

## Section 7.2-7.4 Reading Notes (p. 141-148)

Name \_\_\_\_\_

Note: This content will help get you ready for a major project!

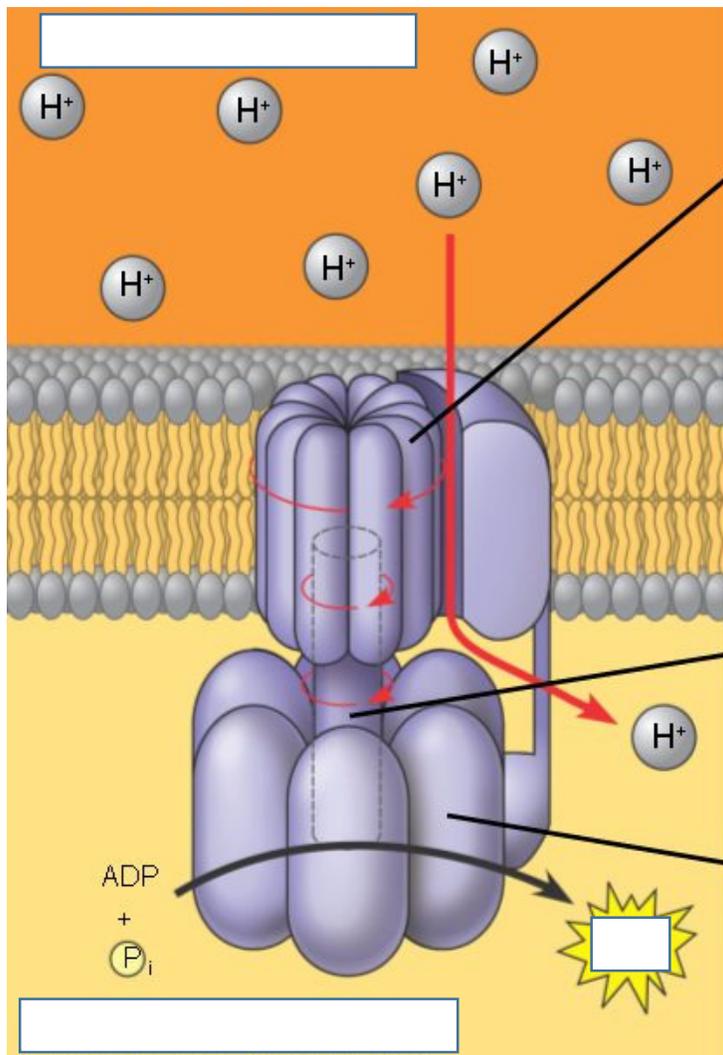
1. Section 7.2—What is the goal of glycolysis? (Consider the word *glycolysis*...what does it mean?)
2. Summarize what happens with ATP in glycolysis. (How much ATP is needed vs how much is created)
3. What are the “net” results of glycolysis? (See Fig. 7.8)
4. Section 7.3—Why is the cell not done after glycolysis? How much of the chemical energy is still available to be obtained?
5. What are the high energy molecules created as a result of the Krebs (or Citric Acid Cycle)? Hint: it’s not just ATP.
6. Section 7.4—Read the first paragraph of the section, at the end of glycolysis and the citric acid cycle, how many ATP have been made? How were they made? (Substrate-level or oxidative phosphorylation)
7. Bypass the text of p. 144 and check out the first full paragraph of p. 145. Part of the paragraph is retyped here. Fill in the blanks.

The electron transport chain makes \_\_\_\_ ATP directly. Instead, it eases the fall of \_\_\_\_\_ from \_\_\_\_\_ to oxygen, breaking a large \_\_\_\_\_ drop into a series of smaller steps that release \_\_\_\_\_ in \_\_\_\_\_ amounts.

8. What is an **ATP synthase** and how does it work to make ATP?

9. What vocabulary word is used to describe a process in which energy stored in the form of a hydrogen ion gradient across a membrane is used to drive cell work?

10. Label the ATP synthase diagram below. Figure 7.13 should be your inspiration.



11. Oxygen ( $O_2$ ) finally makes an appearance in the process of cellular respiration at the very end of the electron transport chain. What would happen to the process of if  $O_2$  were not available?

12. What is the role of oxygen in respiration? (What is  $O_2$  actually used for?)