

Mandatory experiment 3.1

To prepare a slide from plant tissue and sketch the cells under magnification

Apparatus required: onion; cutting board; sharp knife; forceps; glass slide; cover slip; microscope; mounted needle; filter paper or tissue; droppers; water and iodine stain

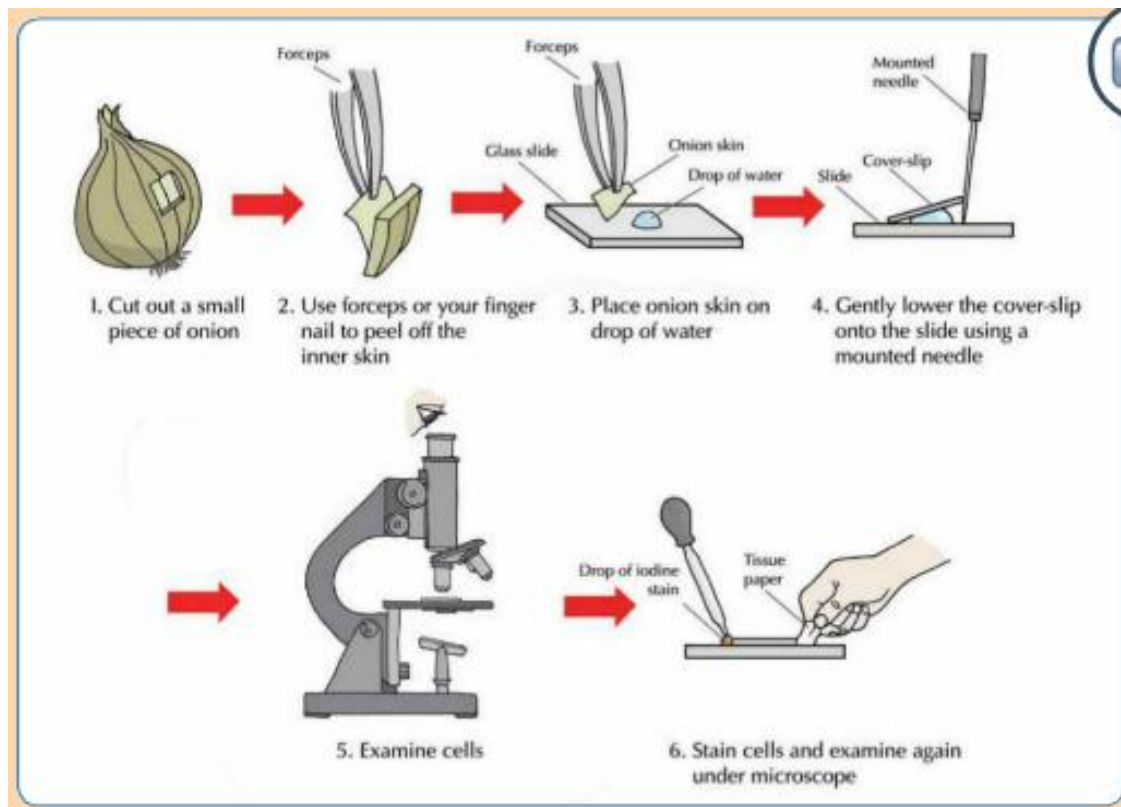


Method

1. Use the forceps to take a small piece of the inner skin of an onion, Fig. 3.6(2).

The main points to remember when using a microscope are:

- Turn on the light source.
- Place the slide on the stage.
- Always use the low power objective lens first.
- Use the coarse focus wheel first and then the fine focus wheel.



2. Place a drop of water onto the centre of a clean glass slide. Place your piece of onion skin into the drop of water on the slide, *Fig. 3.6(3)*.
3. Carefully lower the cover slip over the specimen, as shown in *Fig. 3.6(4)*. The cover slip protects the microscope lens from damage.
4. Put the slide onto the microscope stage, under the clips, *Fig. 3.6(5)*.
5. View the slide as described above.
6. Draw and label a diagram of a few of the cells under low power and one cell under high power.

To view the same cells with a stain

1. Remove the slide from the microscope stage.
2. Place one drop of **iodine stain** to the right of the cover slip.
3. Use a piece of tissue paper to draw the

stain under the cover slip as shown in *Fig. 3.6(6)*.

4. The iodine will stain the cytoplasm a yellow/brown colour and the nucleus an orange/brown colour.
5. Use the microscope to examine the cells under the low and high power magnifications.
6. Draw a labelled diagram of one cell at each magnification.