**Cellular Respiration Notes Part II**

The three processes:

1. Glycolysis: The splitting of Glucose in cytoplasm
   1. Uses 2 ATP to start the process
   2. Gains 4 ATP and 4 Hydrogens (Net 2 ATP)
   3. Glucose is broken in half= 2 Pyruvates

\*\*If Oxygen is available, respiration continues in the mitochondria. If no oxygen is available, fermentation takes place instead.\*\*

1. The Krebs Cycle (aka Citric Acid Cycle)
   1. Pyruvate is broken down (“burned”) to become 6 CO2
   2. Gains 2 ATP and 16 Hydrogens (protons)
2. ETS- The Electron Transport System (or “Chain”)
   1. Protons are used to create a concentration gradient
   2. An enzyme is then used to make 34 ATP

Summary:

1. Glycolysis is the initial breakdown of glucose in the cytoplasm; gains 2 ATP
2. Krebs Cycle continues breakdown or burning of sugar in the mitochondria gaining 2 ATP and many hydrogens/protons.
3. ETS uses hydrogens/protons to produce 34 ATP.