

Cell Biology

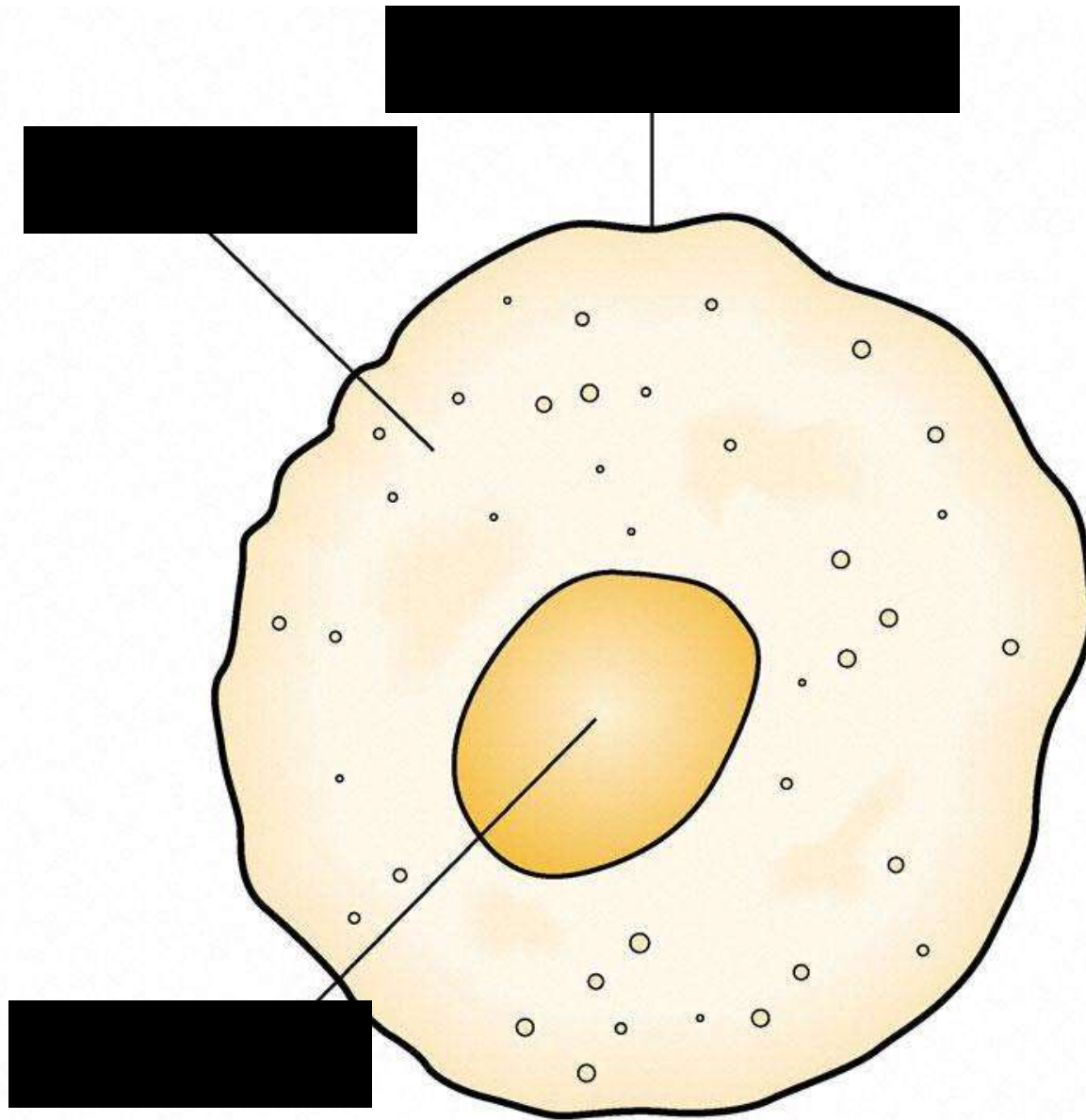
Lesson 1 – Cell Structure



Revision - what you should already know !

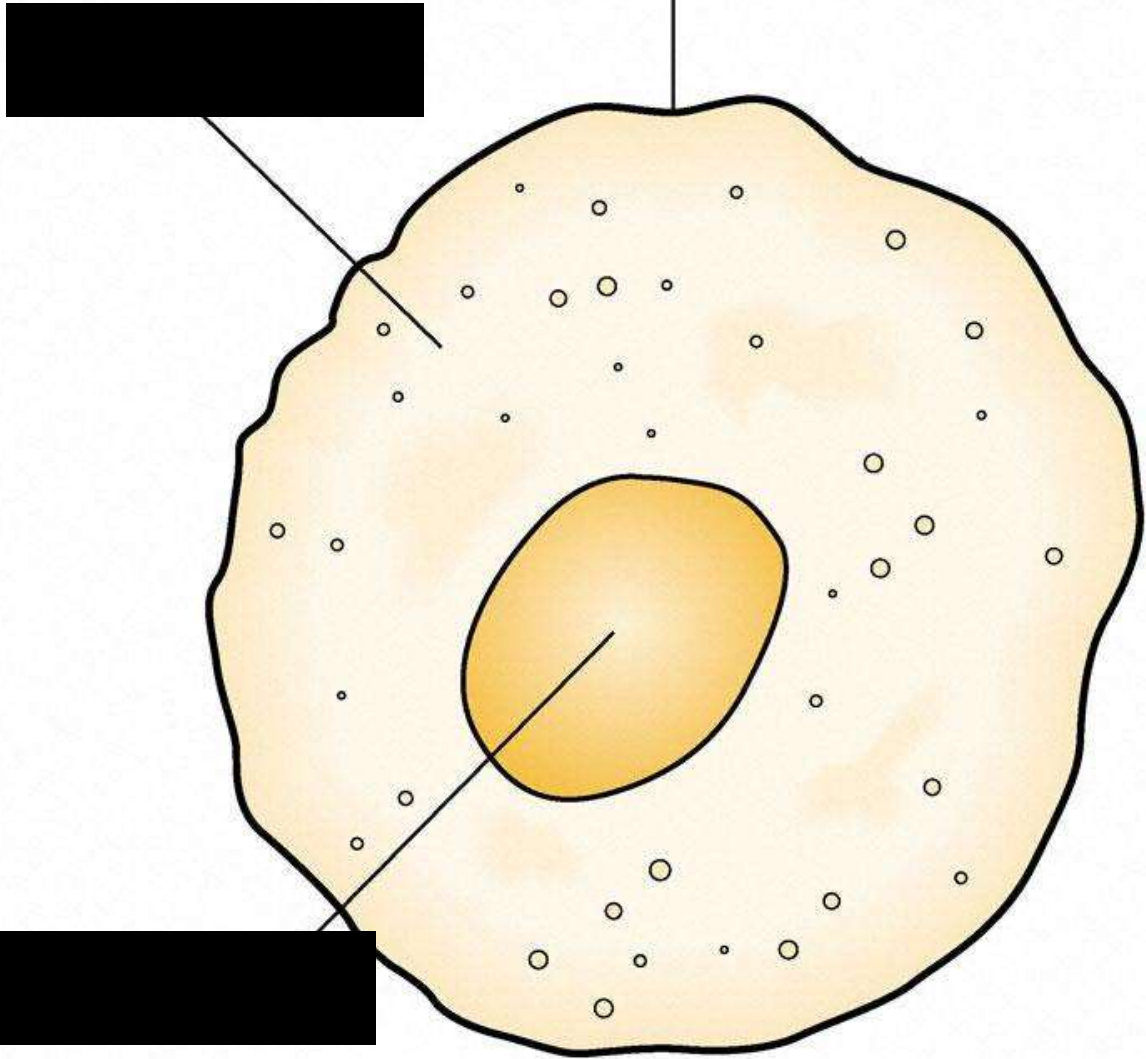
- Collect show me board and work partner.
- Draw a diagram of a labelled plc animal cell
- Can you remember the functions of each labelled structure ?????
- 3 labels for an animal cell
- 6 labels for a plant cell



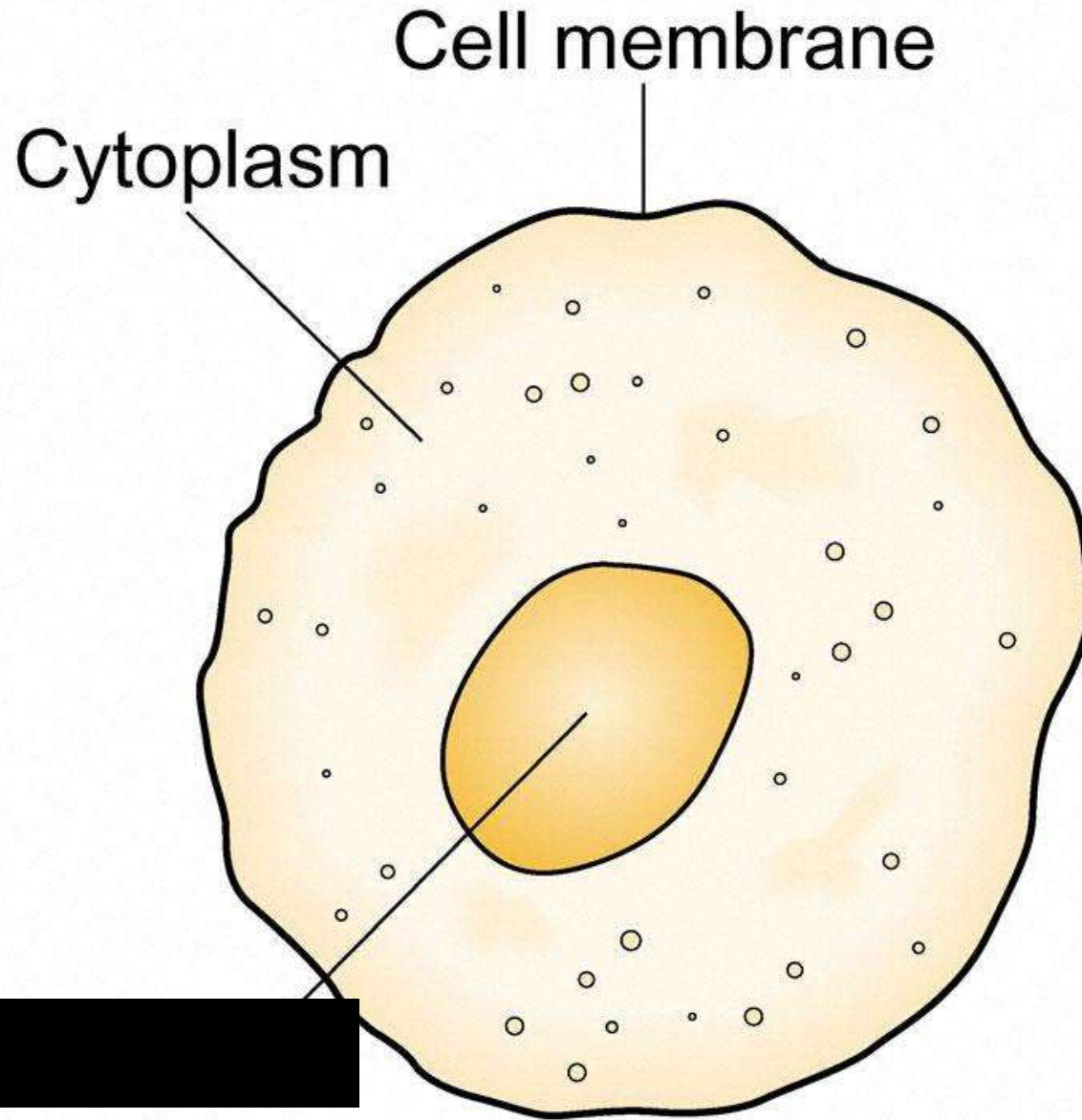


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Cell membrane



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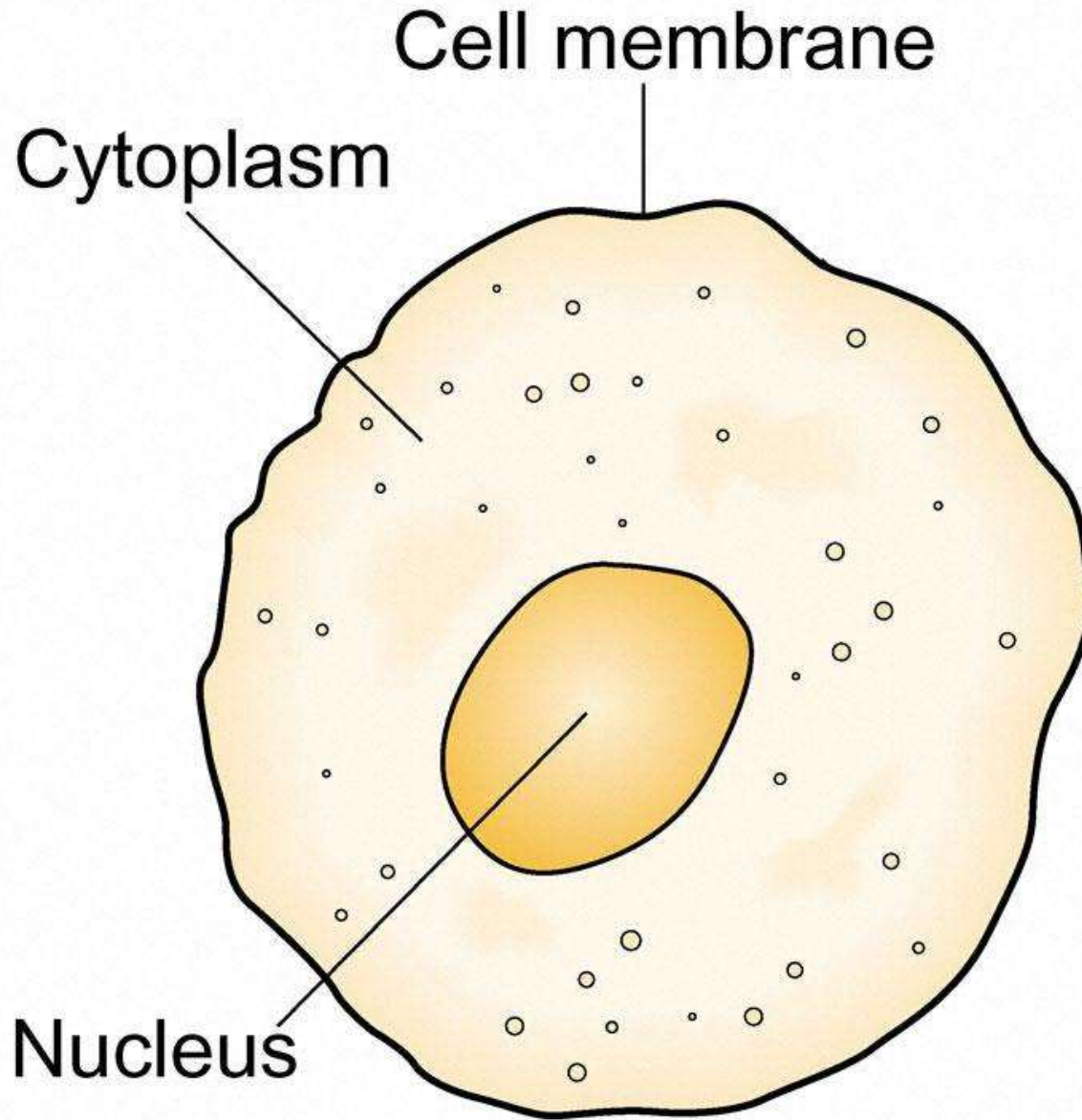


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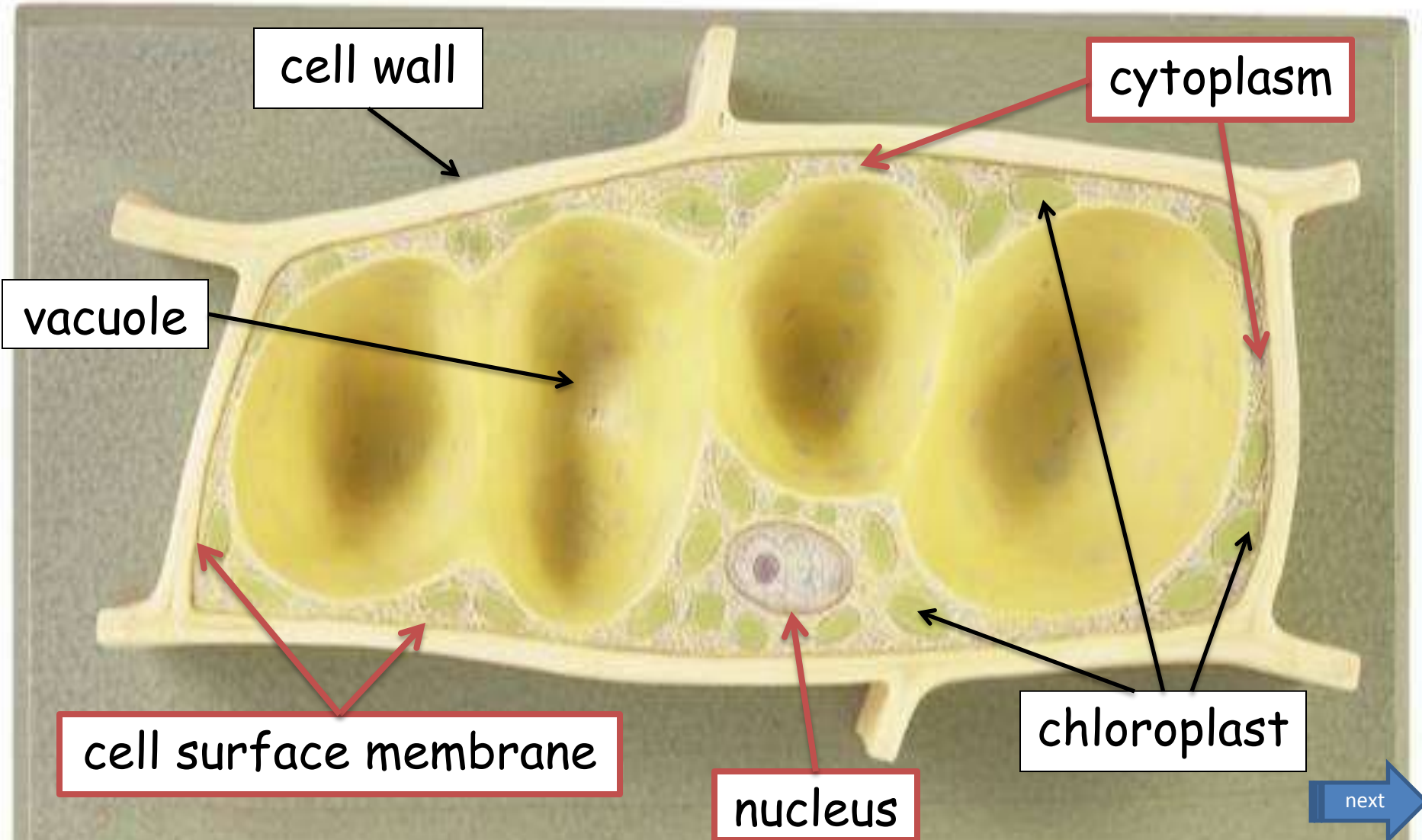


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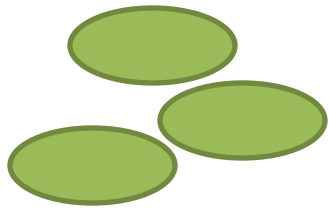
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The ones in red we have already looked at in the animal structure slides

Structure of a plant cell



Chloroplasts

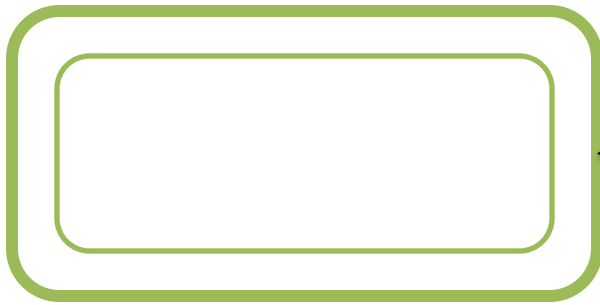


Are discs that contain the green pigment chlorophyll. They make **food** for the plant

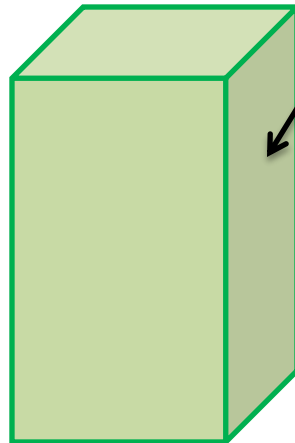


Cell Wall

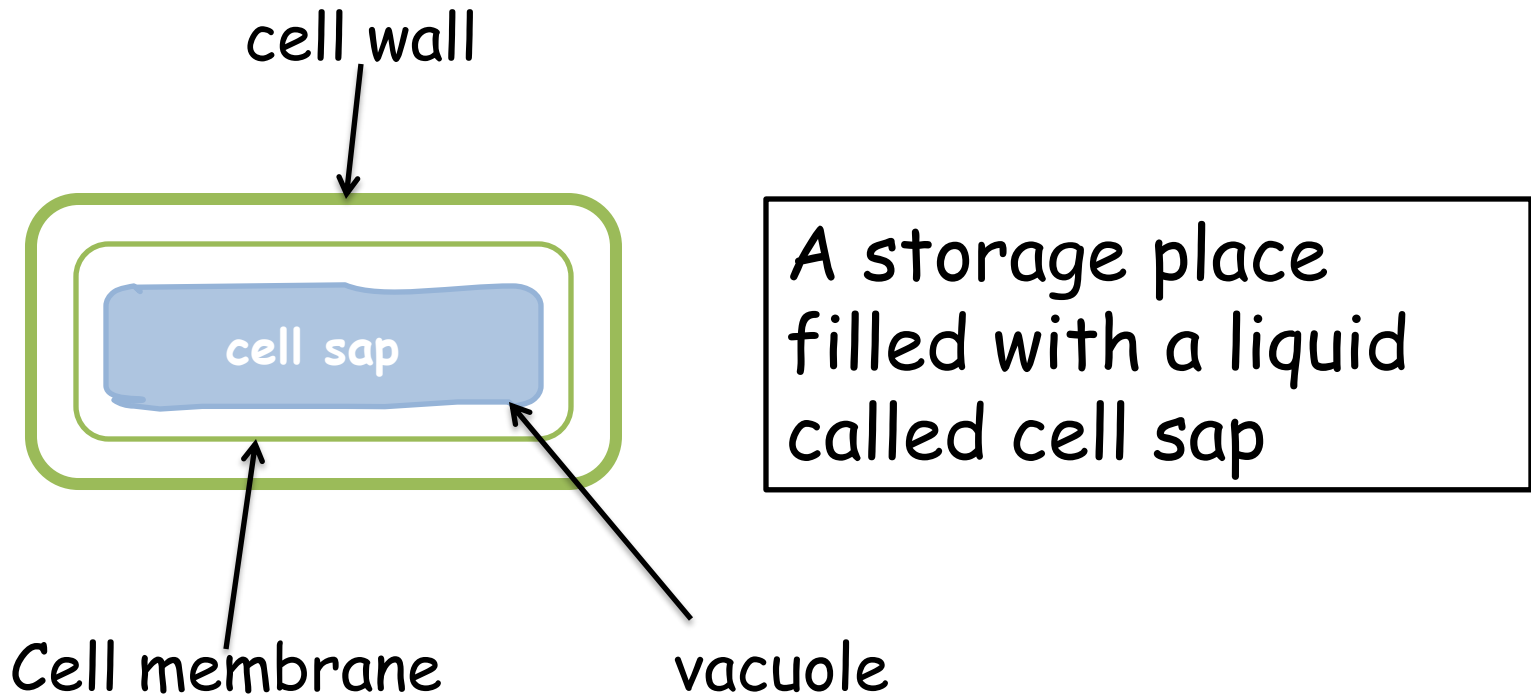
- Plant cells have straighter edges and are boxed shaped



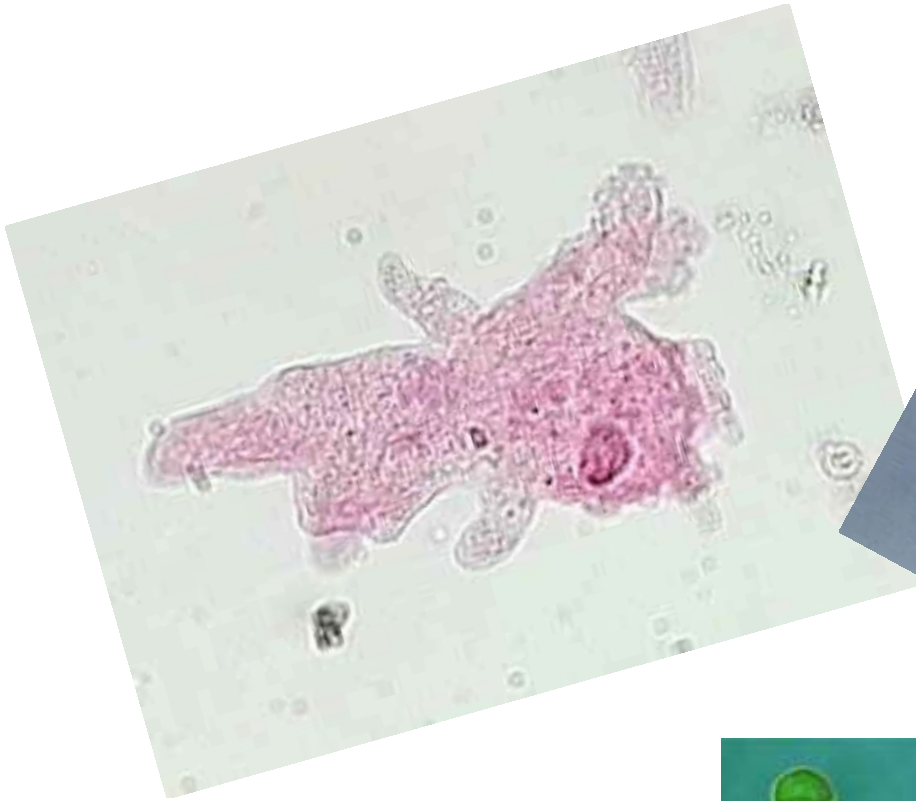
The outside layer of the plant cell. It is very strong and supports the cell.



Vacuole



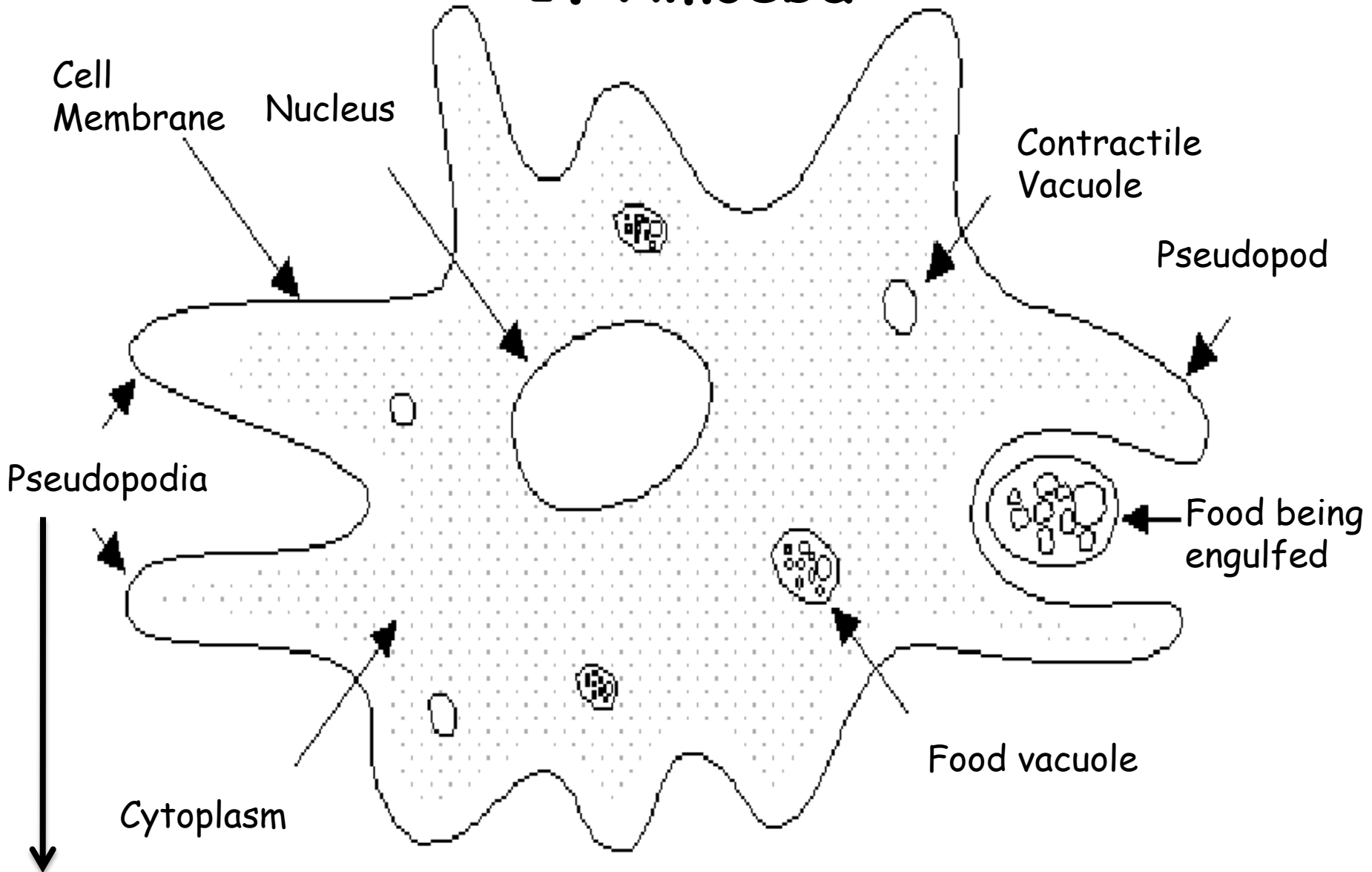
Unicellular Organisms



Most living organisms are composed of millions of cells. They are multicellular.

- Some living organisms are unicellular which means that they only consist of one cell.
- This means that this **single cell** will be able to show all the characteristics of a living organism.
 - metabolism, maintain homeostasis, grow, respond, reproduce, move, excrete.
- Examples of unicellular organisms include:
 1. amoeba
 2. paramecium
 3. euglena
 4. Pleurococcus

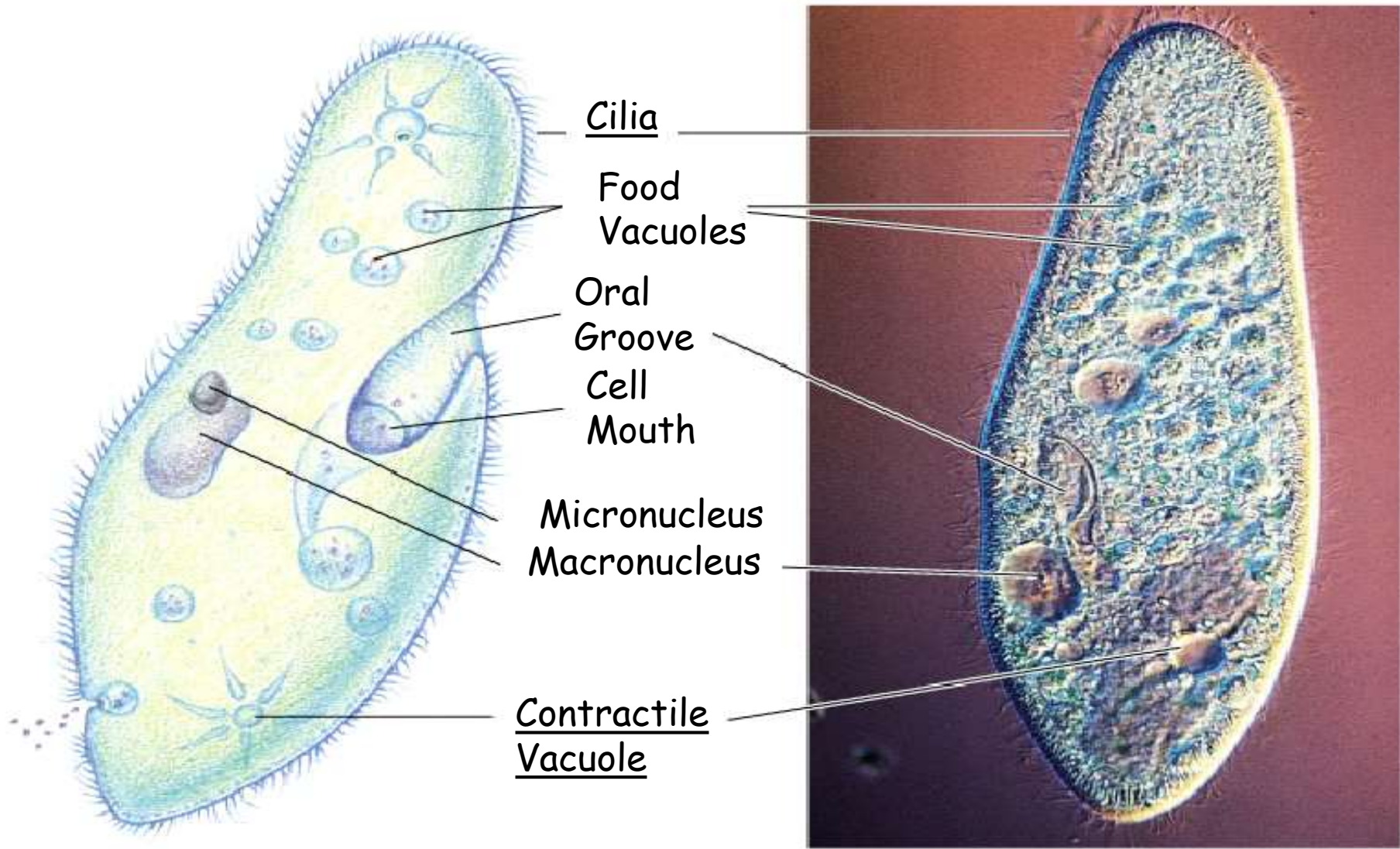
1. Amoeba



temporary projections . This is how [amoebas move](#)

amoeba





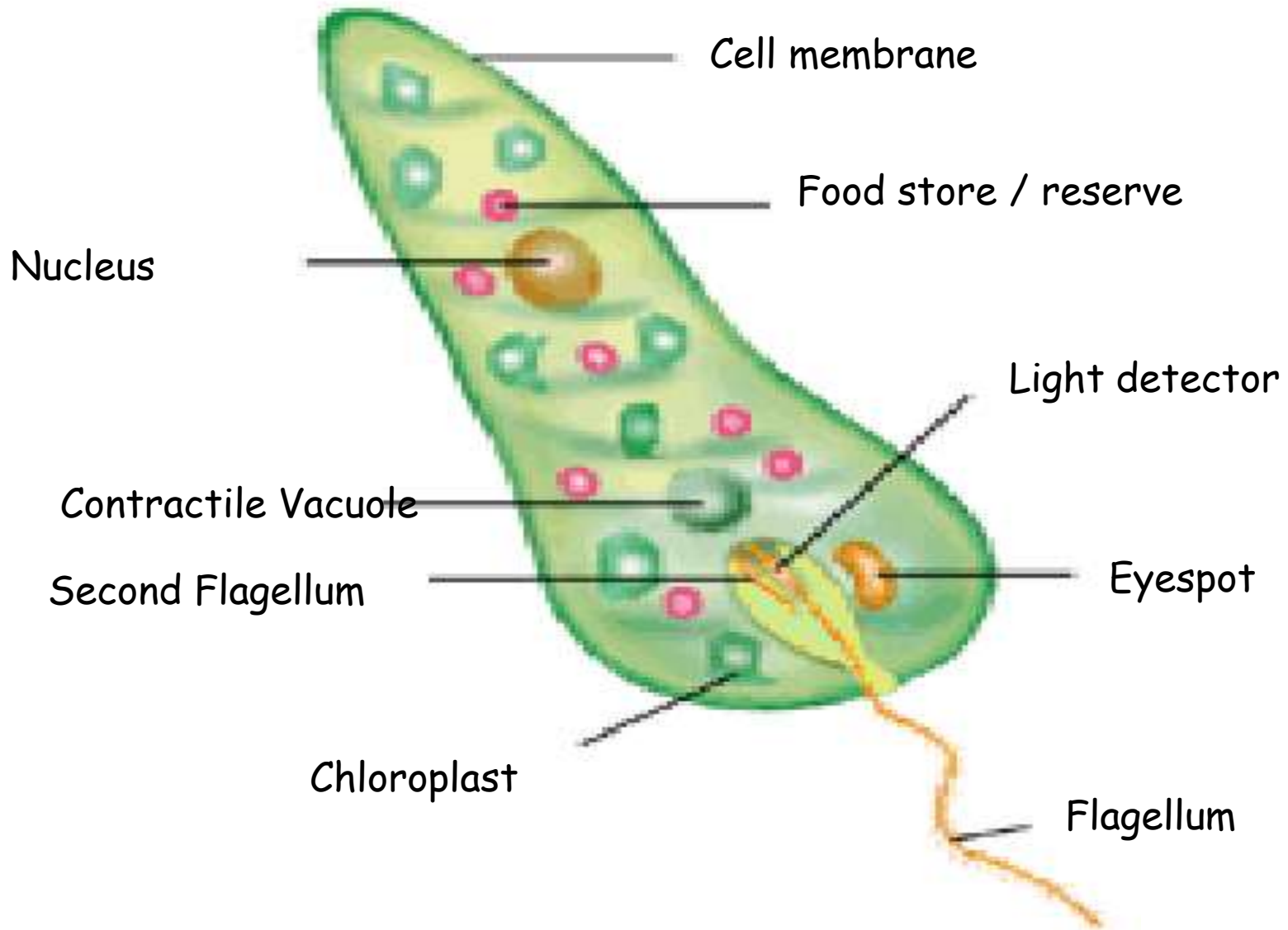
2. *Paramecium*

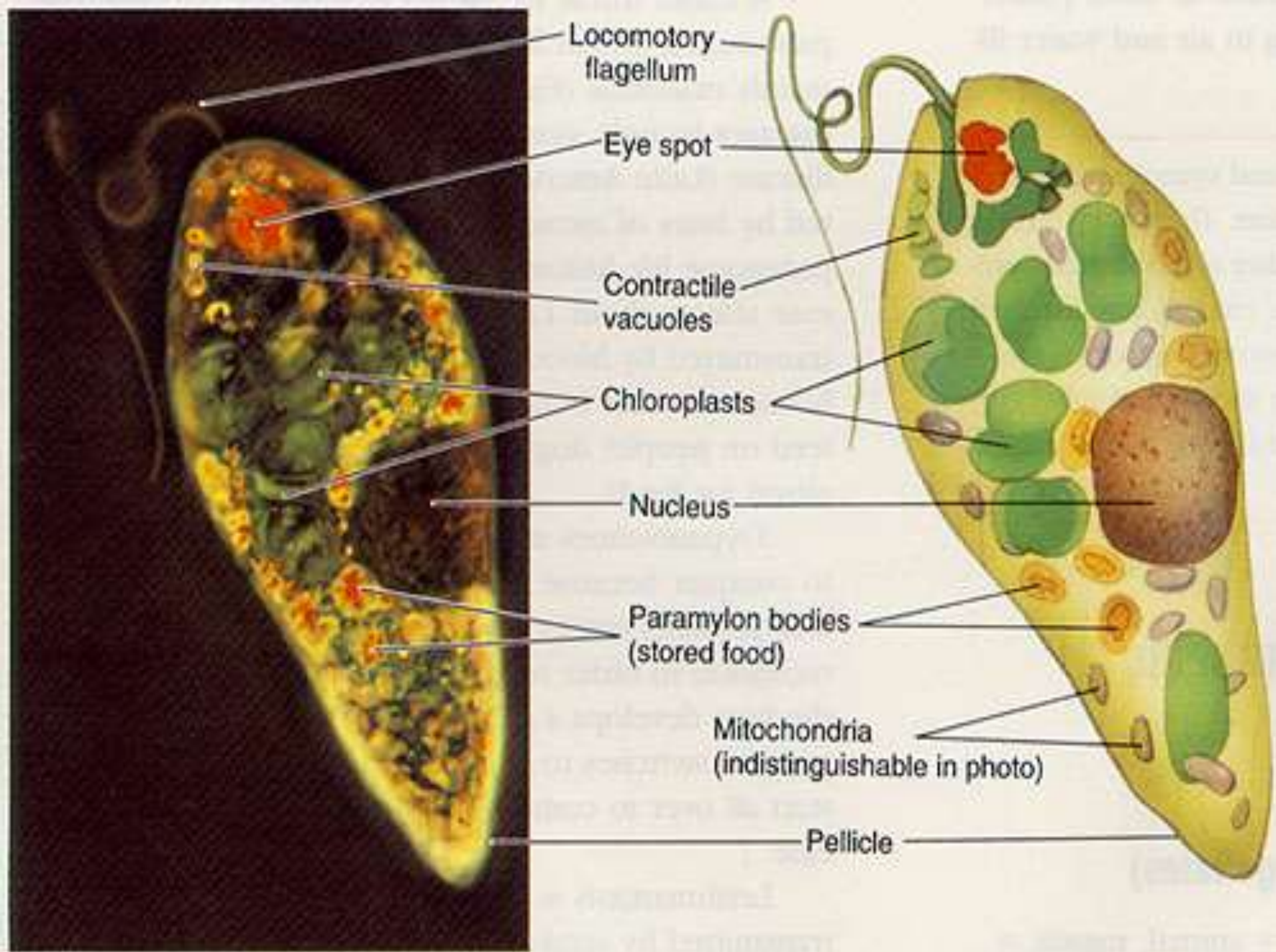
50 μm

0.05 mm

0.005 cm

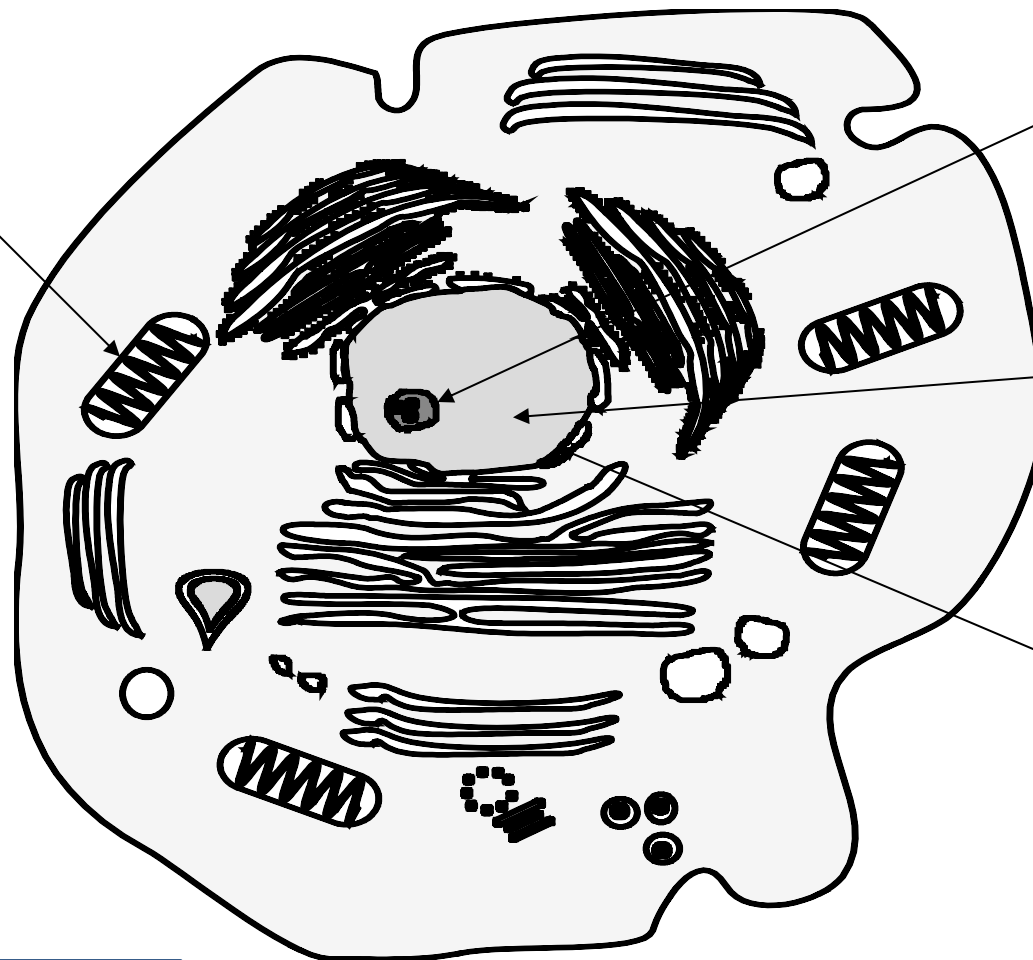
Euglena show plant and animal features.







mitochondrion



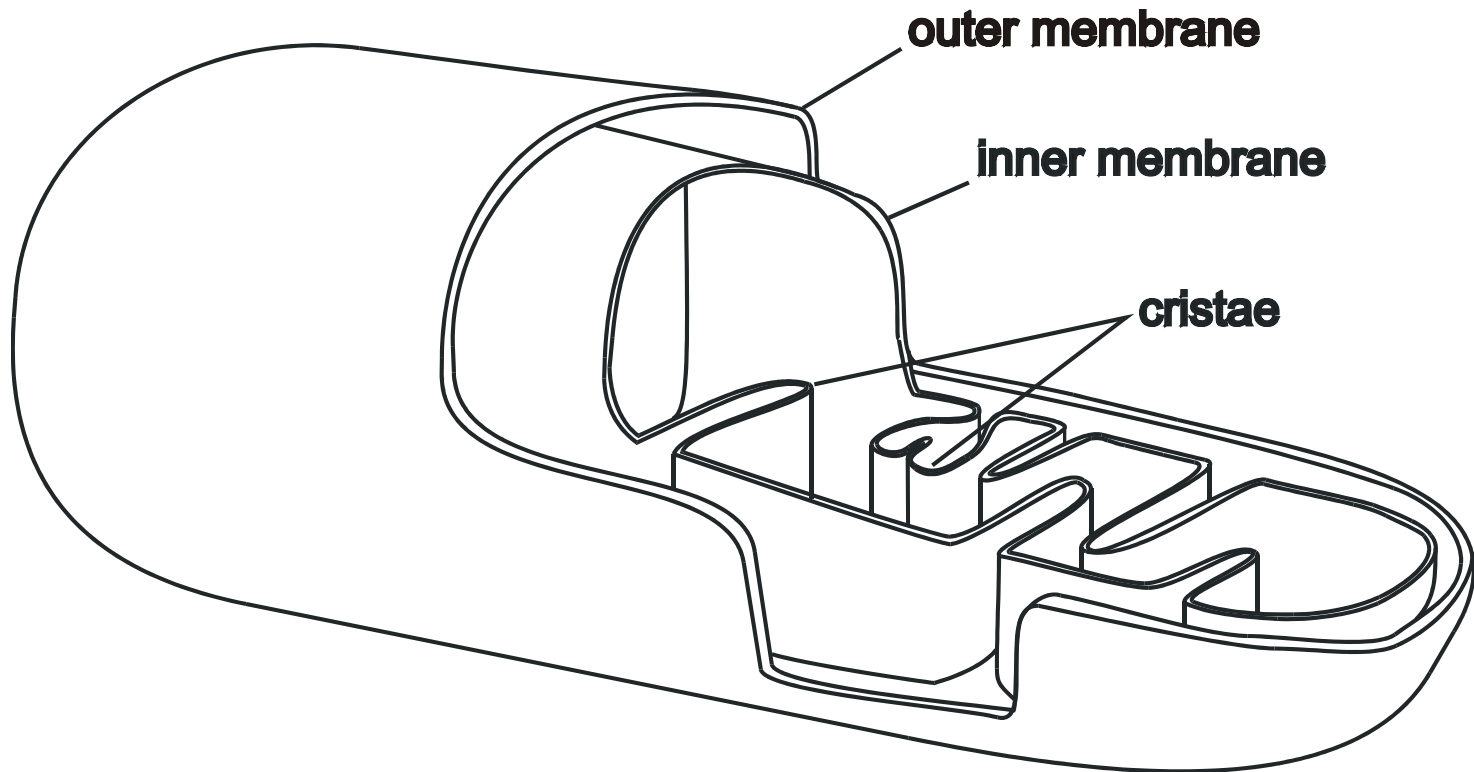
nucleolus

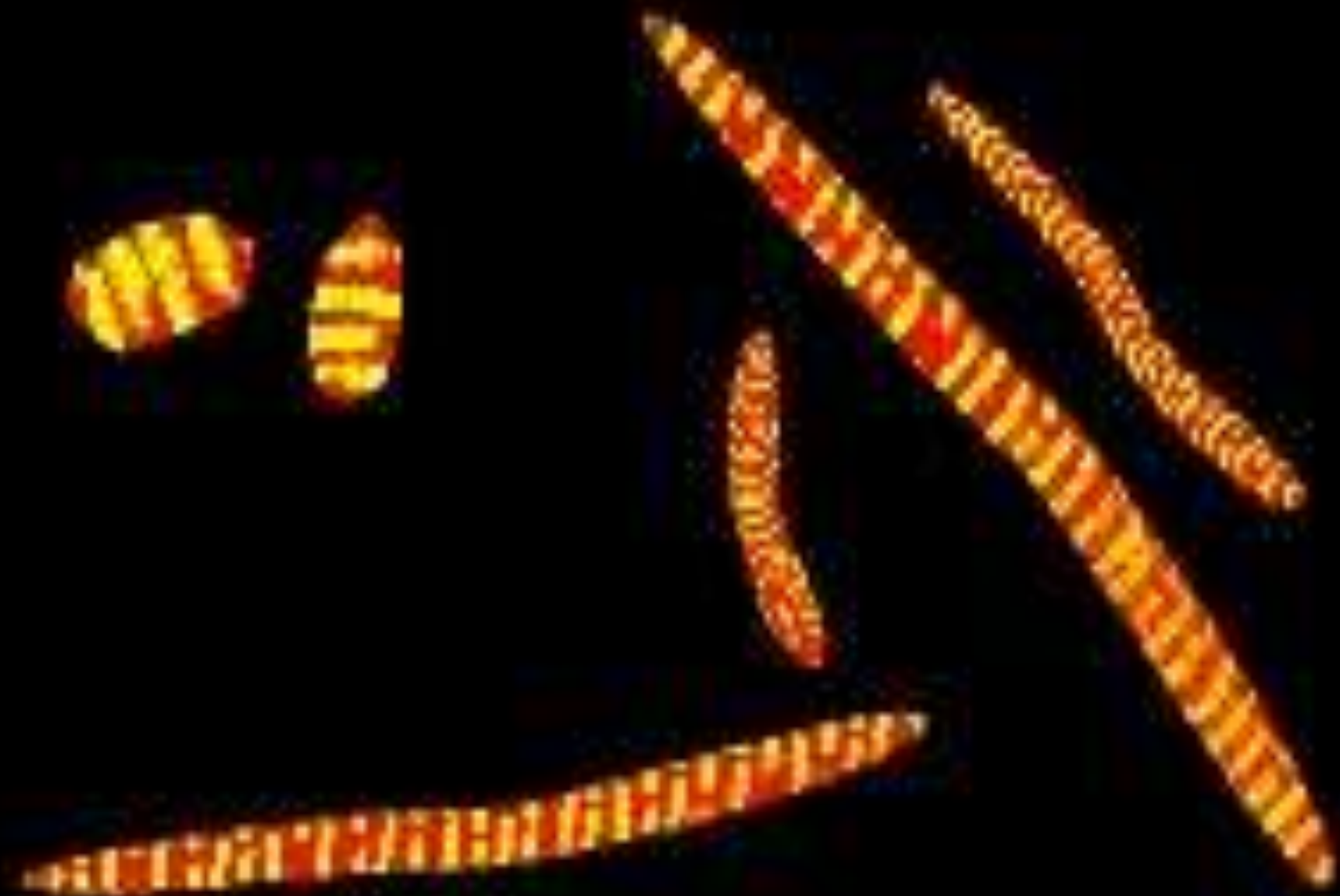
nucleus

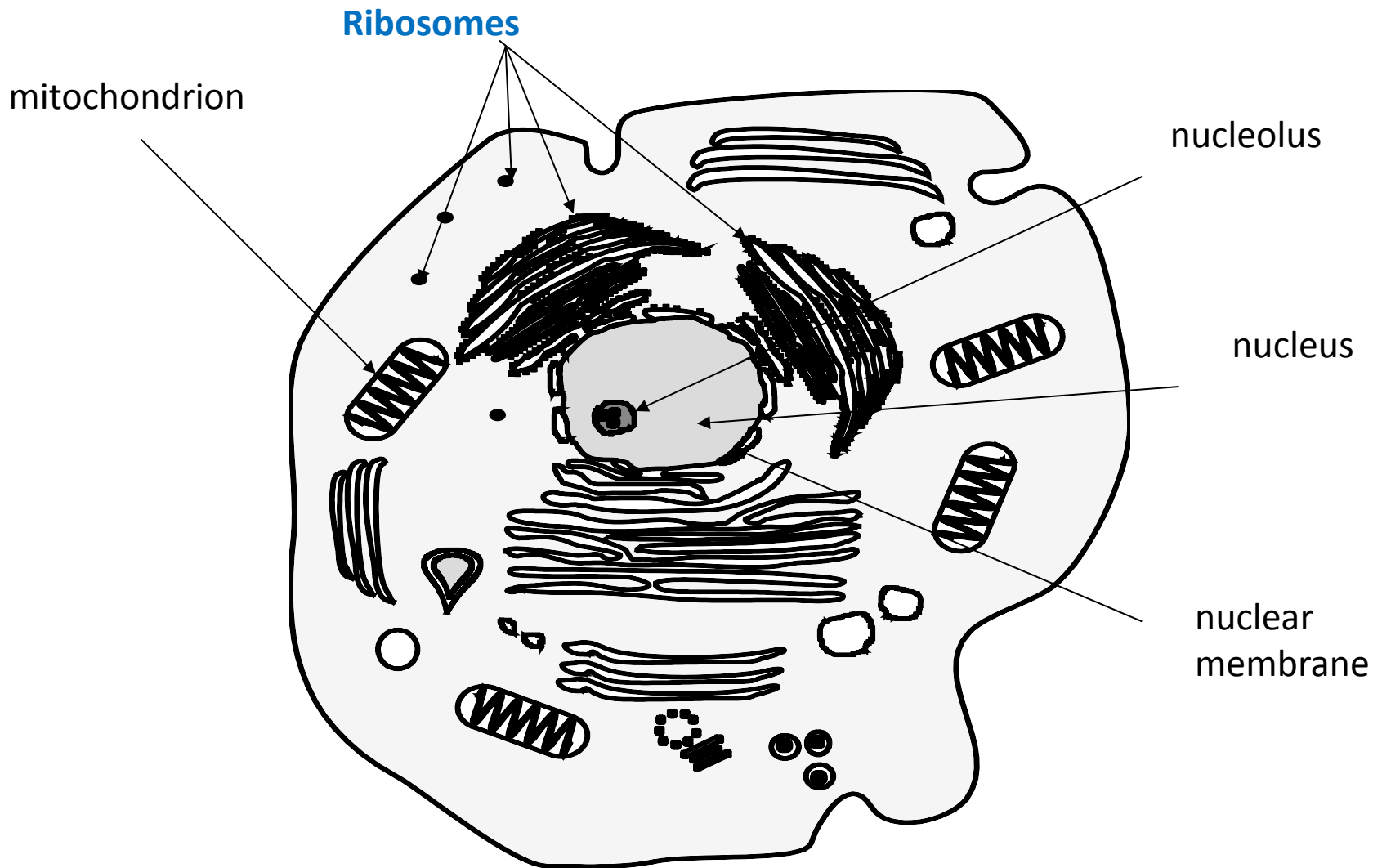
nuclear
membrane

Where aerobic respiration
takes place – energy is
produced here

STRUCTURE OF A MITOCHONDRION







An electron micrograph showing a dense field of ribosomes. The ribosomes appear as small, dark, roughly spherical particles scattered across a lighter, granular background. The overall appearance is that of a highly concentrated population of these cellular structures.

Ribosomes

Ribosomes

- They produce proteins.
- Here is a list of all the things composed of protein:
 1. **Hormones** (Oestrogen, Progesterone, Testosterone, ADH, Growth hormone...)
 2. **Cell Membranes**- important in making new cells and repairing damaged cells
 3. **Enzymes** - control all chemical reactions
 4. **Antibodies** - to fight infection
 5. **Hemoglobin** in red blood cells...

Activity 1

- Page 4 pupil booklet