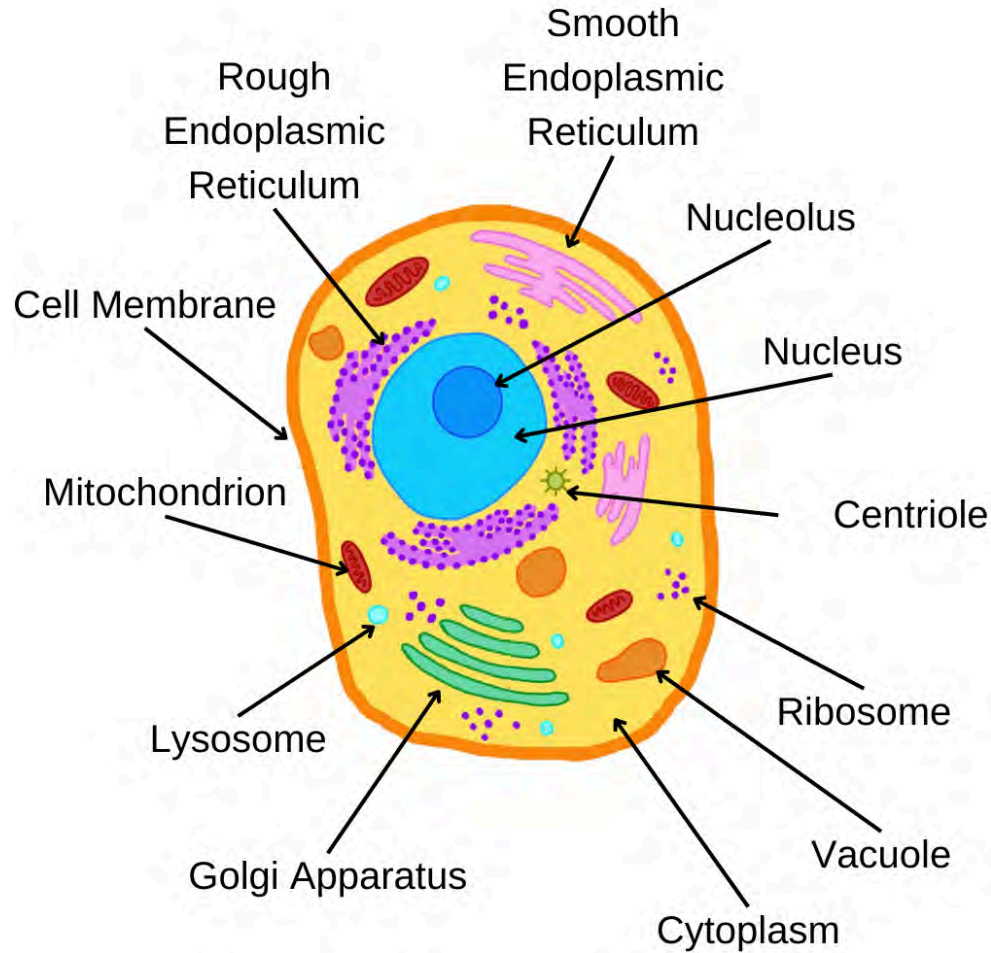
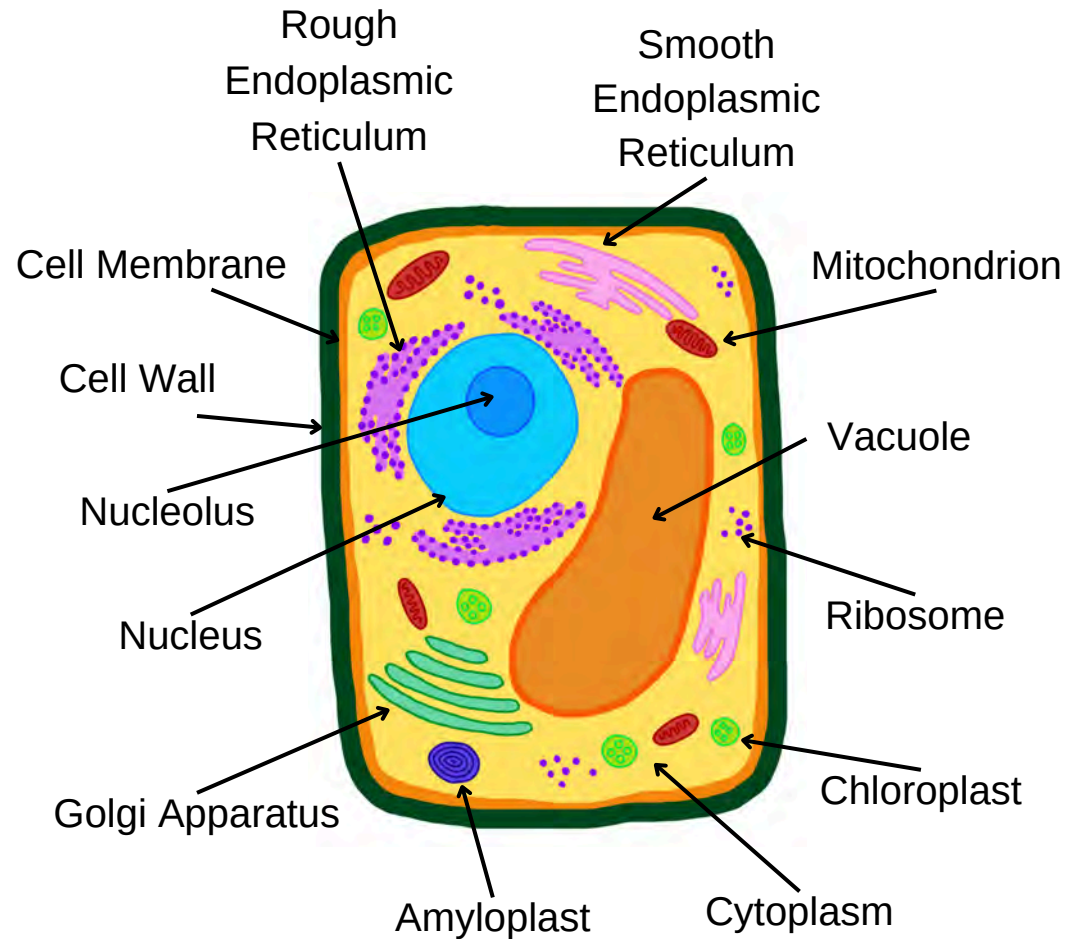


Build Your Own Lego Cell

Animal Cell



Plant Cell



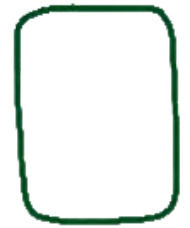
Organelles

Organelles are the subunits in our cells, each one has a specific structure and function.



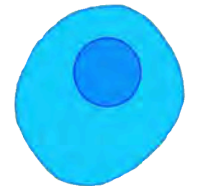
Cell membranes provide the shape of cells and protect the organelles inside, normally these are made from lipids and proteins and they can allow some smaller molecules to enter the cell.

Cell walls also provide shape to the cell, however a cell wall is more rigid than a cell membrane and it provides strength and protection to plant cells.



The **cytoplasm** is a jelly like substance that is made from water nutrients and waste products from the cell.

The **nucleus** is the largest of the organelles and contains all of the cell's genetic information inside the nucleolus.





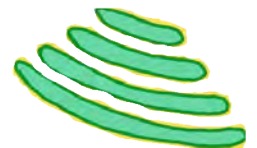
The **mitochondria**, often called the powerhouse of the cell, is oval shaped and stores energy for the cell to use.

Chloroplasts are a type of plastid found in plant cells. These are the organelles that perform photosynthesis, converting light energy into chemical energy.



The **endoplasmic reticulum** is a continuous membrane that forms multiple flattened sacs, these are involved in the synthesis of proteins and lipids, the rough endoplasmic reticulum is covered in ribosomes.

The **golgi apparatus** are sac-like organelles that are involved in the secretion and transport of molecules.



Ribosomes are small units that float freely or are found embedded in the rough endoplasmic reticulum. Ribosomes are involved in the making of proteins.

Lysosomes are small circular shaped organelles filled with digestive enzymes to help to remove and digest waste or damaged cells.



Centrioles are barrel shaped organelles and are usually found in pairs, they help to organise the cell, and are important in cell division.

Vacuoles are fluid filled organelles that can help to keep the shape of cells, they also help to digest, excrete and store substances. They are mainly found in plant cells but can also be found in animal cells.



Amyloplasts are a special type of plastid that are involved in the making and storage of starch in plants. Another example of a plastid is a chloroplast.

Labels for your cells

Print out the names of the different organelles and use them to label your cells.

Endoplasmic Reticulum

Cell Membrane

Nucleus

Cell Wall

Mitochondrion

Amyloplast

Vacuole

Chloroplast

Centriole

Golgi Apparatus

Ribosome

Lysosome

Cytoplasm