Quizlet Study Guide - Chapter 9 Cellular Respiration & Fermentation

Study your Chapter 9 notes (section 9-1, 9-2, & 9-3) as well as the practice (Smartboard games, map, acting, etc.) that we worked on in class.

For a printable, worksheet version, click HERE

Be able to...

- Identify the types of organisms in which cellular respiration occurs.
- Identify the reactants and products of cellular respiration.
- Explain why cellular respiration occurs.
- Identify the three steps of cellular respiration and the amount of ATP created in each.
- Explain the process of glycolysis including the materials it creates, the materials it uses, and where it occurs.
- ~~Explain the role and structure of a mitochondria including the number of membranes.~~
- ~~Identify what pyruvic acid is converted into before it is used in the Krebs Cycle as well as any by-products created in the cycle.~~
- Explain the process of the Krebs Cycle including materials it creates, the material(s) it uses, and where it occurs. Also identify the number of ATP created in the Krebs Cycle (from the original glucose molecule).
- Identify where the Electron Transport Chain (ETC) and ATP synthase are located.
- ~~Explain the role of the ETC as an example of active transport.~~
- Identify the molecule(s) that donate(s) electrons to the ETC.
- Identify the molecule that accepts electrons from the ETC acting as the final electron acceptor. Also identify the molecule it becomes after accepting the electrons.
- Explain how ATP synthase creates ATP. ~~Remember that this is an example of facilitated diffusion.~~
- Explain when and why fermentation occurs.
- Identify the two types of fermentation.
- Identify common organisms in which the two types of fermentation occur.
- Identify the reactants and products of each process of fermentation.
- Provide examples of how fermentation is either used to produce food and beverage or how it affects our bodies.
- Be able to explain the role of the following:
    - Glucose
    - Oxygen
    - ATP
    - NADH
    - $FADH_2$
    - The ETC
    - ATP synthase
- Be able to explain where these are created:
    - ATP
    - NADH
    - $FADH_2$
    - H_2O
    - CO_2
- Define and describe the following new terms:

- Cellular respiration
- Mitochondria
- Glycolysis
- Pyruvic acid
- NADH
- $FADH_2$
- ~~Citric acid~~
- Krebs Cycle
- The Electron Transport Chain (ETC)
- ATP Synthase
- ~~Matrix~~
- ~~Intermembrane space~~
- Fermentation
- Aerobic
- Anaerobic
- Alcoholic fermentation
- Lactic acid fermentation