

Cell Specialisation

Cell Structure

You were able to see the following in most cells under the light microscope.

- Cell wall
- Cell Membrane
- Cytoplasm
- Nucleus
- Vacuole
- Plastids

Structure

- The following cell structures are only clearly visible through an electron microscope
 - Mitochondria
 - Golgi Apparatus
 - Smooth Endoplasmic reticulum
 - Rough Endoplasmic reticulum
 - Ribosomes

Cell Specialisation

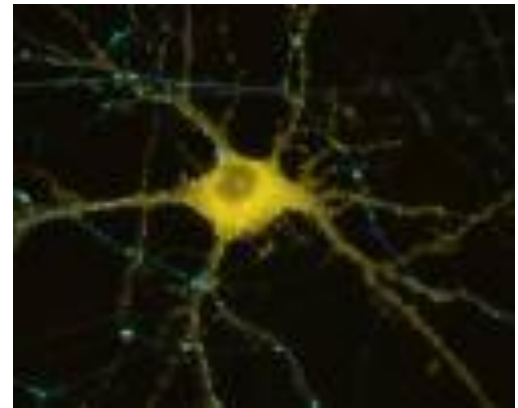
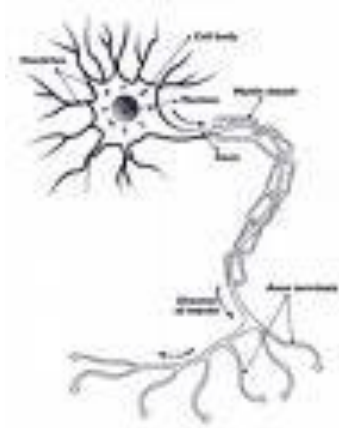
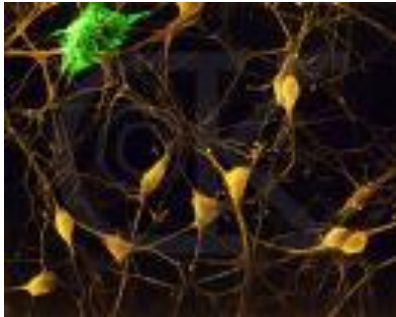
- Activity (in pairs)
- Cut out cells. Group them. Why did you group them in this way?
- Use handout to identify and label each cell. Divide work with your partner.
- How is this cell specialised to suit its function?

Cell Specialisation

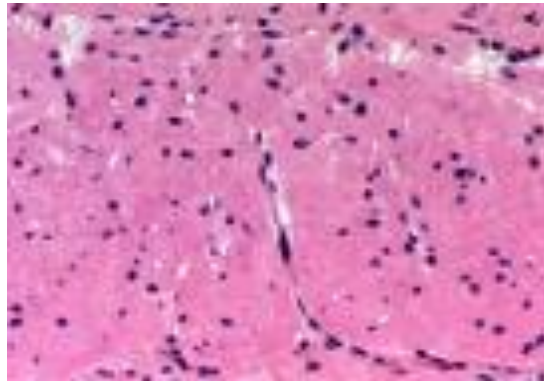
- Identify the following cells
 - The protista
 - Identify the following specialised animal cells
 - Sex cells
 - Nerve cells
 - Muscle cells
 - Ciliated columnar epithelial cells
 - Red blood cells
 - White blood cells
 - Fat cells
 - Bone tissue
 - Identify the following specialised plant cells
 - Cells from a leaf of a plant
 - Stomata (help with this one)
 - Cells that store starch e.g. banana cells
 - Vascular cells (xylem and phloem)(help with this one)
 - Cells with different plastids

Animal Cells

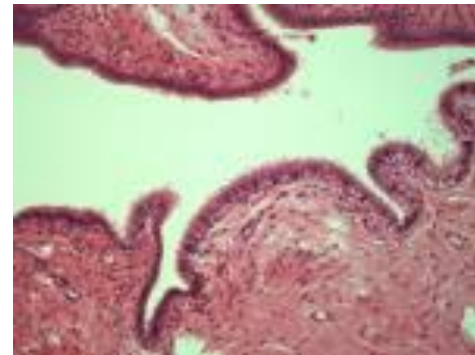
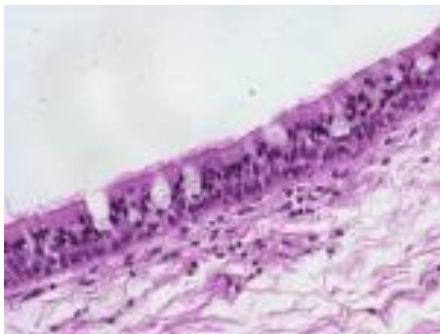
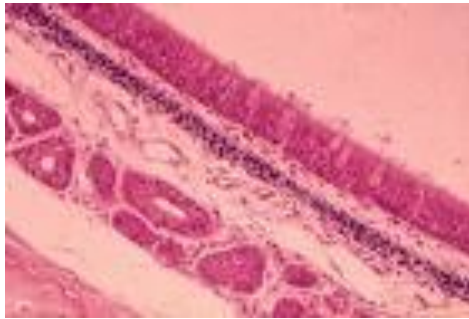
Nerve cells



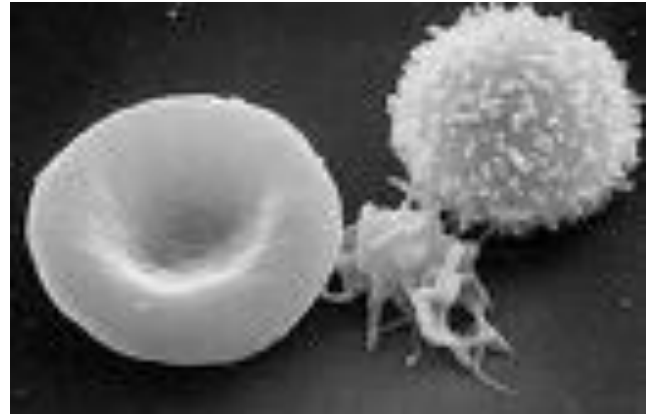
Muscle cells



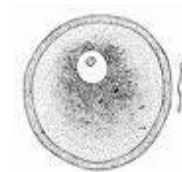
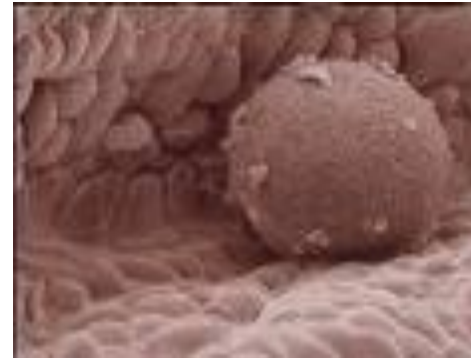
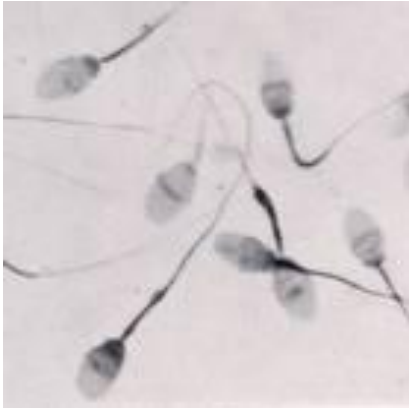
Ciliated columnar epithelial cells



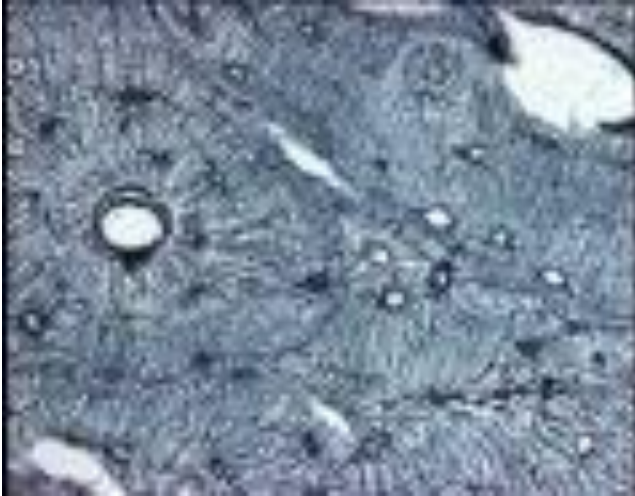
Blood Cells



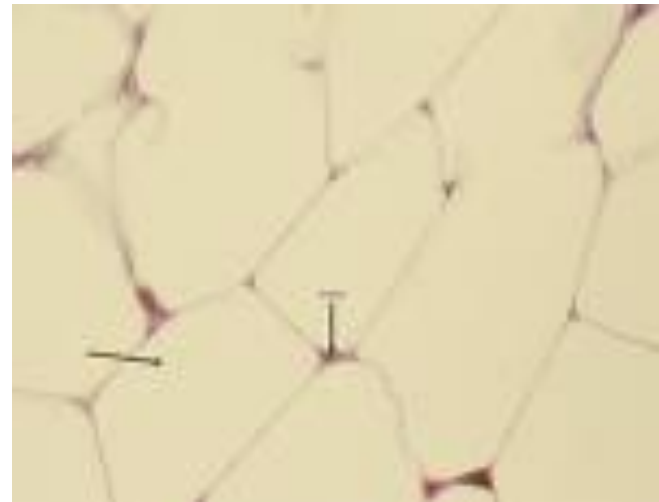
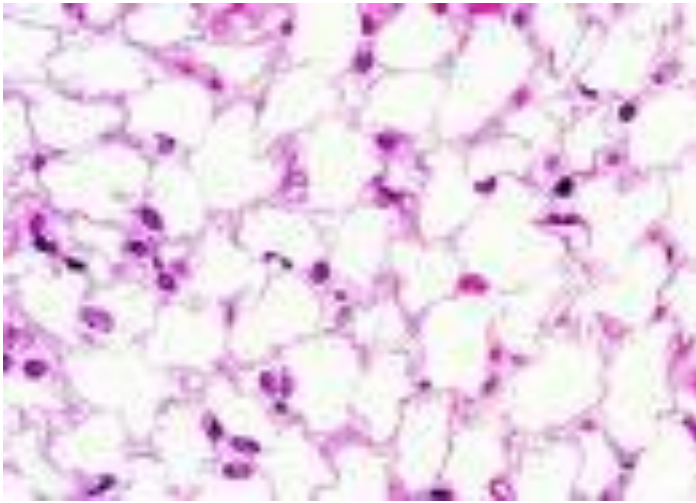
Sex Cells



Bone Tissue



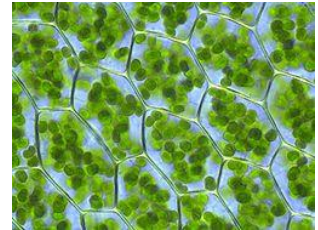
Fat Cells



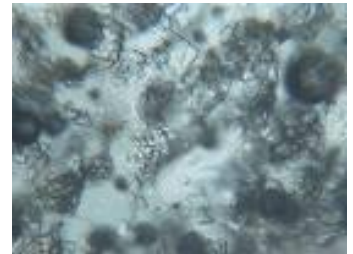
Plant Cells

Plastids – organelles found in the cells of plants.

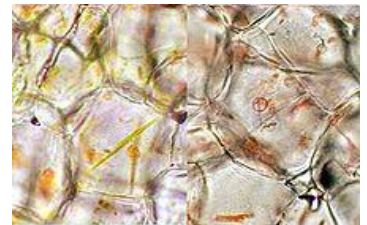
- Chloroplasts – found in plants. Contain chlorophyll. Responsible for photosynthesis.



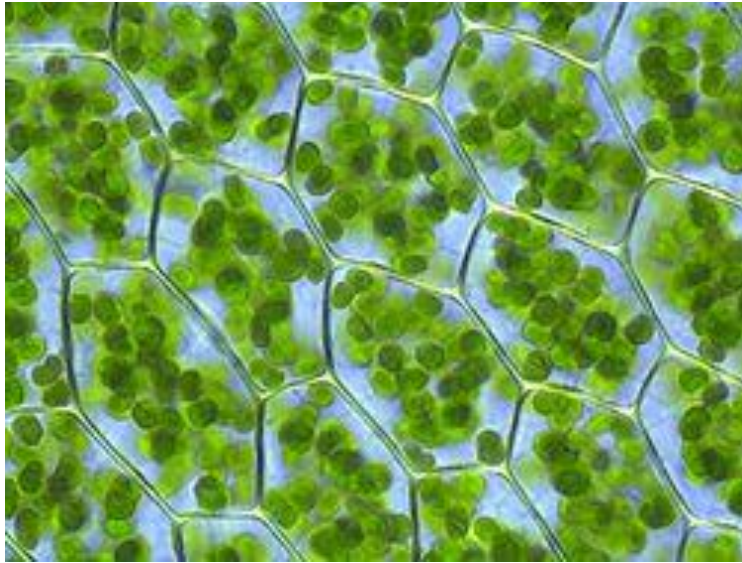
- Leucoplasts – non-pigmented plastids found predominantly in the roots and non-photosynthetic parts of plants. They become specialised for bulk storage of starch (e.g. banana), protein and lipids.



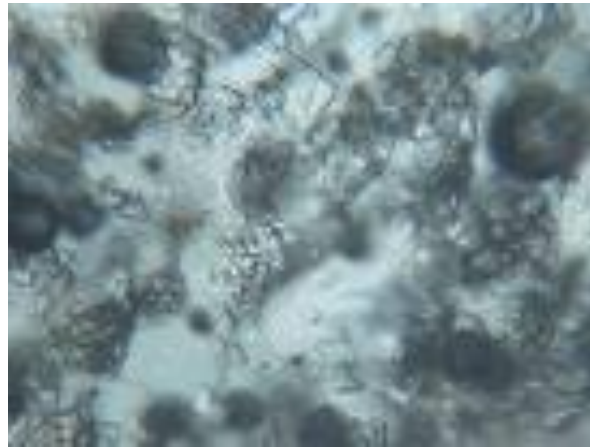
- Chromoplasts – for pigment synthesis and storage (e.g. red capsicum). Often found in fruits and flower part of plants.



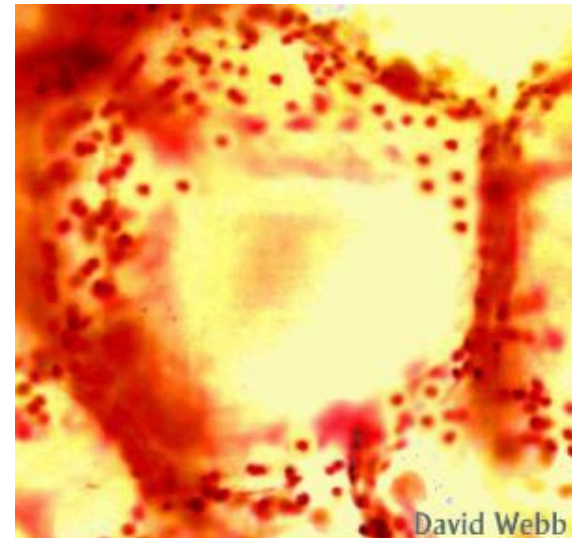
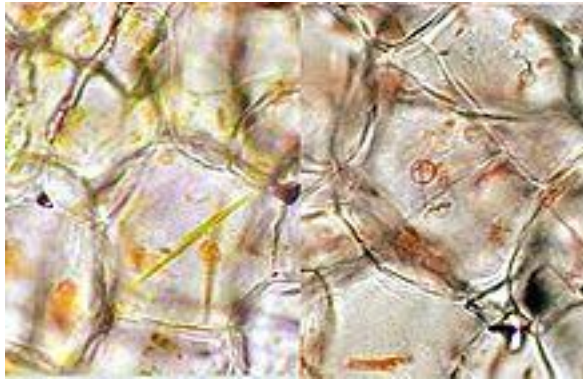
Leaf Cells



Cells that store starch e.g. banana cells



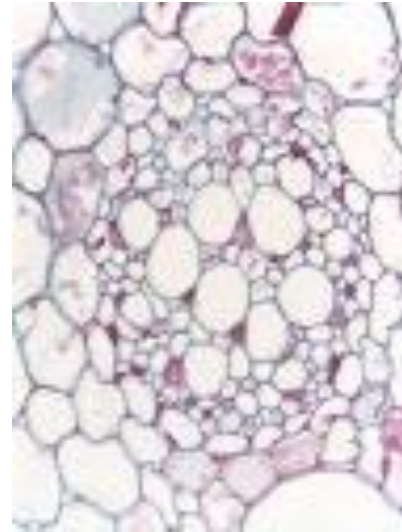
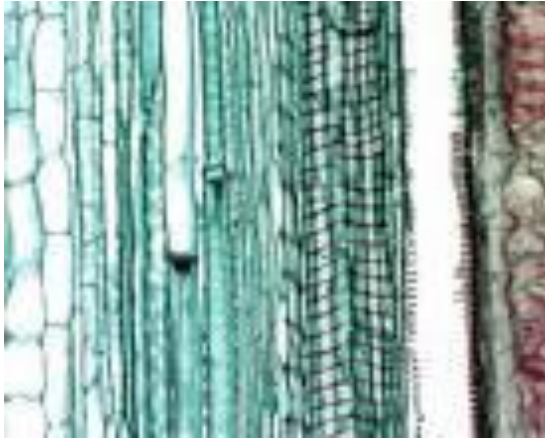
Cells with chromoplasts



Stomata on leaf cells

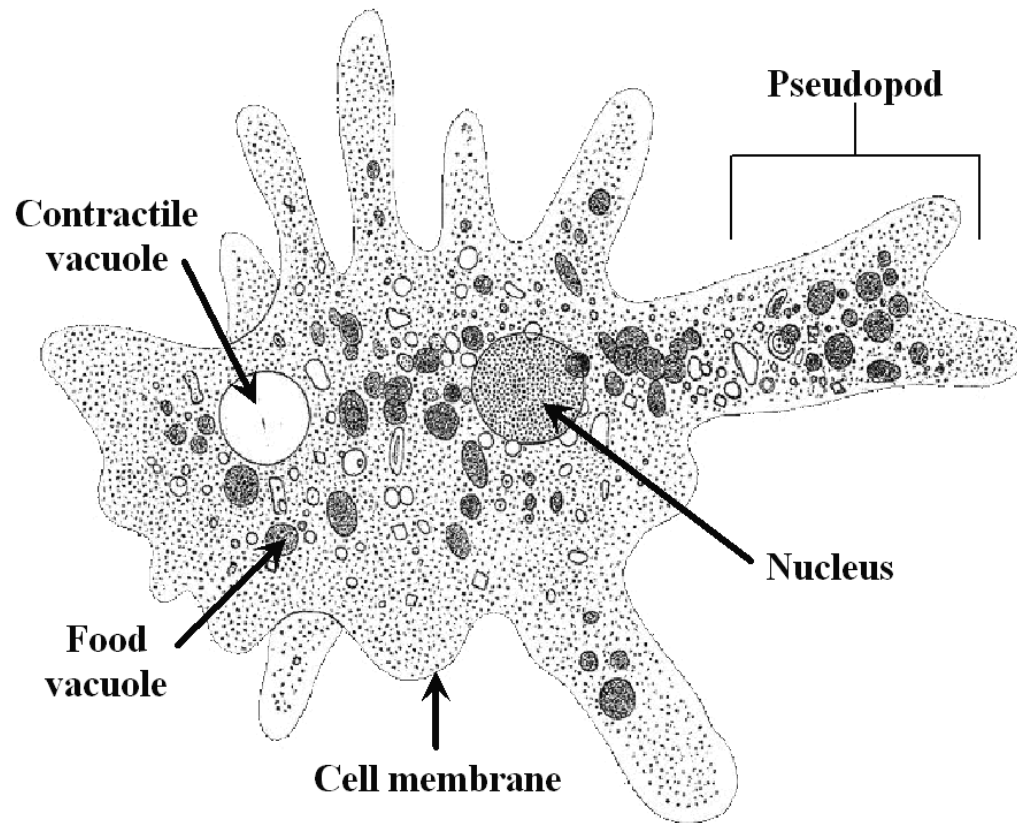


Vascular cells (xylem and phloem)

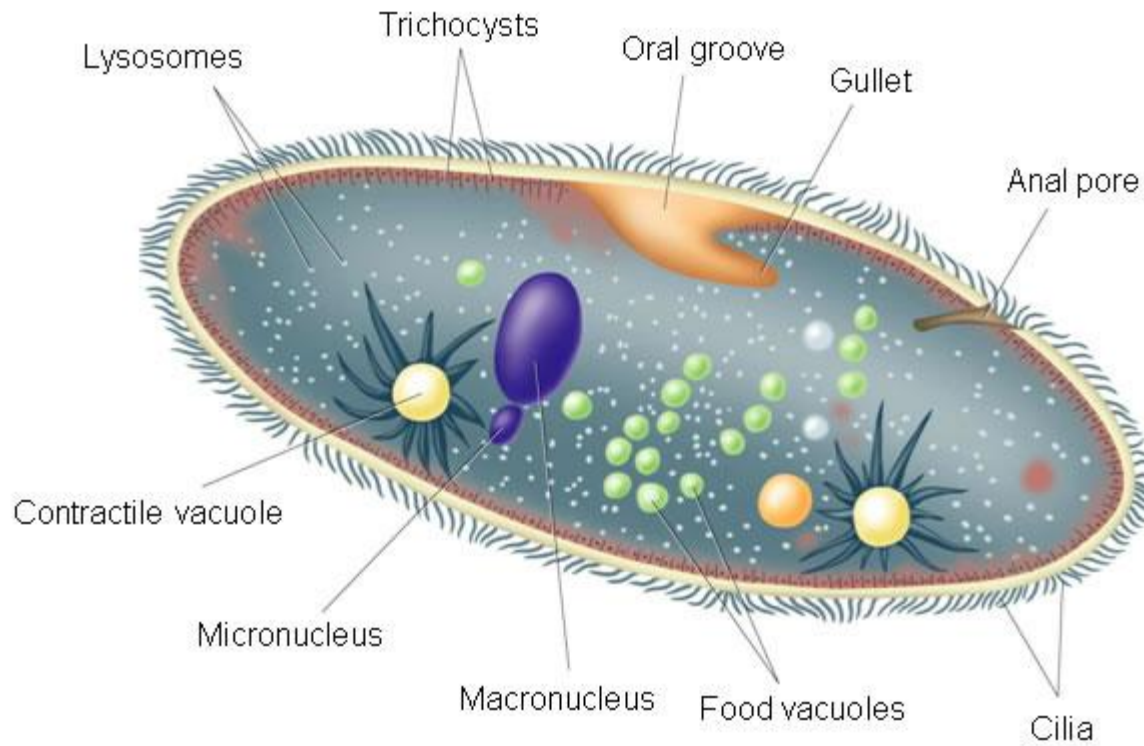


Proctists or Protista

Amoeba



Paramecium



Euglena

