

GUIDED READING QUESTIONS FOR 1B (SECTIONS 5.11-5.15)

- What is the general purpose of glycolysis?
- What is the reactant that starts glycolysis? What are the three major products that complete glycolysis?
- Explain the difference between Aerobic and Anaerobic respiration. In what situations are both used?
- What is alcohol and lactic acid fermentation? Why are they necessary?
- What is a redox reaction (oxidation and reduction)? What is a cofactor? Section 5.1
- Give an example of substrate level phosphorylation. ATP and ADP are your hints.
- What molecule must be present in order for the krebs cycle and electron transport chain to occur?
- What major product is produced when pyruvate is transformed into acetyl-coenzyme A?
- What is the major purpose of the Krebs cycle?
- What is the initial reactant in the Krebs cycle and what are the three major products of the krebs cycle?
- What is the major purpose of the Electron Transport chain?
- What role does the electron transport chain play in producing ATP?
- How does the ATP synthase pump work?
- In what specific part of the mitochondria do the krebs cycle and electron transport chain take place?
- In what part of the cell does glycolysis take place?
- About how much ATP is produced in glycolysis, the krebs cycle, and the electron transport chain? How much total ATP can one glucose molecule possibly create after cellular respiration?
- About how much NADH or FADH₂ is produced in glycolysis and the krebs cycle. What ultimately happens to the NADH and FADH₂ produced in these two processes?

(Use these questions in order to guide your reading through sections 5.11-5.15. This is probably the most difficult reading of the year. Try to see if you can get the basic purpose behind glycolysis, krebs cycle, and the electron transport chain. Additionally, each of the previously mentioned topics are all series of chemical reactions. Can you identify the reactants and products of glycolysis, krebs cycle, and the electron transport chain? Do your best and make sure you highlight any of the guided reading questions that you're are confused about!!)