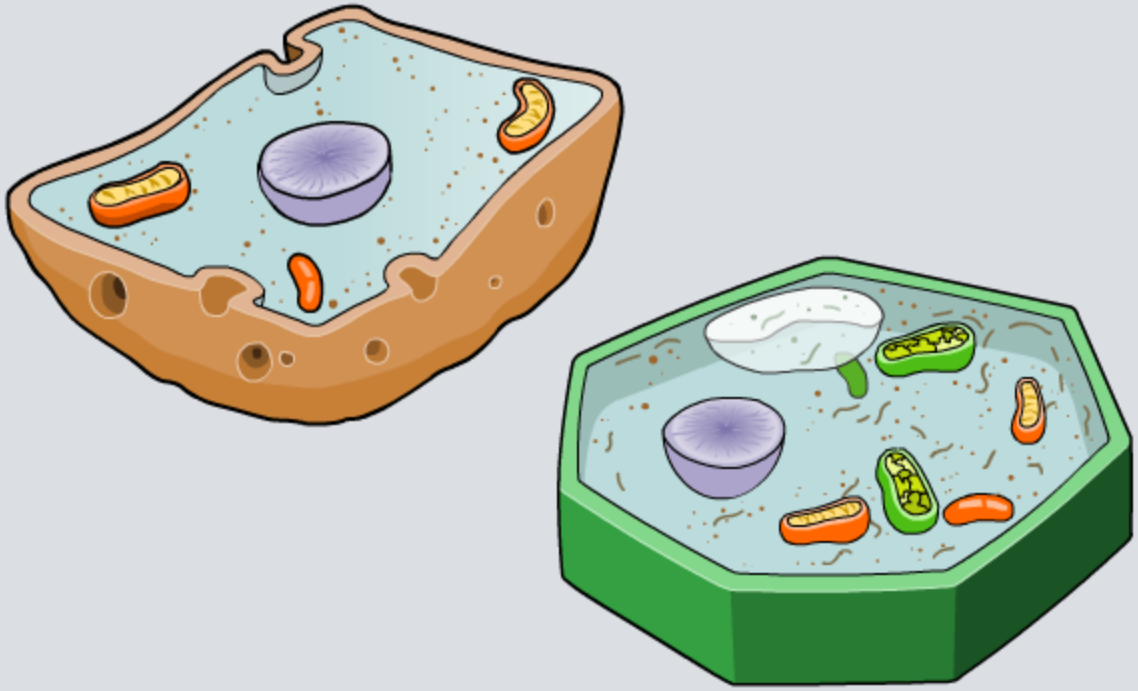
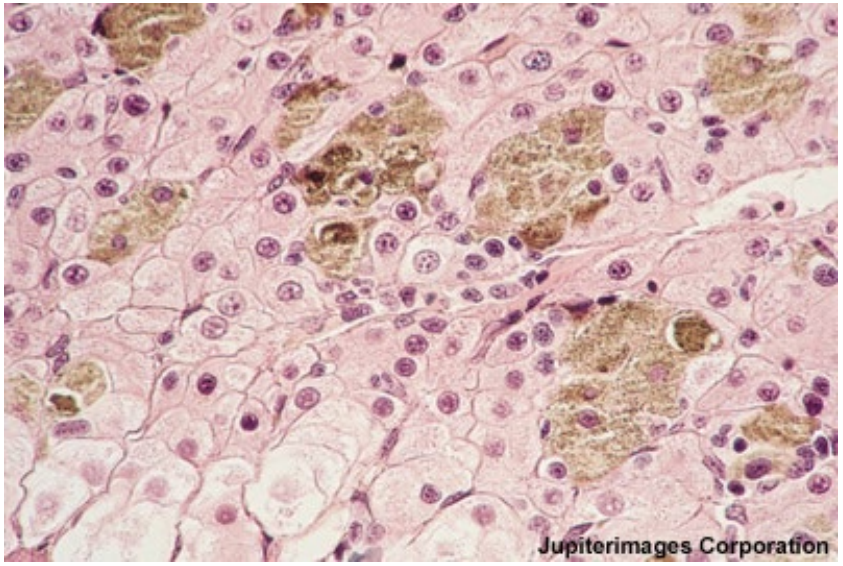
Animal and Plant Cells



What are living things made of?

Cells are the building blocks of life – they come in all shapes and sizes.



Some organisms are **unicellular** – they are made up of only one cell.

Other organisms are **multicellular** – they are made up of many types of cells. Can you think of some examples of unicellular and multicellular organisms?

Cells work together to carry out the seven life processes that are needed for an organism to stay alive.

What are the seven life processes?

Which seven processes do all living things do?

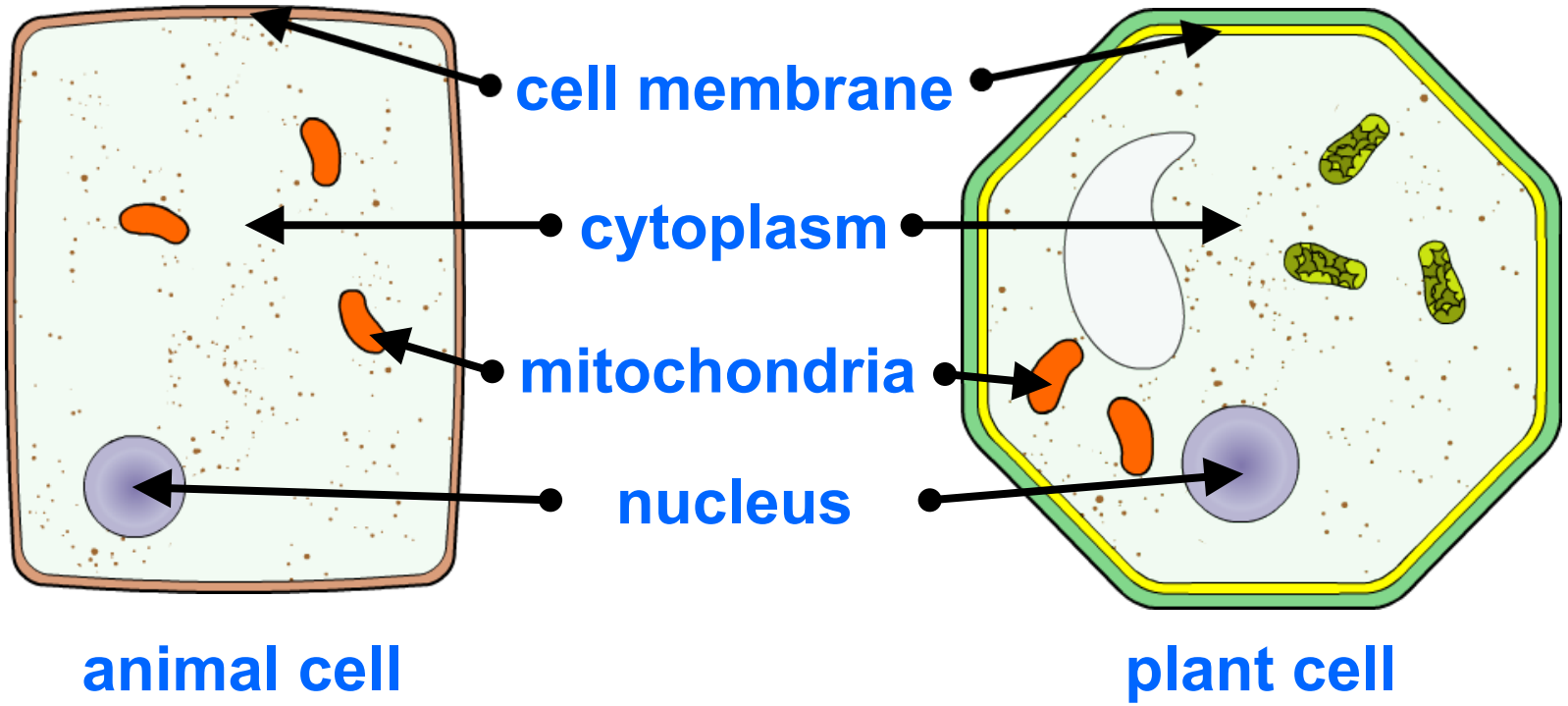
There are seven life processes carried out by all living things. A simple way to remember these processes is to think of **MRS GREN**.

Click the letters in MRS GREN below, to find out which process each one stands for.

M R S G R E N summary

What is a cell?

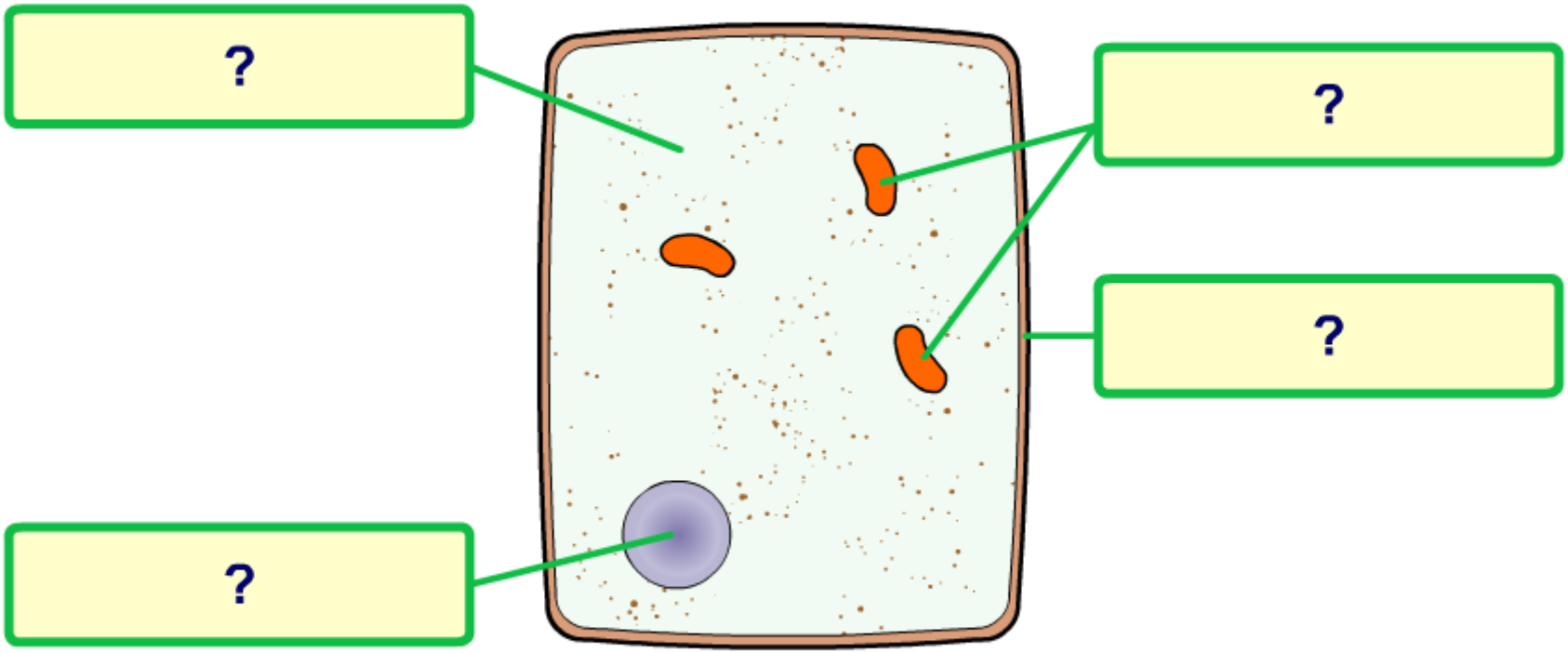
Animal and plant cells come in different shapes and sizes, but they all have four basic features.



Plant cells also have some extra features that make them different than animal cells.

A typical animal cell

What are the parts of a typical animal cell called?



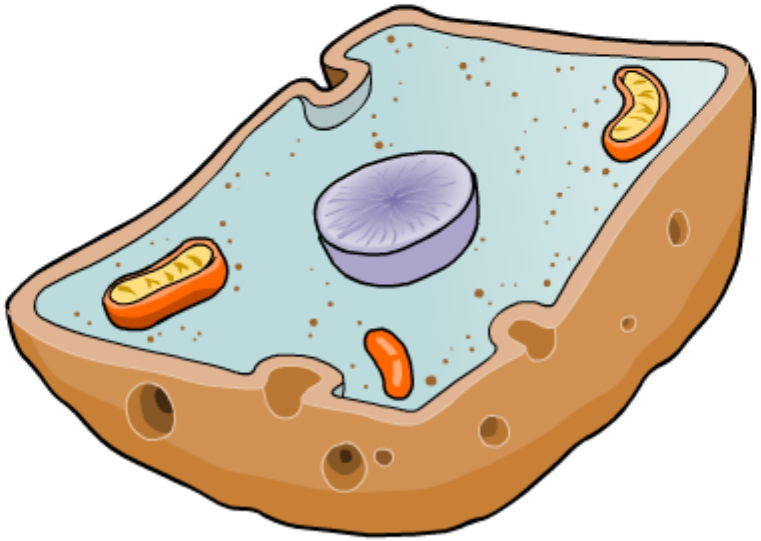
The parts of a typical animal cell

Which structures are found in a typical animal cell?

Click on a button for more information about each animal cell structure.

cell membrane

mitochondria



cytoplasm

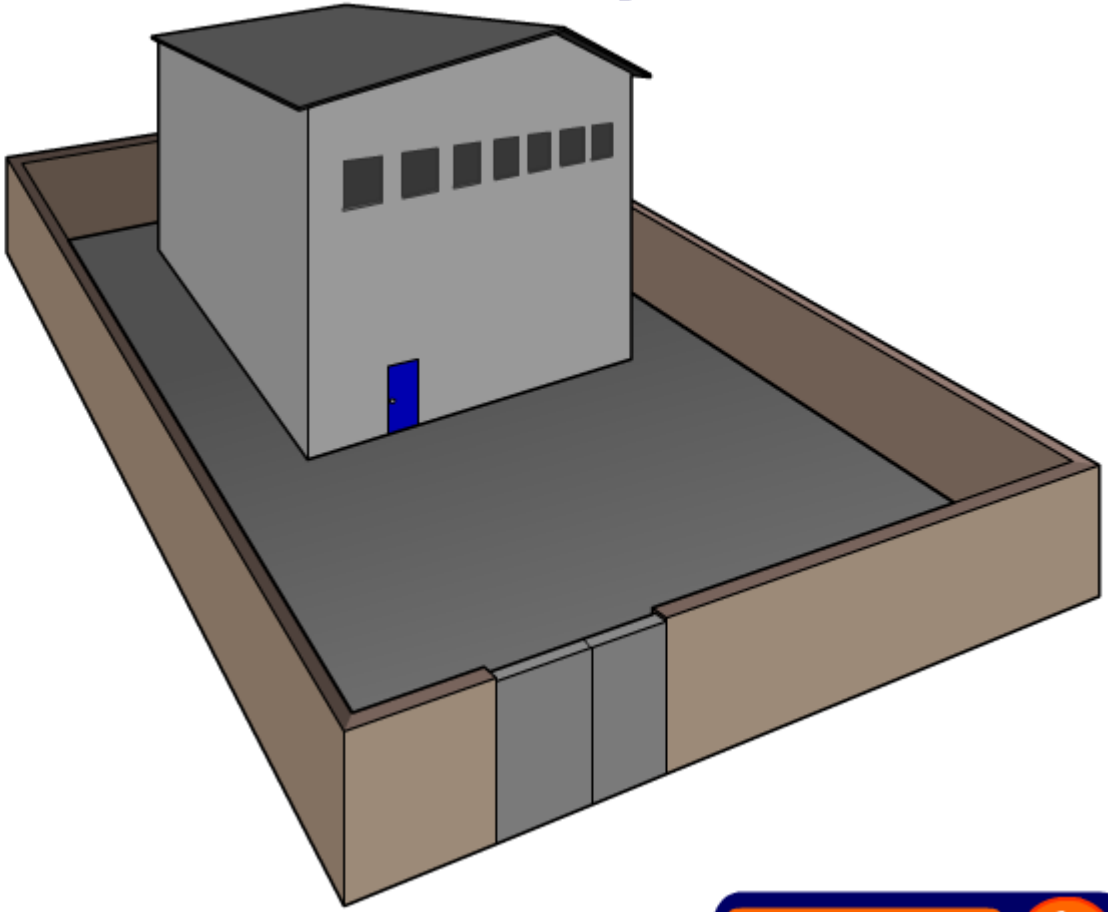
nucleus

The cell – a living factory!

How is a cell like a factory?

How can the three main parts of a factory be compared to the parts of a cell?

Click **"start"** to find out.



start

What does each part do?

How are the parts of a cell like a factory?

factory part	cell part	function
?	nucleus	?
factory floor	?	?
?	?	protection/ regulation

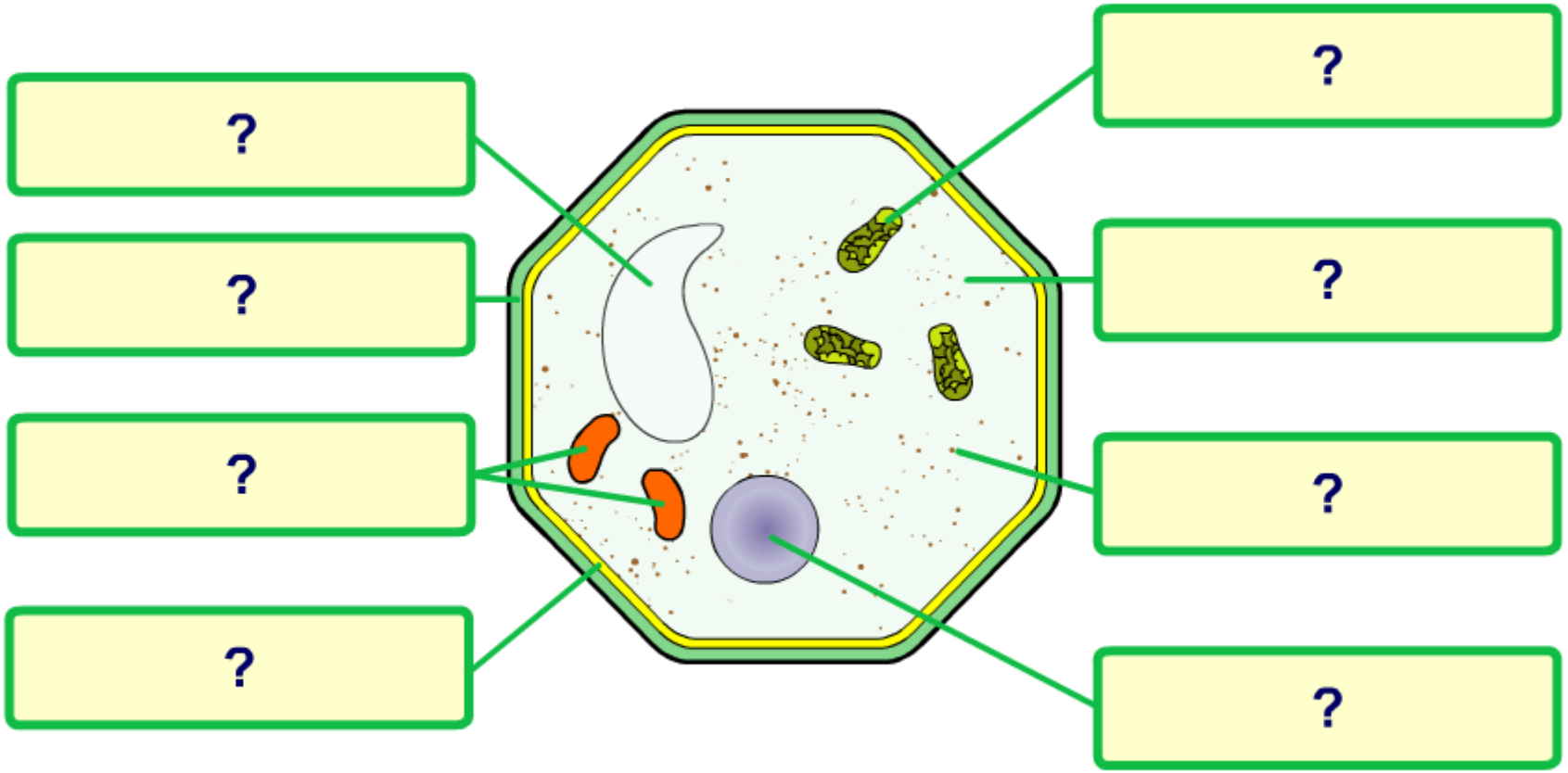
control of reactions

?

C solve

A typical plant cell

What are the parts of a typical plant cell called?

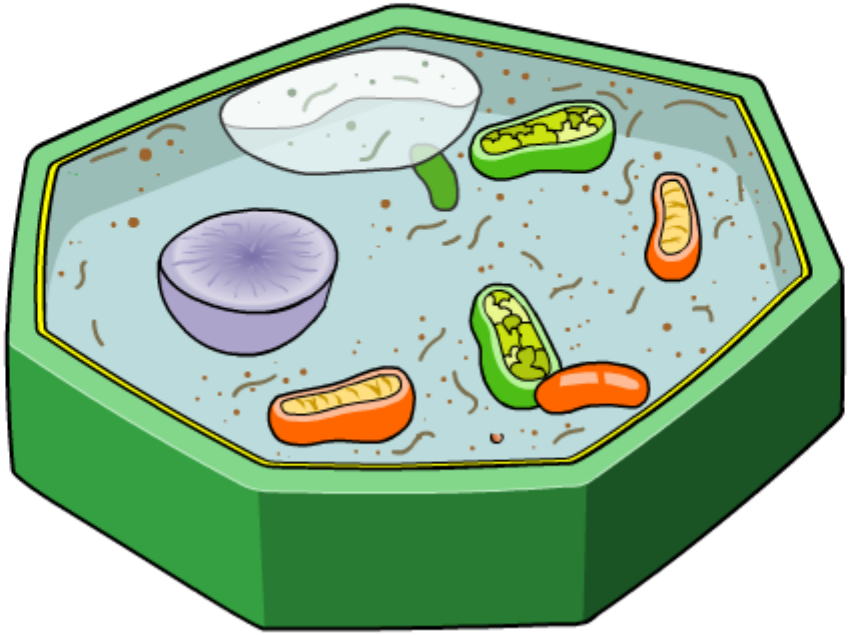


The parts of a typical plant cell

Which structures are found in a typical plant cell?

Click on a button for more infomation about each plant cell structure.

- cell wall
- cell membrane
- cytoplasm
- vacuole

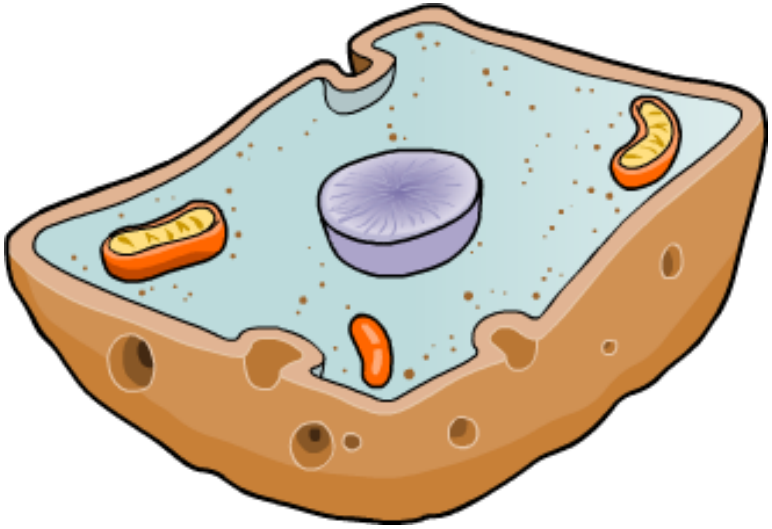


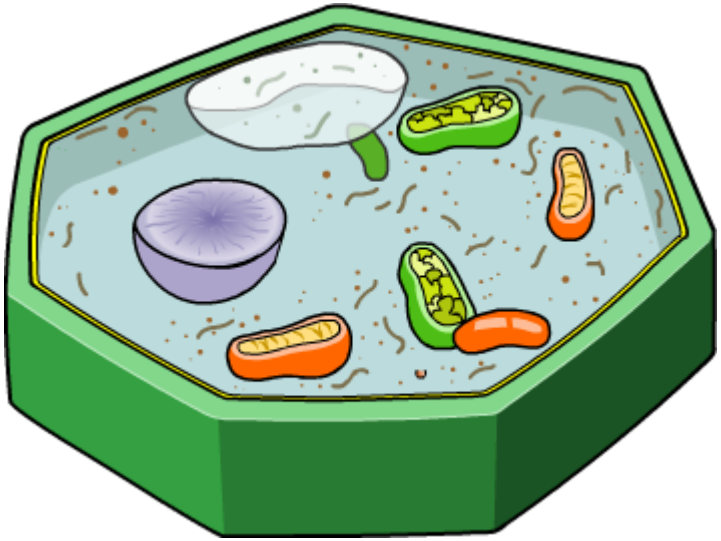
- nucleus
- mitochondria
- chloroplast

Comparing animal and plant cells

What shape is a cell?

Cells are not flat; they are usually three-dimensional (3D).





Most cells have three basic parts: the nucleus, cytoplasm and cell membrane. They may also contain other small structures called **organelles**, which perform specific jobs.

But the 3D shape of the cell is determined by its location in the body and the job that it does.

Do all cells look the same?

Cells can be different shapes and sizes and also have different functions. This is because they are **specialized**.

The shape of a cell is related to its function. Where do you see this idea in sports?

Why are the players in a basketball team often different shapes and sizes?

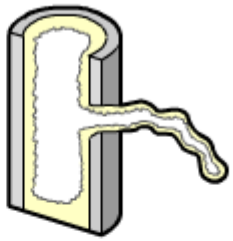
The players are different shapes and sizes because each one does a different job.

Like basketball players, cells are different shapes and sizes because they perform different jobs.

Whose cell is it anyway?

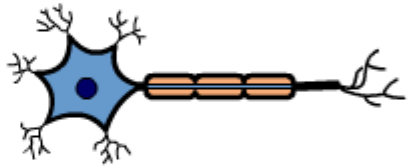
What are these different types of cells called?

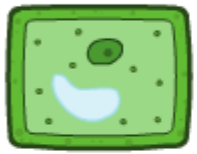
red blood cell



palisade cell

guard cell





skin cell

root hair cell

sperm cell

nerve cell

Make a cell model

You can make your own 3D cell using the following items:

- a plastic bag
- clear gelatin
- small objects to suspend in the cellulose paste (these will represent the internal structures of the cell).

Can you make a model of a typical plant or animal cell?