

## **I. Oxidative Phosphorylation and the Electron Transport Chain**

**Label the diagram of oxidative phosphorylation in a mitochondrial membrane:**

[insert a diagram from the textbook for your course.]

1. Where is the electron transport chain found?
2. What goes into the electron transport chain and where does it come from?
3. The formation of a concentration gradient is very important in electron transport and oxidative phosphorylation. What molecule composes the gradient and how is the gradient established?
4. What is chemiosmosis and what does it do?
5. What is the name of the oxygen-requiring process by which cells make ATP?
6. What role does oxygen play in the electron transport chain?

## **II. 2-D Model of Mitochondrion**

Use the laminated mitochondrion and place the labels and components in the correct place. Draw your answer below.

## Teaching Tips for Peer Leaders

### Part I.

*Diagram:* Have students work in pairs or 3's to fill in the blanks for all the components or steps of the electron transport chain (ETC). Ask them to use this as a self-test to see how much they know collectively, WITHOUT looking at notes or the book. If they're stuck, they can look at figure 7.14, on page 146.

*Questions 1 – 6:* These questions should be used as a self-test.

**Part II. Study Skill:** drawing a complex process. 2-D model of a mitochondrion. Once students have correctly labeled the figure and answered the questions, have them move everything into the right position on the 2D model, then make their own drawing of the 2-D model they've just assembled. Emphasize that this is another way to study – by drawing out a process and its components. This method is good for both visual & kinesthetic learners.

### Notes to Faculty

A figure or diagram for section I should be added, either from the image files provided with your textbook or your own drawing.