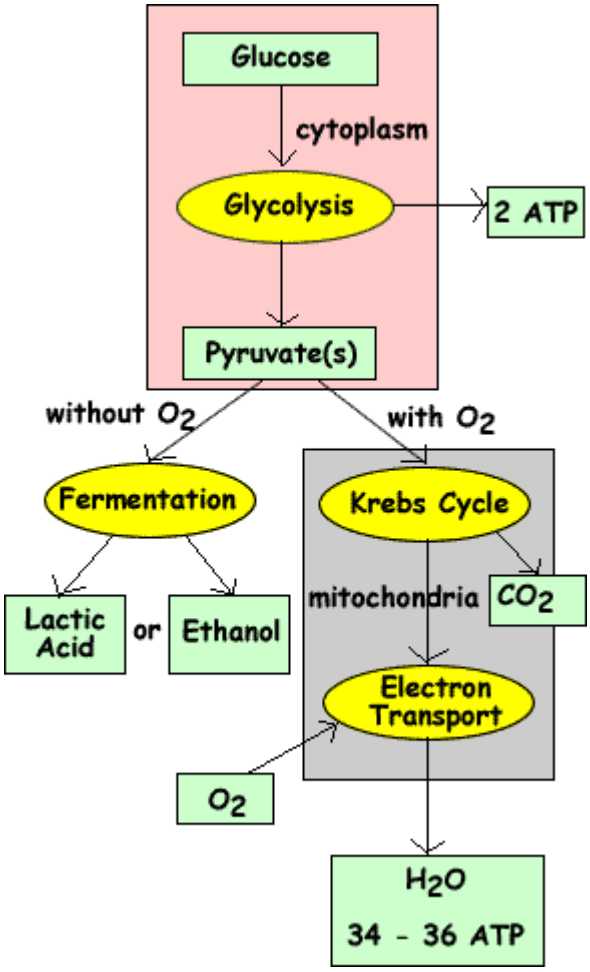
Cellular Respiration Diagram
https://www.sciencegeek.net/Biology/review/U2RespFillin.htm



alcohol ATP carbon cristae cytoplasm dioxide electrons energy lactic matrix mitochondria oxygen pyruvic six sugar three two water

Glycolysis

Glycolysis literally means "[ ]-splitting." In glycolysis, the [ ]-carbon sugar glucose is split into [ ] molecules of pyruvate, also called [ ] acid. This process produces a net gain of [ ] ATP molecules. The resulting molecules of pyruvate each have [ ] carbon atoms. Glycolysis takes place in the cell's [ ]. The remainder of cellular respiration takes place in organelles called [ ].

The Krebs Cycle

The Krebs Cycle takes place in the fluid-filled area inside the inner membrane of the mitochondria known as the [ ]. Some [ ] and other energy carrying molecules are produced here. The gas [ ] [ ] is a byproduct of this process.

The Electron Transport Chain

Most of the [ ] is produced in this last step of cellular respiration. Electron transport takes place in the infoldings of the inner-membrane of the mitochondria. These infoldings are called [ ]. At the end of electron transport, [ ] combines with hydrogen ions and [ ] (e^-) to form [ ].

$$\frac{1}{2}O_2 + 2H^+ + 2e^- \rightarrow H_2O$$

Overall Process

glucose + oxygen → carbon dioxide + water + 38 [ ]

Fermentation

In the absence of [ ], the cell resorts to ***anaerobic*** metabolism. In animal cells, pyruvate is converted to [ ] acid. In yeast and bacteria, the pyruvate is often converted to [ ]. In both cases, no new ATP is produced, so the net production of the [ ]-carrying molecule is only the [ ] molecules of ATP produced in glycolysis.