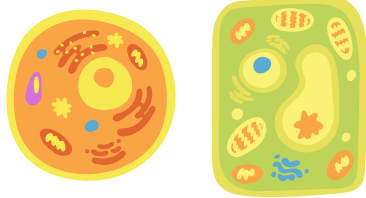
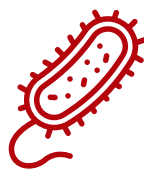


Eukaryotic cells:



Eukaryotes have a **membrane-bound nucleus**, where they store their genetic code.

Prokaryotic cells:



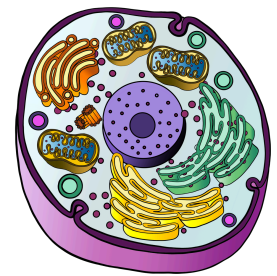
Prokaryotes **do not have a nucleus**, and therefore store their DNA in a different way - such as in **plasmids**

Due to how small cells are, we have to use **orders of magnitude** to depict their size (shown via metres)

Prefix	Multiply by
Centi- (cm)	0.01
Milli- (mm)	0.001
Micro- (μm)	0.000001
Nano- (nm)	0.000000001

Organelles are small structures inside of cells that serve a **specific function**. Different cells have different organelles

B1.1 - Eukaryotes, Prokaryotes, Animal and Plant cells.



Animal and Plant cell organelles

Bacterial organelles

Organelle	Function
Cell Membrane	-Controls what goes in and out of cell
Nucleus	-Contains DNA -Controls cellular activities
Cytoplasm	-Site for chemical reactions -Contains enzymes -Houses organelles
Mitochondria	-Site of aerobic respiration -Energy provider
Ribosomes	-Site of protein synthesis
Cell wall	-Provides strength to cell
Permanent Vacuole	-Improves cell rigidity -Stores cell sap (nutrients and water)
Chloroplasts	-Contains chlorophyll - Chlorophyll allows for photosynthesis , providing food

Organelle	Function
Cell Membrane	-Controls what goes in and out of cell
Single circular strand of DNA	-Instead of a nucleus
Cytoplasm	-Site for chemical reactions -Contains enzymes -Houses organelles
Plasmids	-Small rings of DNA
Cell Wall	-Provides strength to cell

Bacterial and Plant cell walls are made of different compounds!
Bacterial cell wall = **Peptidoglycan**
Plant cell wall = **Cellulose**

- Black text = Present in both
- **Green text** = Present only in plant cells

