

Lesson 5: Cells (animal and plant cells)

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Magnification

To calculate the magnification of something being viewed:

$$\begin{array}{ccccc} \text{Magnification} & \text{of} & & \text{Magnification} & \text{of} \\ \text{eyepiece lens} & & \times & \text{objective lens} & \end{array}$$

$$\begin{aligned} \text{e.g. Magnification} &= \text{Mag. of objective lens} \times \text{Mag. of eyepiece lens} \\ &= 100 \times 20 \\ &= 2000 \end{aligned}$$

$$\text{Total magnification} = 2000 \times (\text{Real size})$$

Cells

All cells contain certain things which make them cells:–

Nucleus

This contains the chromosomes (DNA) which control all the chemical activities of the cell.

Cell membrane

A very thin layer of protein and lipids (fats and oils) around the cell, which controls the movement in and out of the cell. It forms the outer boundary of the cytoplasm.

Cytoplasm

The part of the cell outside the nucleus. A jelly-like substance that is colourless and fills the cell.