

Year 7 Knowledge Organiser - Cells

Differences between animal and plant cells

Animal cells have no **cell wall**, **vacuole** or **chloroplasts**. They tend to be rounder and plant cells are more rectangular, hexagonal or square.

Key words:

Cell – The unit of a living organism; contains parts to carry out life processes.

Unicellular: Living things made up of one cell.

Multicellular: Living things made up of many types of cell.

Tissue: Group of cells of one type.

Organ: Group of different tissues working together to carry out a job.

Cell membrane: Surrounds the cell and controls movement of substances in and out.

Nucleus: Contains genetic material (DNA) which controls the cell's activities.

Vacuole: Area in a cell that contains liquid; used by plants to keep the cell rigid and store substances.

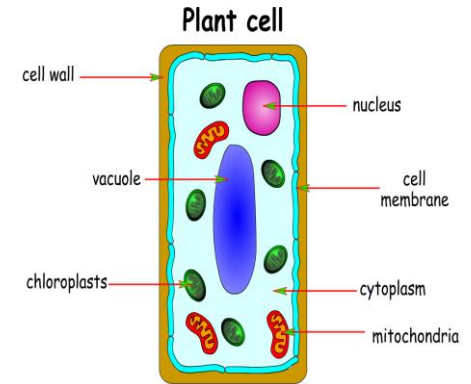
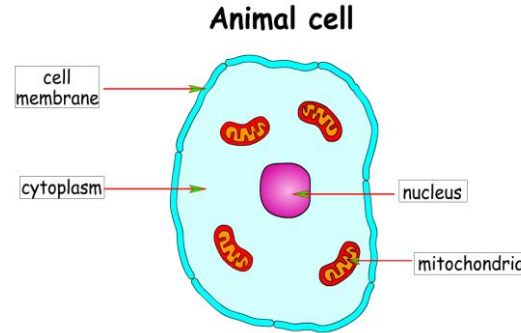
Cell wall: Strengthens the cell. In plant cells it is made of cellulose.

Chloroplast: Part of a plant cell that absorbs light for photosynthesis

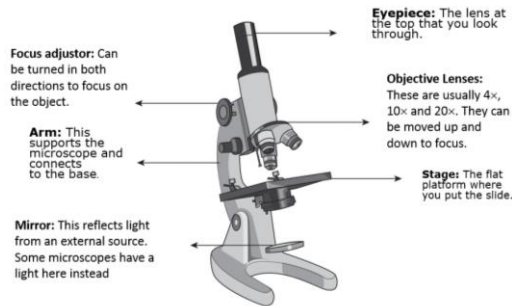
Cytoplasm: Jelly-like substance where most chemical processes happen.

Mitochondrion (plural mitochondria): sausage shaped organelle where energy is released

Cell structure



Microscope parts



Specialised cells

Many cells have adaptations to their function. For example **sperm cells** have **tails** to swim and many **mitochondria** to release energy.



Websites that might be useful:

<https://www.bbc.com/bitesize/articles/zr69dxs>

Extension ideas to research:

- What do bacterial cells look like?
- Who were the first people to see cells and when was this?

Cells divide by a process called **mitosis**, which produces two identical cells from one parent cell. Yeast cell dividing:

