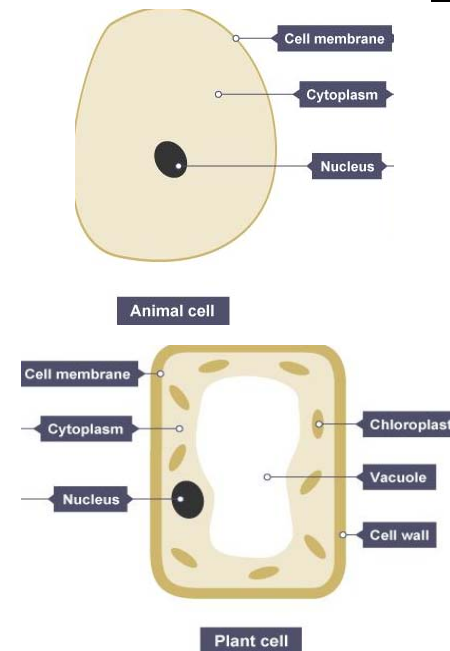


# Y7 – Knowledge organiser – 7.1 - Cells & Movement

## Single vs Multicellular 1

- A **cell** is the 'unit' of a living **organism**.
- **Multicellular** organism are made up of many different types of cell.
- **Microscopes** are used to view cells.
- **Tissue**: groups of 1 type of cells.
- **Organ**: group of different tissues working together.
- **Organ system**: collection of different organs working together.

## Animal & Plant cells 2

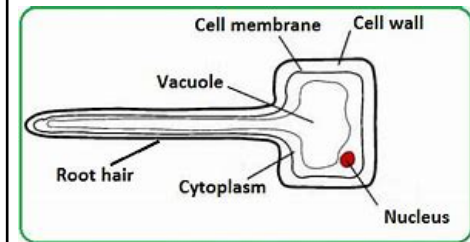


## Parts of cells 3

- **Nucleus**: contains genetic information. Controls the activities of the cell.
- **Cell membrane**: Controls what goes in/out of the cell.
- **Cytoplasm**: where chemical reactions happen.
- **Chloroplasts**: absorbs light energy so the plant can make food.
- **Vacuole**: contains liquid to keep the cell rigid.
- **Cell wall**: strengthens the cell.

## Specialised cells 4

- Some cells are **specialised**. They have special features to carry out their jobs.
- Examples: sperm cell, ovum cell, palisade cell, ciliated cell, nerve cell, red blood cell.



## Unicellular organisms 5

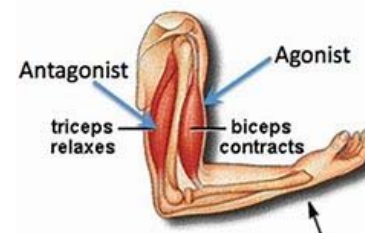
- Some organisms, like bacteria & yeast are made from 1 cell only. They are **unicellular**.
- These cells have extra parts compared to typical plant/ animal cells.
- **Mitochondria**: where energy is released from food molecules.

## Skeleton structure & function 6

- Function of the skeleton: **protection**, **support**, allows **movement**, production of new blood cells.
- **Joints**: where bones meet.
- **Ligaments**: connects bone to bone.
- **Tendons**: connect muscles to bone.
- **Cartilage**: tissue found at the end of bones, used to reduce friction.

## Antagonistic muscles 7

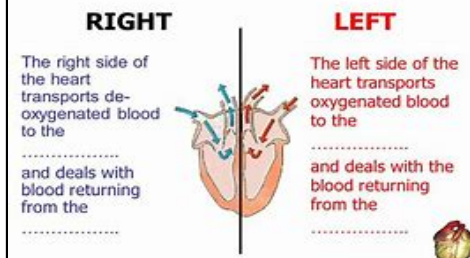
- **Antagonistic muscle** pair: muscles working together to make create movement
- Create movement when one **contracts** and the other **relaxes**.



## The Heart 8

- The heart is a muscle used to pump blood around the body.
- Heart attacks occur when the heart stops pumping

### The heart as a double pump



# KO Quiz 1

1. Draw an animal cell and label it.
2. Are you multicellular or unicellular?
3. Name one organelle a plant has that you do not.
4. What does the cytoplasm do?
5. What does the nucleus do?
6. What do a cell wall do?
7. Name a specialised cell.
8. Draw this specialised cell.
9. What does this specialised cell do?
10. What do mitochondria do?

# KO Quiz 2

1. Are you multicellular or unicellular?
2. Name one organelle a plant has that you do not.
3. What does the cytoplasm do?
4. Name a bone in your leg.
5. Name a joint.
6. Name a joint that does not move.
7. Name a joint that only moves 2 ways.
8. What does antagonistic mean?
9. Name a pair of antagonistic muscles.
10. What do ligaments do?