SHAPE OF CELLS

Lab: 3

Tissue from an onion is a good first exercise in using the microscope and viewing plant cells. The cells are easily visible under a microscope and the preparation of a thin section is straight forward. An onion is made of layers, each separated by a thin skin or membrane. In this exercise you will make a wet mount on a microscope slide and look at the cells of the onion membrane magnified by the high power, compound microscope.

Method

1. First add a few drops of water or solution on the microscope slide to avoid dryness and wilting
2. Take a small piece of onion and using forceps.
3. Place the membrane flat on the surface of the slide.
4. Add a drop of Iodine solution to the onion skin.
5. Using a pin, lower the thin glass cover slip or cover glass onto the slide. Make sure there are no air bubbles
6. Make sure the lowest power objective lens is in line with the optical tube, and the microscope light is turned on. Then place the prepared slide onto the stage of the microscope.
7. Looking from the side (NOT through the eyepiece), lower the tube using the coarse focus knob until the end of the objective lens is just above the cover glass. Do this carefully so as not to crack the cover glass (and possibly damage the objective lens).
8. Now look through the eyepiece and turn Only the smaller, fine focusing knob to move the optical tube upwards until an image comes into focus. The cells should look something like lizard skin.

9. Swap the objective lens for a higher powered one so that you can see the cells at greater magnification. You should be able to make out a nucleus in each cell.
10. Be very careful; these dyes can stain your skin and clothes .Could be dangerous if it is on you.