Name: \_\_\_\_\_\_\_\_\_\_\_

**Main Ideas Title: Oxidative Phosphorylation: ETC & Chemiosmosis** Period: \_\_\_ Seat:\_\_



 Types of Substrate level phosphorylation- using an enzyme to

Phosphorylation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Oxidative phosphorylation-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to draw electrons down an electron transport chain \_\_\_\_\_\_\_

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 Which pathways of cellular respiration use substrate level

phosphorylation?

Anaerobic vs. Anaerobic respiration- generates ATP \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (very little ATP)

Aerobic Aerobic respiration- generates ATP only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Yields nearly 10 times more ATP

 Anaerobic Aerobic

 Oxygen?

 Occurs in?

 Amount of Energy made?

 Products?

 What happens to glucose?

Oxidative 2 parts to this:

Phosphorylation 1)ETC: Series of redox reactions that use electron carrier proteins to slowly release the energy from NADH and FADH2… Moves H+ out of matrix to intermembrane space

 2)Chemiosmosis: Process that uses the movement of H+ through ATP synthase to phosphorylate ADP🡪ATP

ETC \*Removes the electrons from NADH and FADH2 passes them \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*Creates an H+ gradient by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Chemiosmosis The H+ wants to move back into the mitochondrial matrix—\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Energy from movement is enough to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



 Carbohydrates (sugars) enter at…

Proteins (amino acids) enter at…

 Lipids (glycerol) enter at…

 Lipids (fatty acids) enter at…

Summary