b) Centrioles

Description
- Pair of hollow cylinders located near nucleus; 0.2µm in diameter and 0.3 to 0.5nm in length
- Found in pairs at right angles to each other,
- From the transverse section of the centriole as seen under the TEM, 9 triplets of microtubules are fused together to give a rod-like structure.

Function
- Organize spindle fibres during cell division.
- Anchorage for cilia and flagella

![Centriole diagram](image)

C) Cell wall

Description
- Rigid and inflexible structure that is mainly made up of cellulose
- Supports and defines the shape of plant tissues
- Freely permeable to all but very large molecules

Functions
- Protecting the cell from mechanical injury and invasion
- Withstanding the hydrostatic pressure exerted by the uptake of water by the cell

Other Parts

Cytoplasm
- Refers to all the organelles + cytosol (without nucleus)
- Cytosol → Aqueous solute rich matrix that contains
  - Essential ions & soluble organic molecules such as sugars and amino acids
  - Soluble proteins
  - Cytoskeleton
- Bounded by ______________________
- Various metabolic reactions needed to sustain life takes place here
Test yourself

1. Label the various organelles and parts of the animal cell below

2. Label the various organelles and parts of the plant cell below