

Cell Tour III

ENERGY!

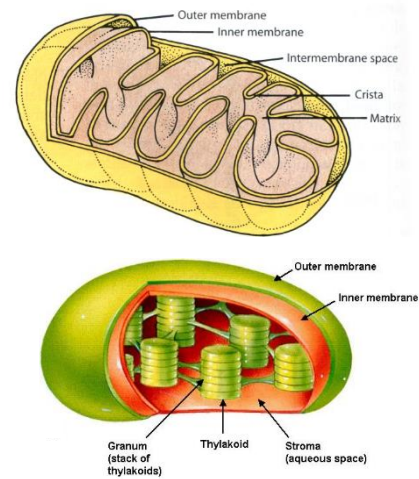
“Energy Molecule” =

Capturing energy:

Mitochondria

Chloroplasts

Similarities:

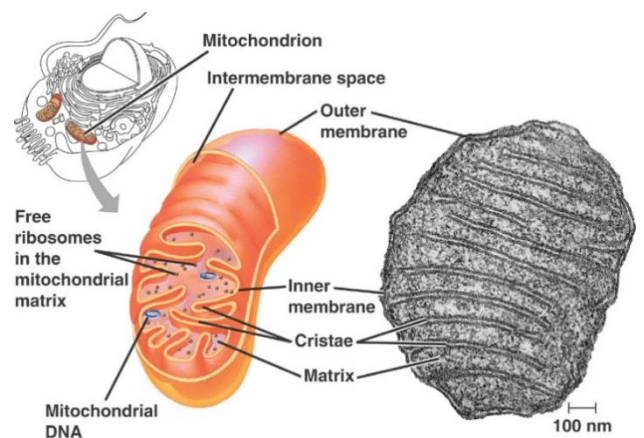


Mitochondria

Function

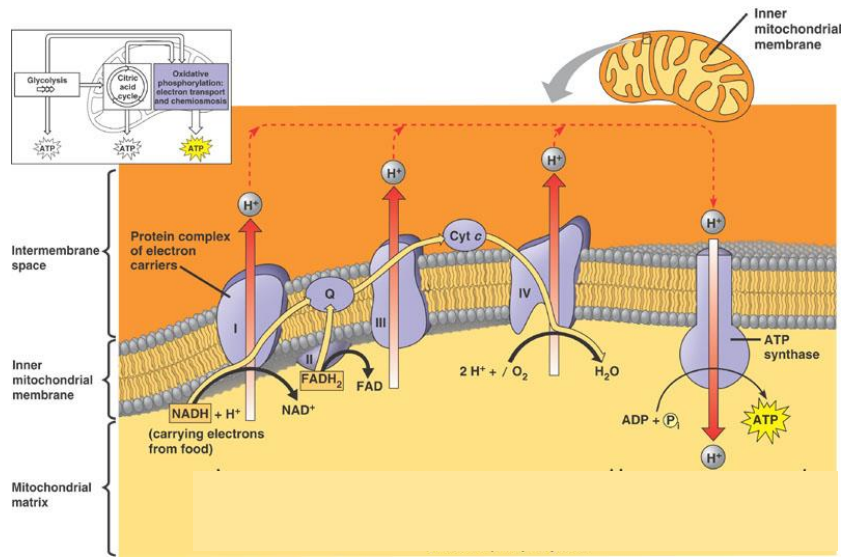
Catabolism =
Aerobic Respiration =

Structure



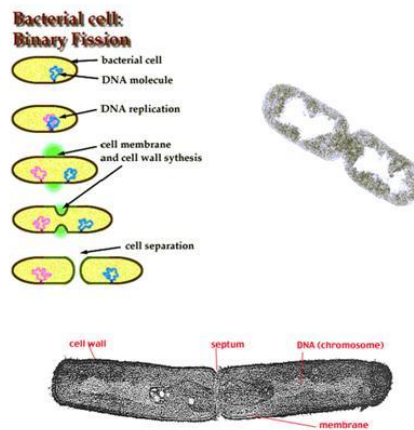
Why 2 membranes?

Membrane-bound enzymes



Dividing mitochondria

Evolution of eukaryotes?



Number in each cell:

More activity = more

= more

Types of cells with lots o' mitochondria?

Chloroplasts

Plastids =

Amyloplasts

Chromoplasts

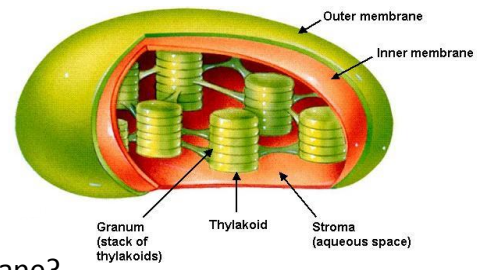
Chloroplasts

Structure

Stroma =

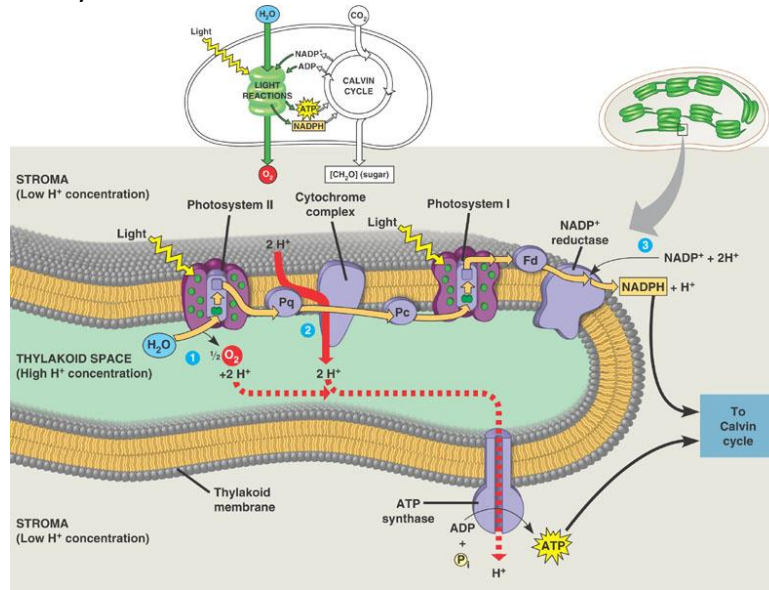
Thylakoids =

Grana



Why the inner membrane?

Membrane-bound enzymes:



Function

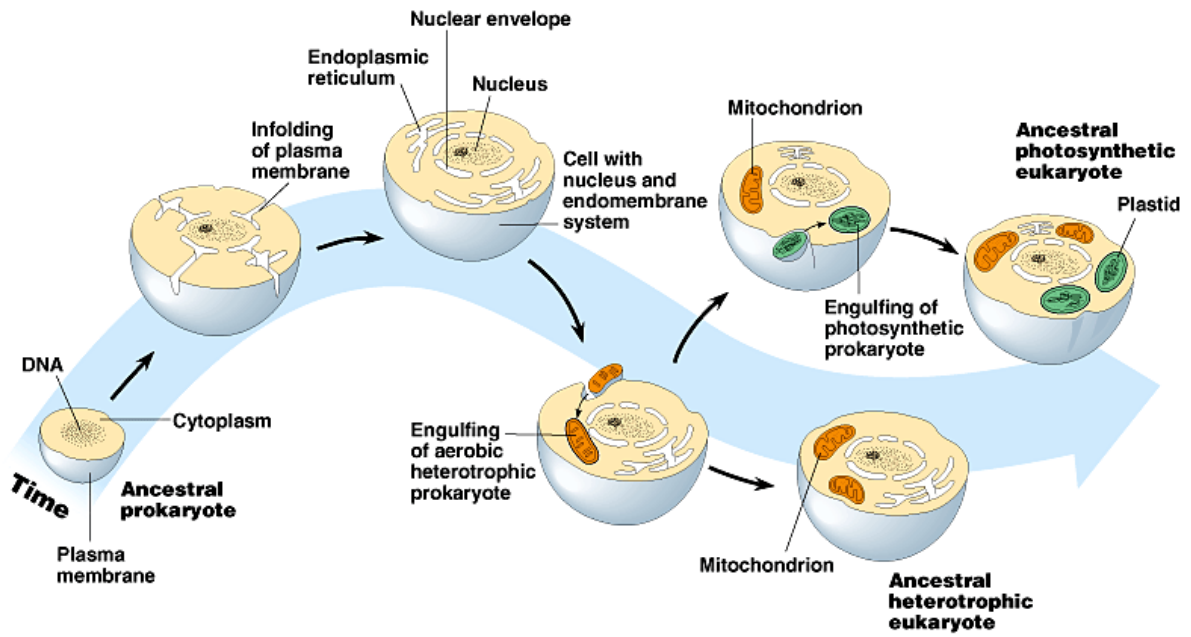
Why green?

Mitochondria and Chloroplast Compared

Endosymbiotic Theory

Endosymbiont =

Evolutionary advantage?



Comparing equations:

Photosynthesis

Respiration

Carbon/Oxygen cycle