

Cells

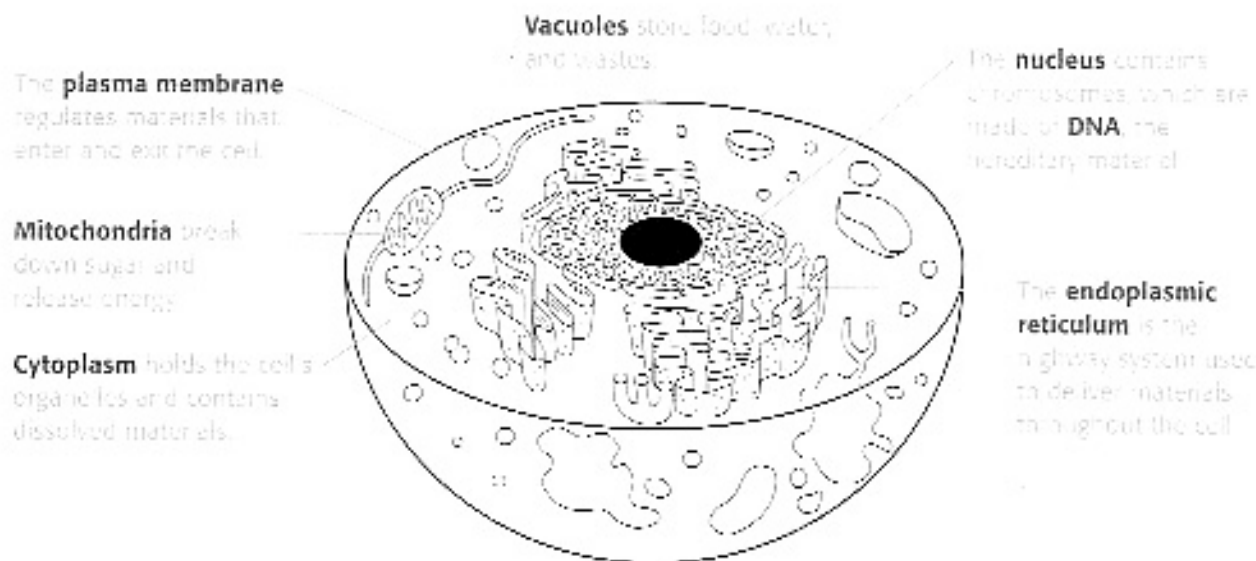
What are the functions and structures of cells?

Cells are the basic unit of life. Although cells may not all look alike, they all carry out the same basic functions. They break down sugar during **cellular respiration**. This process releases energy, which cells need to do their work. All cells make the materials they need to function. And almost all cells grow and divide to produce more cells.

Cells are surrounded by a plasma membrane, or cell membrane, that forms a boundary between the cell and its external environment. By controlling what goes in and comes out of a cell, the plasma

membrane allows a cell to maintain **homeostasis**. That means that although a cell's external environment may change, its internal environment remains stable.

All cells have a plasma membrane and cytoplasm. In addition, all cells except bacteria contain **organelles**. Some of these organelles include mitochondria, vacuoles, endoplasmic reticulum (ER), and a nucleus that contains chromosomes. Each organelle functions the same way in all cells, even though the cells themselves may have different functions.



All cells have similar structures.

Show What You Know

How does a plasma membrane help a cell to maintain homeostasis?
