

Name _____

Period _____

Ms. Foglia

Date _____

AP: CHAPTER 9: RESPIRATION — EXTRA CREDIT 3

PETER MITCHELL & HOW CELLS MAKE ATP

1. How do different concentrations of a molecule on the two sides of a membrane store energy? How is this like a battery?

2. How does a molecular pump (active transport) use energy?

3. Why were chemists unable to find intermediate molecules (such as in a metabolic pathway) in the process of mitochondrial ATP synthesis?

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4. Why doesn't the electron transport chain function if the electron carrier molecules are removed from the mitochondrial membrane?

5. Can a mitochondria make ATP if there is an open proton channel (a hole in the membrane)? Explain!
