Study Guide

for Photosynthesis and Cellular Respiration

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| **Resources for Studying:**  PowerPoint on Photosynthesis and Cellular Respiration  Homework  Reading Activity on Photosynthesis  Prezi project  Textbook  Videos on my webpage  ***REVIEW*** *YOUR rate of photosynthesis lab and Bromotymol Blue Demonstration notes* |

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| Energy: |

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|  | 1. When you exercise why do you get hot and sweaty? 2. What is ATP? And How do you make it into ADP? atpadp.gif    1. 3. Where is energy stored in ATP?       1. Which stores more energy and why?   **ATP, AMP, ADP** |

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| Photosynthesis: |

1. Purpose:
2. Location: (organismal level (plant or animal) and at a organelle level)
3. Equation: Know products and reactants
4. Understand each component of the photosynthesis prezi project:

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| –Equation of Photosynthesis and connection to changing our atmosphere |  |
| –ATP and ADP conversion and how energy is produced |  |
| –Chloroplasts and Chlorophyll |  |
| –Light Reaction |  |
| –Dark Reaction | Why is the term “dark reaction” confusing? |

1. Light and Dark reactions

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| **Process** | **Location** | **Reactants**  (What Goes In) | **End Products**  (What Comes Out) |
| **Light Dependent Reactions** |  |  |  |
| **Light Independent Reactions** |  |  |  |

1. Label the process of photosynthesis in the space below. Include the following structures and processes in your diagram: chloroplast, chlorophyll, light reaction, dark reaction, reactants, products, light, ATP

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| Cellular Respiration |

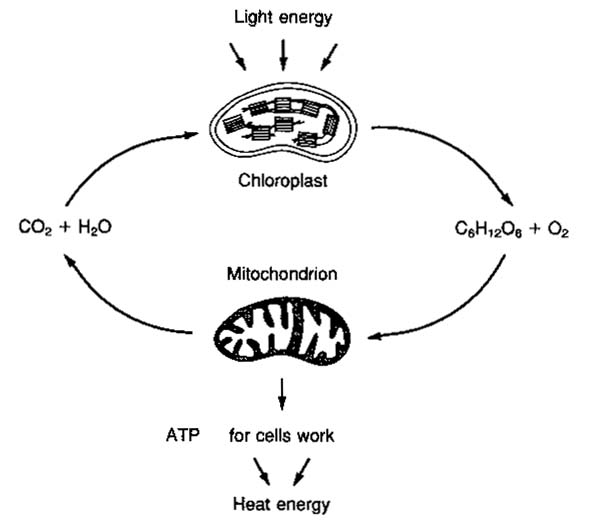
1. Purpose:
2. Location:
3. BALENCED Equation of Aerobic: Know products and reactants
4. Types: (know why each is used)
   * 1. Aerobic:
        1. Pro:
     2. Con:
   1. Anaerobic:
      1. Pro:
      2. Con:
5. Glycolysis:
   1. Briefly summarize the events (reactions) that occur during glycolysis.
   2. What is formed during glycolysis?

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| http://faculty.clintoncc.suny.edu/faculty/michael.gregory/files/bio%20101/bio%20101%20lectures/cellular%20respiration/cellul9.gif |  |

* 1. How much chemical energy (in the form of ATP molecules) is produced by the complete breakdown of 1 glucose molecule during glycolysis and aerobic respiration?

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| Connections: Cellular respiration to photosynthesis: |

* 1. How are they connected?/Why are they called opposite processes?
  2. Be able to draw and explain the figure below: (Type of question I may ask: Analyze the figure at below and discuss how cellular respiration and photosynthesis are related)



* 1. How are cellular respiration and breathing (respiration) related?
  2. What is the function of the electron transport chain?

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| Screen shot 2012-02-26 at 5.29.47 PM.png |
| Screen shot 2012-02-26 at 5.30.07 PM.png |
| Screen shot 2012-02-26 at 5.29.59 PM.png |