Microscope

A microscope is an instrument used to see very small objects

- **Cell**
- **Atoms**
- **bacteria**

Anything which we cannot see from our naked eyes so we will use a microscope to see

There are two types of microscopes

- **Light microscope**
- **electron microscope**
- **Light Microscope**
- **It's magnification and resolution**
- **Light microscope has a resolution of 0.25 - 3 micrometre**
- **Electron microscope has a resolution of 0.0001 micrometer**
- **light microscope has the magnification of 500x - 1500 x**
- **Electron microscope has the magnification of 100,000x**

Which Microscope is most efficient

Electron microscope

- Magnification is equals to image size divided by magnification
- Real size is equals to in which size divided by magnification

Magnification=Imagesize/ Magnification
Real size = Image size / Magnification

Worked example
Cheeks is viewed under microscope with the magnification of 40s the image of the cell is 2.4 mm calculate its real width
Real size= 0.06mm

Parts of light microscope
Eyepiece Lens to look through to 10x to 15x
Nose piece, Holds objective and it rotates
Objective lens , Is basically 4 x 10 x and 40 x
Stage, Platform for the slide
Diaphragm, it controls the light
Coarse focus, Rough focusing
Fine focus, sharper focusing
Base, its supports

Slide preparation

- At drop of water to the slide
- peel onion epidermis
- then place that onion on water drop
- then add Iodine
- then lower coverslips slowly
- then you have to remove the extra water with filter paper
- place the slide on the stage for observation

Observation of this slide

- here we will see that what we will observe
- slide on stage and clip it
- then start with lower power objective
- then use coarse focus
- then use fine focus
- then switch to high power