CELLULAR RESPIRATION

1.             Draw and annotate a molecule of ATP to show how it stores and releases energy

2.             List six cellular process that use ATP as a source of energy

3.             Define cell respiration

4.             State the word and symbol equation for the process of cell respiration

5.             Identify organic molecules, other than glucose, which could be used for respiration

6.             Identify the two components of the cell in which respiration takes place

7.             Distinguish between aerobic and anaerobic in terms of cell respiration

8.             Label the diagram of aerobic cell respiration below

9.             Label the diagram of anaerobic cell respiration below

10.          Complete the table below, comparing aerobic and anaerobic respiration

|  |  |  |
| --- | --- | --- |
| Aerobic | Anaerobic | |
| Hexose sugar input in both types of respiration | | |
| Oxygen in |  | |
|  | 2 ATP produced | |
| Pyruvate as an intermediate compound in both types of respiration | | |
|  | Yeast | Animals |
| Carbon dioxide produced |  |  |
| Water produced |  |  |

11.          Complete the table below summarizing the events of aerobic cell respiration

|  |  |  |  |
| --- | --- | --- | --- |
| Reaction | Location | Purpose | ATP Yield |
| Glycolysis |  |  | 2 |
|  | Matrix of the mitochondrian | Convert pyruvate (3C) to acetyl CoA (2C) | 0 |
| Krebs Cycle |  |  |  |
|  |  |  |  |
| Oxidative phosphorylation |  |  |  |

12.          Label the diagram below with the correct processes, locations and compounds