Cellular Respiration Group Worksheet  
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Group Names (first/last):

Hour Due: *at the end of the hour* Why late? Score: + ✓ -  
 If your project was late, describe why

**Directions**: use the accompanying PowerPoint (available online) to complete the questions as group. Each person is responsible for answering an equal share of the questions (e.g. if you have 4 people in your group, the first person should answer #1, #5, #9, etc.). Those not writing should work together to create the answer for the writer to write.   
+ = exceed expectations (full sentences, legible handwriting, etc.). ✓= met but did not exceed expectations.

1. What is the main purpose of cellular respiration? How does this happen? Use all space given for your answer:
2. What is a carbohydrate? How could we tell if a molecule is a carbohydrate?
3. If glucose is not the energy of the cell, what is? How does glucose relate to this? Use full sentences for your answer:
4. How are foods that are carbohydrates related to sugar?
5. What is the difference between a fiber, starch, and simple sugar?
6. Summarize what happens to a carbohydrate molecule in each of the following places:  
     
   The digestive tract:   
     
   The bloodstream:   
     
   The cytosol:   
     
   The mitochondria:
7. In the space below, draw a mitochondria and label the following: *outer membrane; intermembrane space; inner membrane, matrix, ATP Synthase, hydrogen, oxygen, pyruvate.*
8. Summarize what happens in glycolysis:
9. Summarize what happens in the TCA Cycle:
10. Summarizes what happens in the Electron Transport System:
11. Summarize what happens during Oxidative Phosphorylation:
12. How are glucose and pyruvate molecules similar? How are they different?
13. Summarize what happens in substrate level phosphorylation:
14. How are substrate phosphorylation and oxidative phosphorylation similar? How are they different?
15. What is the function of FAD+ and NAD+ in the mitochondria?
16. The Electron Transport System is similar to what kind of tool or machinery? Explain:
17. What is fermentation?
18. How is fermentation similar to respiration? How is it different?
19. We have covered five ways in which the production of ATP could be increased. List and explain them below:   
      
    Method 1:   
      
    How it would make more ATP:   
      
       
      
     Method 2:   
      
    How it would make more ATP:   
      
       
      
    Method 3:   
      
    How it would make more ATP:   
      
       
      
    Method 4:   
      
    How it would make more ATP:   
      
       
      
    Method 5:   
      
    How it would make more ATP: