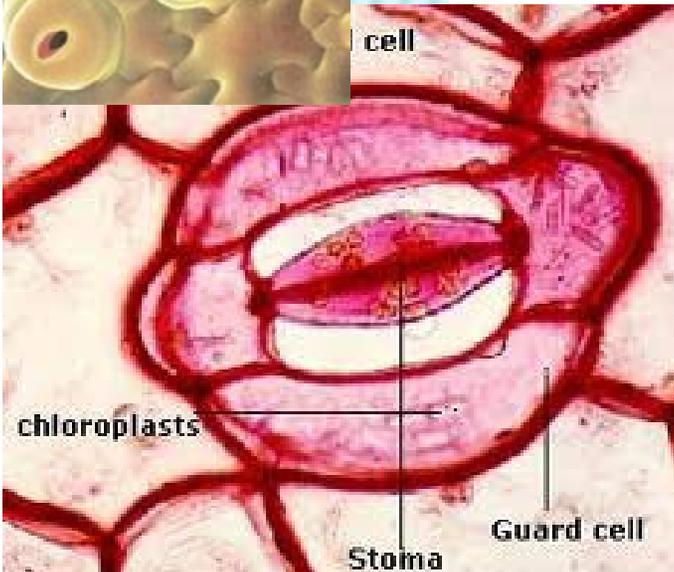
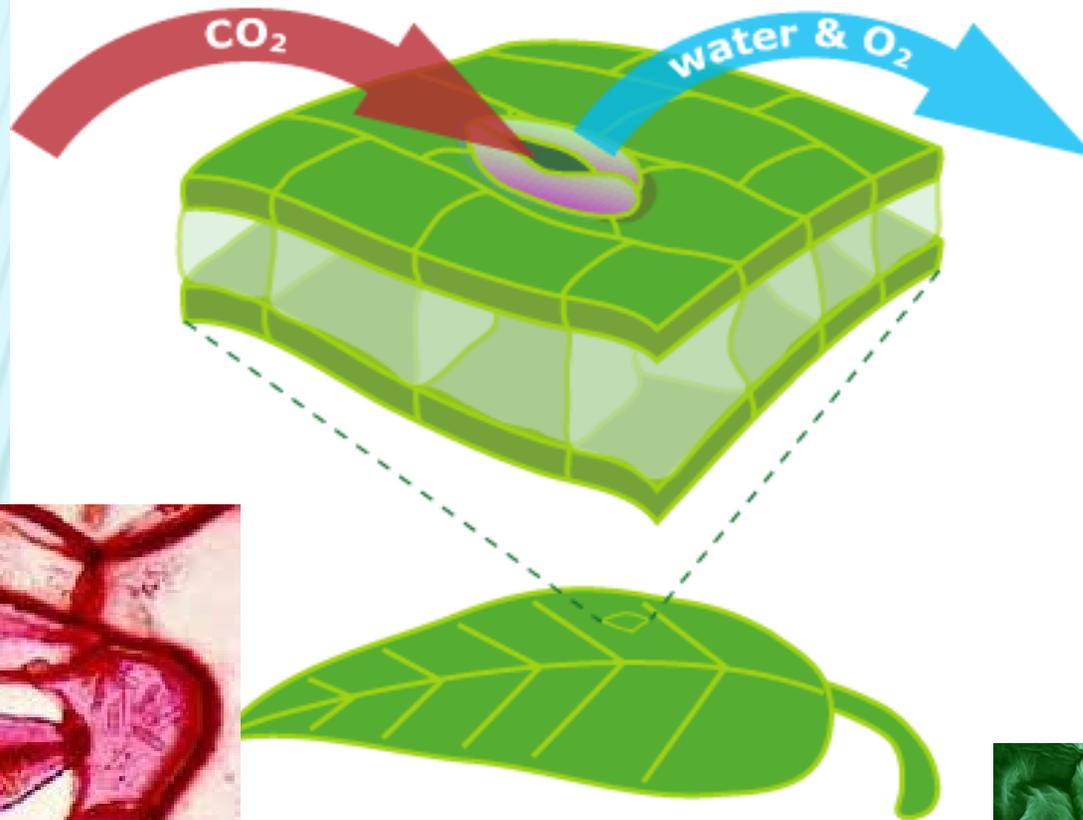
membrane-rich org



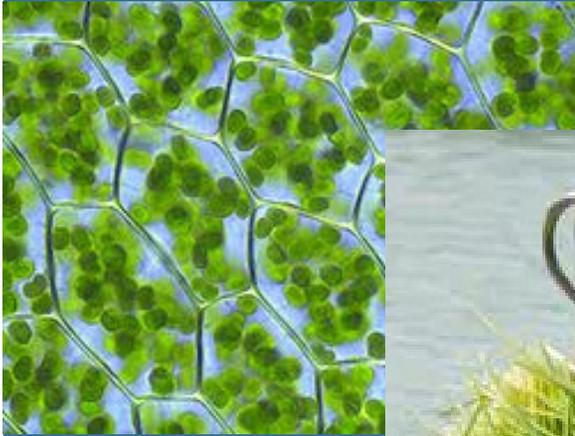
D) Stoma/Stomata

pores that allow the exchange of gases and water with the outside environment

Carbon dioxide enters, while water and oxygen exit, through a leaf's stomata.

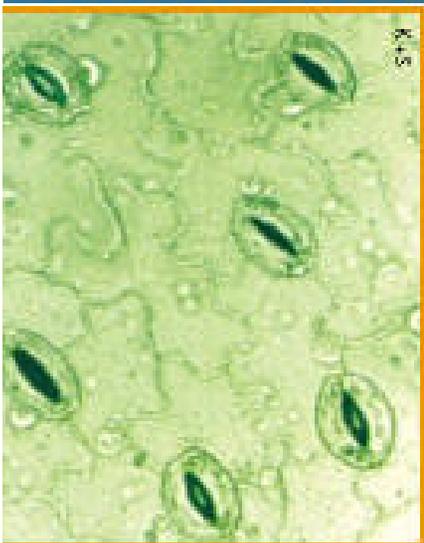


CHLOROPLAST, CHLOROPHYLL, STOMATA



× The benefits of chlorophyll

- + Cleanser
- + Anti-inflammatory properties.
- + Stimulates repair & healing of damaged tissues.
- + Filter for pollutants;
- + Neutralizer of environmental pollution & would be beneficial for smokers.
- + Been known to fight deposit of carcinogens in body
- + Best known for deodorizing benefits, reducing body odor and bad breath.



**STOMATA = gas
exchange**

E) What is the importance of photosynthesis to us?

Other animals? The ecosystem?

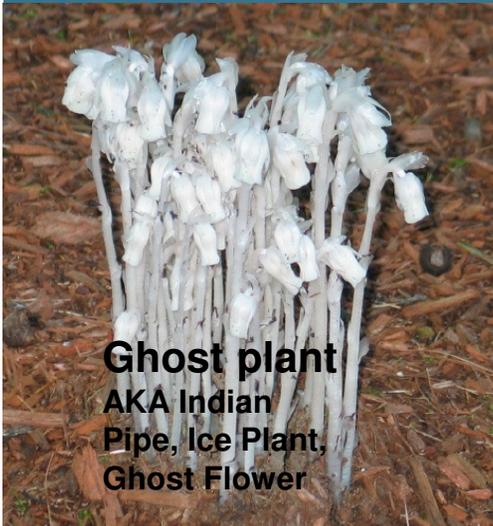
- × OXYGEN for us, for other animals
- × GLUCOSE (sugar) for us, for other animals
 - + Plants are the main source for chemical energy for most organisms on earth →
 - × Herbivores get energy directly from plants →
 - * Secondary consumers get energy indirectly from plants →
 - * Decomposers get their energy indirectly from plants =
 - × ***it all revolves around plants!***



So how do *Heterotrophic Plants* get energy??

- There are about 3000 species of non-photosynthetic (i.e. heterotrophic) flowering plants.

- Get food from outside source → are parasitic on fungi → energy comes from photosynthesis of a nearby tree → passing through the root-like structure of fungus → to the heterotrophic plant!



Monotropa, from the Latin, "once-turned", reference to the flowers, which face the ground early in life, and turn straight upward once they begin producing seeds. *uniflora*, from the Latin, "single flower"

The Venus Fly Trap

They don't need flies to survive!

They DO have chlorophyll

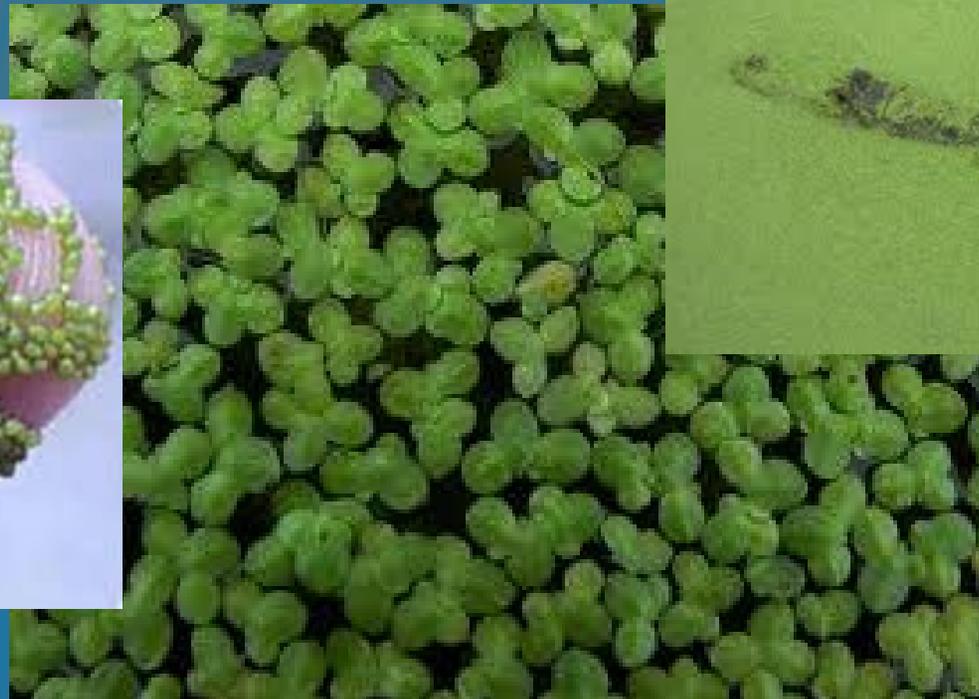


Duckweed

The smallest flower in the world....

<http://safari2.volusia.k12.fl.us/SAFARI/monstage/play.php?keyindex=14641>

Clip mentions: Photosynthesis, Chloroplasts, Stomata



Giant Arum AKA Corpse Flower

The BIGGEST flower in the world....

The blossom is pollinated by flies attracted by its scent → Rotting flesh!

- Mega flower in captivity was 44.5 inches tall, having grown nearly 4 inches in 24 hours.
- In the wild, the plant can grow as big as 20 feet tall X 15 feet across.
- Blooms only 2-3 times in its 40 year life span



A) The Equation

Cellular Respiration



Reactants \rightarrow Products

B) Energy comes from...

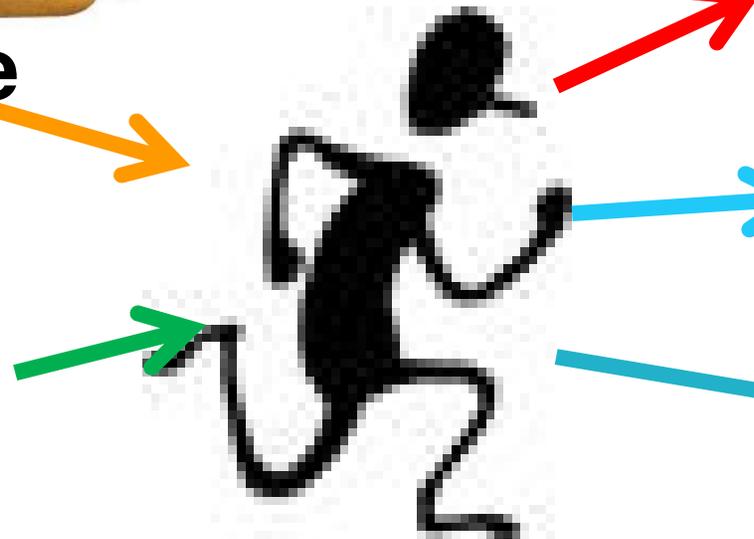
Cellular Respiration

Cell Food + Oxygen \Rightarrow Water + Carbon Dioxide + ATP



Glucose

Oxygen



ATP

H₂O

CO₂

C) What does it mean that Cell Respiration is AER (air)obic?



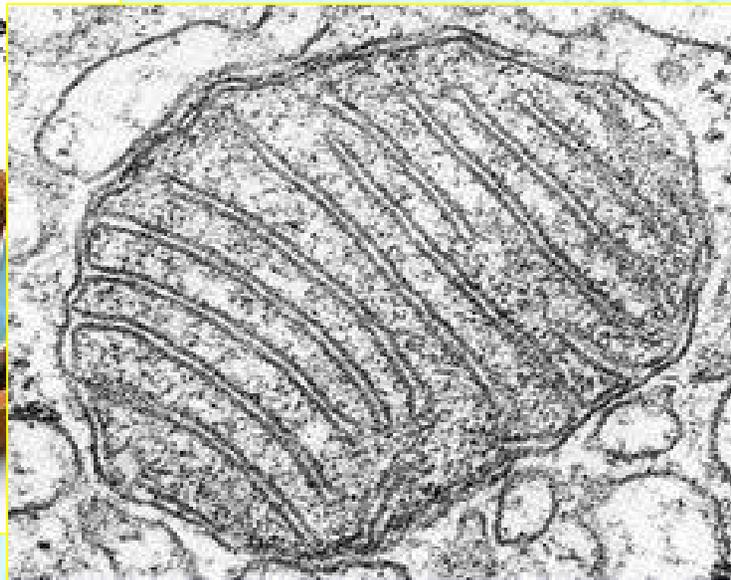
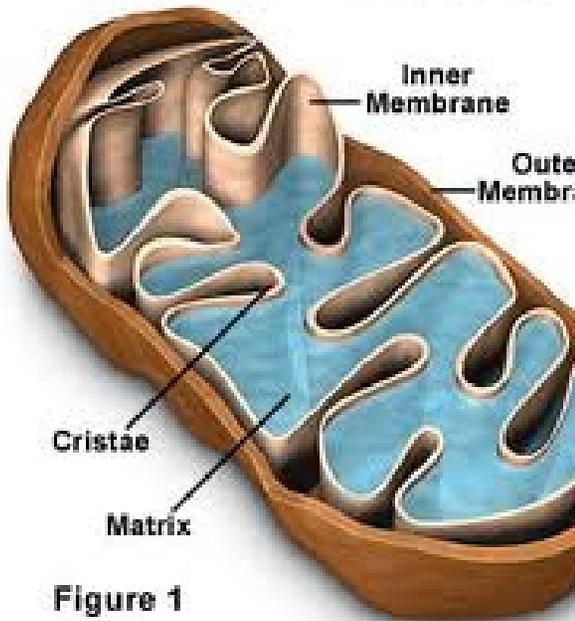
1. AER = with AIR = with OXYGEN!

2. So... ANAER = withOUT AIR = w/o OXYGEN!

D) Mitochondria

Organelle where food is converted to energy

Mitochondria Inner Structure



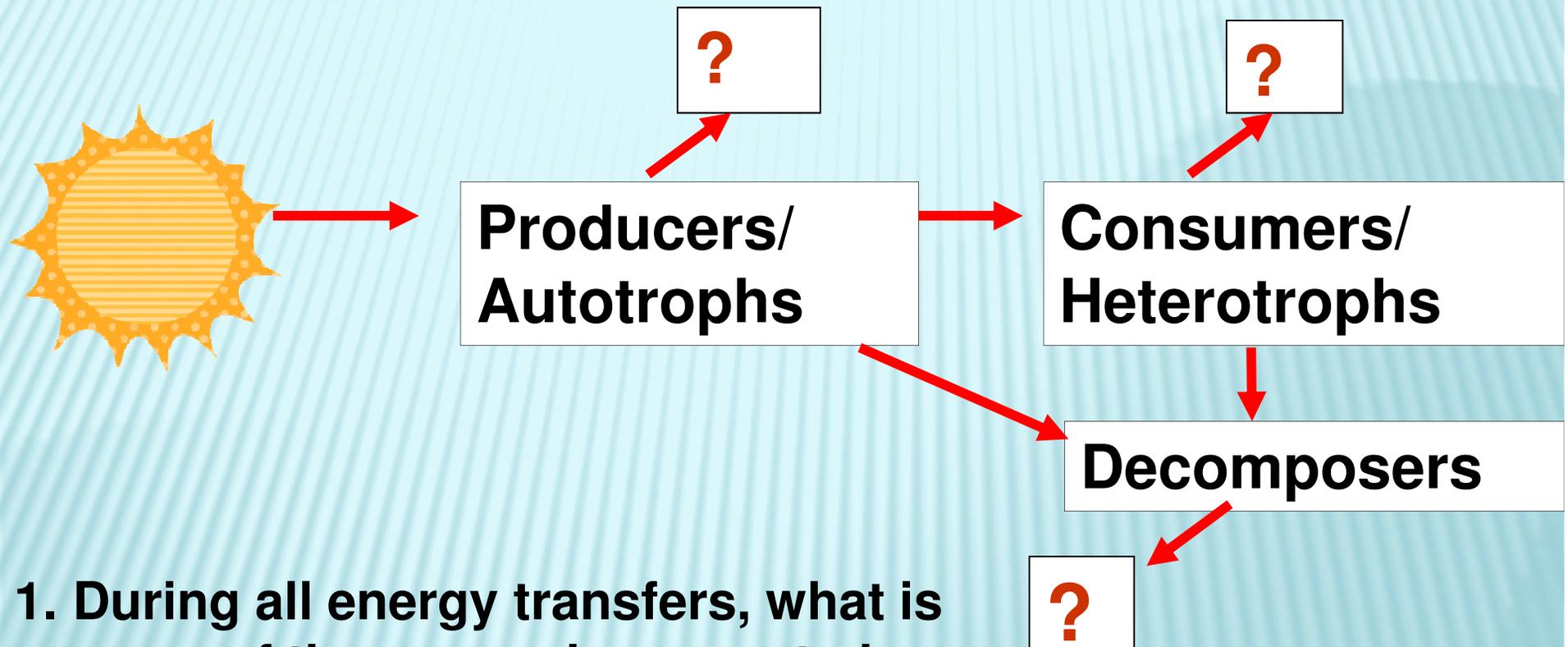
Once again, check out the many folds inside the mitochondrion...



E) What is the importance of respiration to us? Other animals? TO PLANTS???

- × ATP → ENERGY for all!
- × Plants use cellular respiration to make ATP from the sugars they produce during photosynthesis.

APPLICATION OF MEMORIZATION



1. During all energy transfers, what is some of the energy is converted, or changed into?

- A. Carbon dioxide
- B. Water
- Sunlight

- C. Heat**
- D.

Your Last

JOBS TODAY

1. YOUR JOB → Complete
Comparison Chart on ISN page
71