

Concept Development 1E: THE ELECTRON TRANSPORT CHAIN

For an animation of the electron transport chain, see the essential study partner's video of the Krebs's Cycle – external links on Bb (cells→chemistry→respiration→Electron Transport). Also, the following links may be helpful: http://highered.mcgraw-hill.com/sites/0072437316/student_view0/chapter9/animations.html#

Also for another great tutorial: http://www2.nl.edu/jste/electron_transport_system.htm
(This has a great step by step animation and explanation of the major steps – as well as a summary of the “ins and outs”)

In the space below, you may draw the diagram your instructor has displayed on the board for you.

What you need to know about the Electron Transport Chain:

- What's the major purpose/goal of the electron transport chain?
- What are the three major reactants in the electron transport chain?
- What is the major product of the electron transport chain?
- How and why does the ATP synthase pump work?
- Explain the role of protons/electrons in the electron transport chain's function.
- Where **specifically** in the cell (organelle) does the electron transport chain take place?
- Why is oxygen necessary for the Electron Transport Chain to occur?
- What are the consequences if oxygen is not present? How can cells get ATP?

| | Glycolysis | ACETYL COENZYME A FORMATION | Krebs Cycle | Electron Transport Chain |
|----------------|------------|-----------------------------|-------------|--------------------------|
| In | | | | |
| Out | | | | |
| Where | | | | |
| Oxygen Needed? | | | | |