

COMPARING PLANT AND ANIMAL CELLS

PRE-LAB

Complete assignment as teacher instructs.

BACKGROUND

There are two kinds of cells; prokaryotic and eukaryotic. Prokaryotic cells, such as bacteria and archaea, are small, relatively simple cells that do not have a nucleus. All other forms of life are composed of one or more larger and more complex eukaryotic cells, which are distinguished by the presence of a true nucleus. The plant and animal cells to be observed are eukaryotic.

SAFETY

1. Microscope slides are made of glass and will break.
2. Use proper microscope technique.
3. Avoid getting stain on clothing and skin.

MATERIALS

microscope slides
cover slips
forceps
green plant cell source

dropper bottle filled with water
dropper bottle of methylene blue or iodine
flat toothpicks
beaker of disinfectant (10% bleach) solution

PROCEDURE

Part A- Examining Plant Cell

Preparing Plant Cell Wet Mount

1. Place one drop of water on a clean slide.
2. Using the forceps, remove the thin membrane of the plant surface layer and place on the drop of water. Make sure that the membrane is flat.
3. Carefully place a coverslip over the drop of water and plant membrane. Wick excess water with a piece of paper towel placed at the edge of the cover slip. (Put a very small amount of pressure on the cover slip to remove air bubbles).

Observing Plant Cell Wet Mount

1. Using the 4X scanning objective, bring the plant tissue into focus; switch to the 10X low power objective to locate and focus the specimen. Sketch your observations in the space provided on the student data sheet
2. Switch to the 40X high dry objective; sketch observations.
3. In the box provided, compare the 10x and 40x sketches. Identify and label any structures observed.
4. In the table, list the structures observed and provide evidence for the iden

