**Cellular Respiration Guided Notes**

**4 Types of Energy:**

1)

2)

3)

4)

**ATP**

1) The long name for ATP is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2) ATP is like a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3) When the energy from ATP is used, it becomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_.



All of the energy used to make ATP comes from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Cellular Respiration**

1) Main Objective of Cellular respiration (What does it do?):

2) Equation for Cellular Respiration using words:

3) Equation for Cellular Respiration using Chemical Formulas:

4) Cellular Respiration that uses oxygen is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, while cellular respiration that does not use oxygen is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Aerobic Respiration Happens in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

*Label the inner membrane, outer membrane, cristae, and matrix*

****

**Main Steps Aerobic Respiration**

1)

2)

3)

**Glycolysis**

- first step in cellular respiration, does not require \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Main Objective:

****Location:

 Reactants:

 Products:

**Intermediate Reaction:** converts\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Requires \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!!!!

**Kreb’s Cycle**

Requires \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!!!!

Main Objective:

Location:

 Reactants:

 Products:

**Electron Transport Chain**

Requires \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!!!!

Main Objective:

Location:

 Reactants:

 Products:

**ATP Totals**

|  |  |
| --- | --- |
| **Reaction** | **Number of ATPs Produced** |
|  |  |
|  |  |
|  |  |

**Anaerobic Respiration**

1) Doesn’t require \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) Two Main Types

 1)

 2)

3) Both start with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4) Fermentation:

**Lactic Acid Fermentation**

1) Organisms that do lactic acid fermentation:

2) Steps:

 1)

 2)

3) Main byproduct of lactic acid fermentation:

4) Example:

**Alcoholic Fermentation**

1) Organisms that do alcoholic fermentation:

2) Steps:

 1)

 2)

3) Main byproduct of alcoholic fermentation:

4) Example: