

Cellular Respiration

Use the illustrations to help you fill in the blanks.

ATP	carbon dioxide	cytoplasm	mitochondria	glycolysis
ATP	carbon dioxide	cytoplasm	mitochondria	cellular respiration
ATP	glucose	water	oxygen	

The bromthymol blue changed color due to the presence of _____ in your exhalations. Where did the carbon come from? It is a waste product from a process that releases energy from molecules. _____ is a series of chemical reactions that convert the energy in food molecules into a usable form of energy called _____. Cellular respiration occurs in two parts of a cell—_____ and the _____.

The first step of cellular respiration, called _____, occurs in the _____ of all cells. **Glycolysis** is a process by which _____ (a sugar), is broken down into smaller molecules. Glycolysis produces some _____, an energy storage molecule. This process also uses energy from other ATP molecules.

The second step of cellular respiration occurs in the _____ of eukaryotic cells. This step requires _____. The smaller molecules made from glucose during glycolysis are broken down. Large amounts of _____—usable energy—are produced. Cells use ATP to power all cellular processes. Two waste products _____ and _____ are given off during this step. The CO₂ released by cells as a waste product is used by plants and some unicellular organisms during photosynthesis.