Aerobic Cellular Respiration 101 video notes

1. Aerobic cellular respiration is the _____
   _____
2. What are the reactants of this process? _____ What are the products of this process? _____
3. Write and draw the formula below:

Important workers for Cellular Respiration:

Acetyl-CoA – a molecule whose main function is to _____
_____

ADP (Adenosine _____) – made of _____ and 2 _____, used to make ATP by adding another _____

ATP (Adenosine _____) – made of adenosine and 3 _____, used by cells to _____

NAD^+ accepts _____, when it transports an electron it _____

NADH – reduced form of _____, used to transport _____

$FADH_2$ – an electron carrier used to transport _____

The Process of Aerobic Cellular Respiration occurs in 3 steps:

Step 1 - _____ Step 2 - _____ Step 3 - _____

It produces approximately _____

Glycolysis is the breakdown of _____ by _____ (2 ATP) and _____, occurs in cytoplasm.

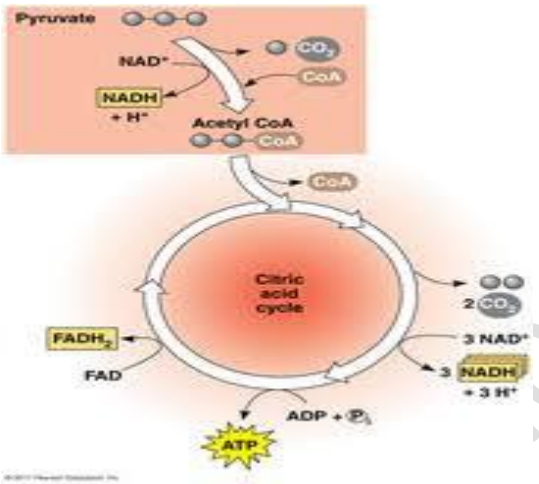
1. 2 ATP molecules are _____ to start the process of _____
2. Enzymes break down _____ into 2 _____
3. 2 ATP and 2 _____ molecules are produced from each _____ molecule and head into the _____

Draw the picture for glycolysis below:

Created By: Chivas & Jordan Spivey

Krebs Cycle (_____) – pyruvic acid is broken down to make _____ _____, _____, _____, _____. Cycle twice (1 for each _____ produced from Glycolysis = _____) occurs in _____

1. Pyruvic acid from Glycolysis reacts to form _____.
2. CO2 is produced from the reaction and _____ are passed to _____ to produce _____
3. Acetyl-CoA combines with a _____ compound in the cycle to produce _____ _____.
4. Citric acid is broken down into a 5-carbon compound and then into a 4-carbon compound releasing _____
5. The breaking and rearranging of _____ is captured in the forms of _____ _____ to go into the _____



Electron Transport Chain – uses the high-energy electrons from _____ and the _____ _____ to convert _____, occurs in the _____ layer of the _____ _____

1. NADH and FADH2 pass _____ from carrier to carrier down the _____
2. Oxygen accepts the electrons also with _____
3. Energy is generated by the _____ to move H+ ions across the _____ _____ membrane into the _____
4. H+ ions pass back across the _____ through _____ which causes the base of the _____. With each rotation which is caused by the movement of an _____, ATP synthase produces _____