

Light Microscope - how it works.

Electron Microscope – how it works.

Comparison of Light and Electron Microscopes

	light microscope	electron microscope
illumination and source	light from lamp	electrons from hot wire
focusing	glass lenses	electromagnets
detection	eye or film	phosphor screen or film
magnification	1 500 x	500 000 x
resolution	200 nm	1 nm
specimen	living or dead	dead
staining	coloured dyes	heavy metals
cost	cheap to expensive	very expensive

Explain the advantages and limitations of using BOTH the light microscope and the electron microscope

LIGHT MICROSCOPE

ELECTRON MICROSCOPE

Advantages

Advantages

Limitations

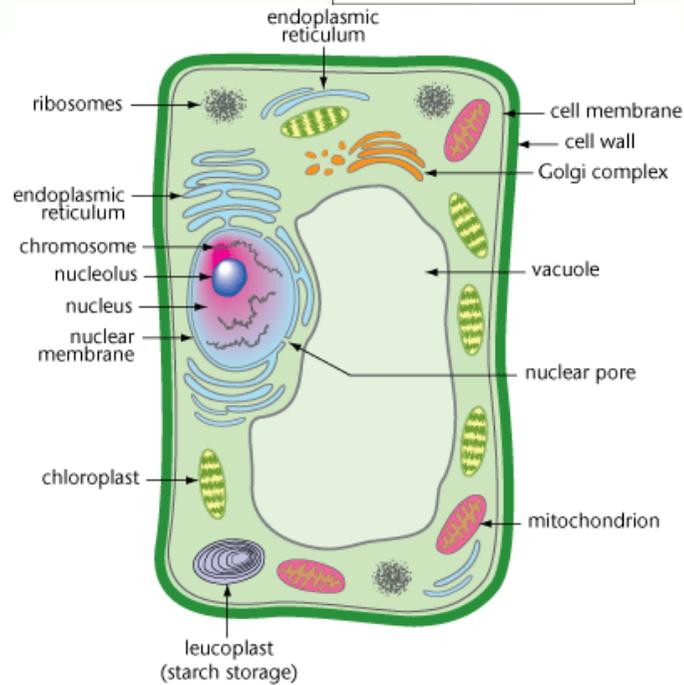
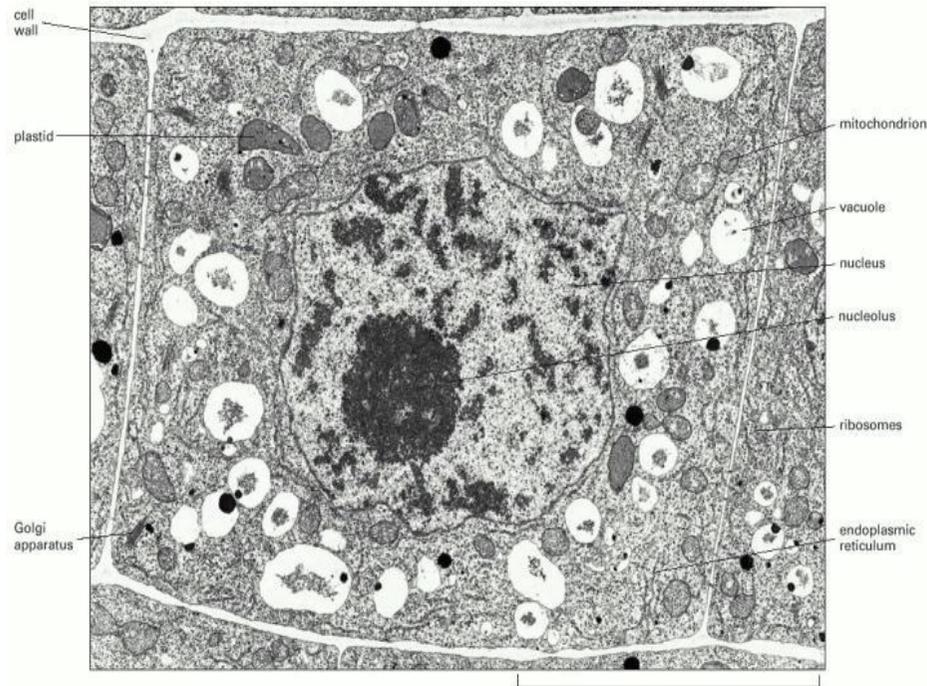
Limitations

Describe the differences in the way that the two types of ELECTON MICROSCOPE work

Scanning Electron Microscope

Transmission Electron Microscope

PLANT CELL



ANIMAL CELL

