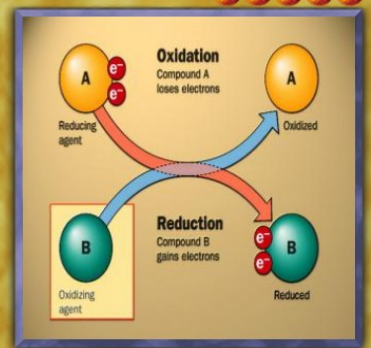


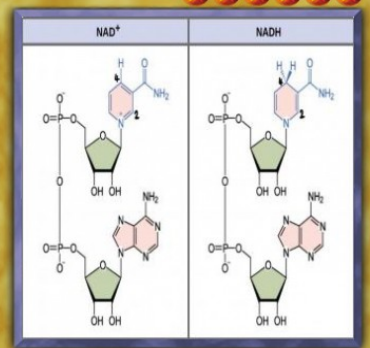
BIOL 1110- 6.1.2, 7.1.1



[Ch.7]
Oxidation is losing electron
Reduction is accepting electron

ATK/2800 DEF/2500

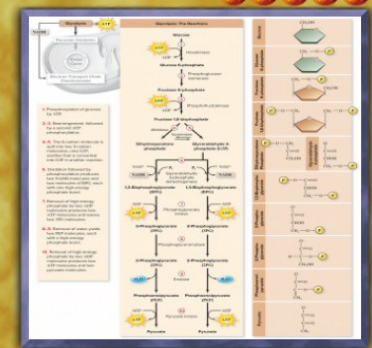
BIOL 1110- 7.1.2, P.124



[Ch.7]
NAD⁺ is a carrier for electrons and protons
Vitamin B is a coenzyme that stimulates the enzyme to break substrates and create ATP

ATK/2500 DEF/2400

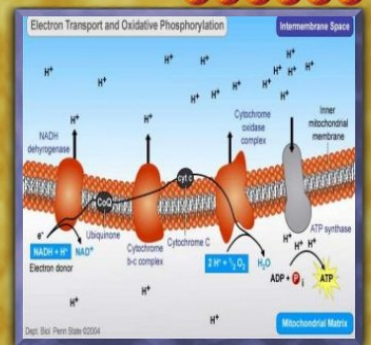
BIOL 1110- 7.2.1



[Ch.7]

ATK/1700 DEF/1800

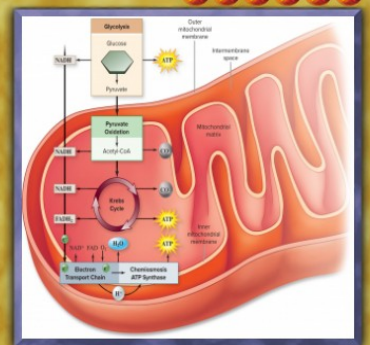
BIOL 1110- 7.1.3



[Ch.7]
Two ways that ATP is created are: Substrate-Level Phosphorylation and Oxidative Phosphorylation
SLP is using an enzyme substrates of ADP and P to ATP
OP is shown above

ATK/1800 DEF/1900

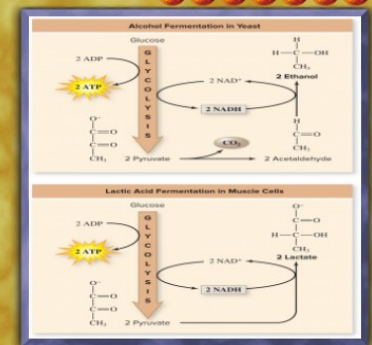
BIOL 1110- 7.2-5



[Ch.7]
Four stages of Cellular respiration: Glycolysis, Pyruvate Oxidation, Krebs Cycle, and Electron Transport Chain Chemiosmosis

ATK/2300 DEF/2200

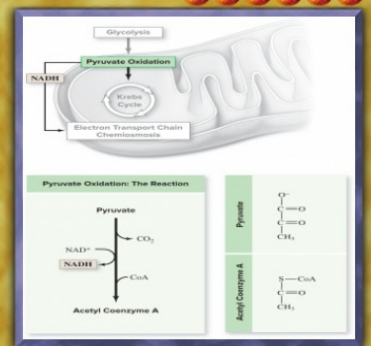
BIOL 1110- 7.2.2, 7.3.1, 7.7.2



[Ch.7]
Pyruvate can enter both the Pyruvate Oxidation and Fermentation Processes

ATK/2400 DEF/2500

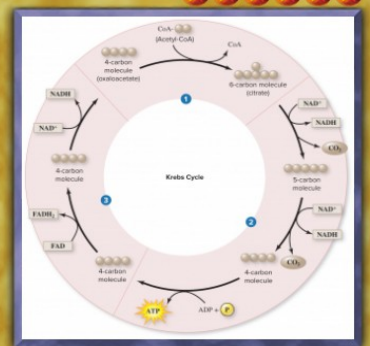
BIOL 1110- 7.3.1



[Ch.7]

ATK/2200 DEF/2300

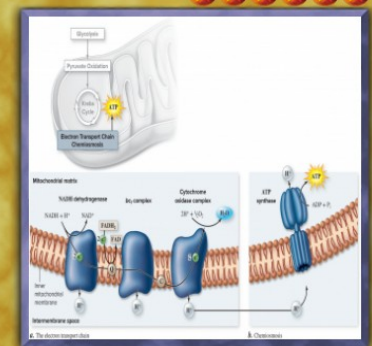
BIOL 1110- 7.3.2



[Ch.7]
Role of the Krebs cycle is to harvest the electrons by a series of oxidation reactions that regenerate the starting material

ATK/2100 DEF/2500

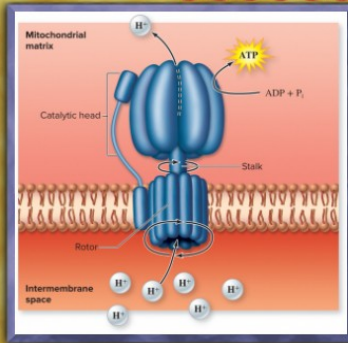
BIOL 1110- 7.4.1



[Ch.7]
Each site uses a portion of the electrons' energy to pump protons out of the matrix into the intermembrane space

ATK/2200 DEF/1800

BIOL 1110- 7.4.2



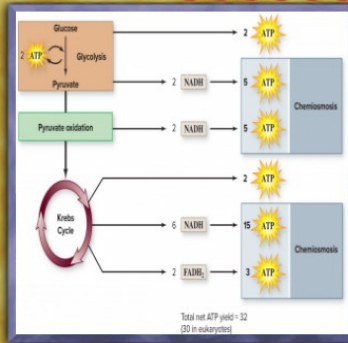
[CH.7]
Chemiosmosis

ATK/1700 DEF/1900

44995295

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BIOL 1110- 7.5



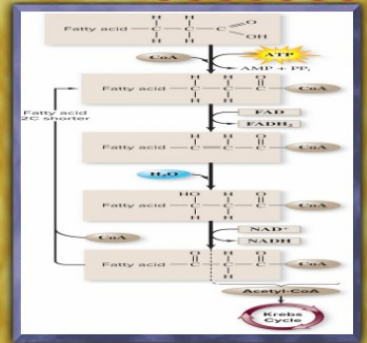
[CH.7]
32% of the energy is available for use, more than 25% of a car's gasoline

ATK/2000 DEF/2100

79635910

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BIOL 1110- 7.8, 23.7, 31.1



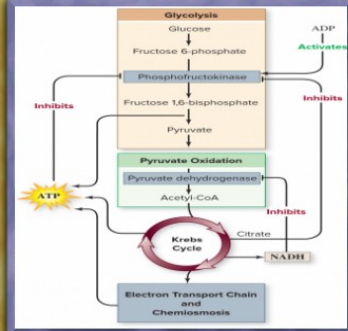
[CH.7]
Maximum yield of ATP is rarely obtained because oxidation reactions requires one ATP, and other processes like a flagella require ATP to function

ATK/2600 DEF/2700

25993762

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BIOL 1110- 6.5.2, 7.6.1



[CH.7]
Two Key points of regulation for cellular respiration are Phosphofructokinase and Pyruvate Dehydrogenase

ATK/2500 DEF/2300

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BIOL 1110- 7.7



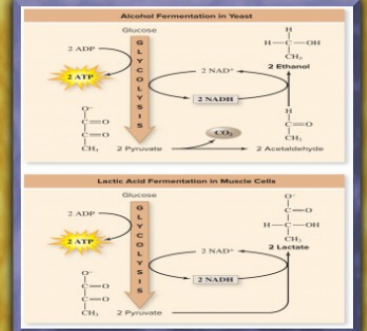
[CH.7]
Two ways Prokaryotes produce ATP anaerobically are:
Methanogens (Archaea) uses CO2
Sulfur Bacteria uses SO4, Sulfate

ATK/2200 DEF/2100

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BIOL 1110- 7.7.2



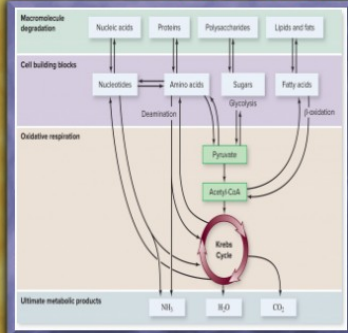
[CH.7]
Fermentation is where the electrons are carried via an organic molecule that's not O2, it is glycolysis

ATK/1900 DEF/2000

37248090

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BIOL 1110- 7.8



[CH.7]
When ATP levels are high, acetyl-CoA is channeled into the fatty acid synthesis
When ATP levels are low, acetyl-CoA flows into the energy producing oxidative metabolism

ATK/1800 DEF/1600

97976276

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