

Science department.
Lab practice 1º ESO.

USE OF MICROSCOPE. OBSERVING ANIMAL AND PLANT CELLS.

BASIC FACTS

The discovery of the cell is closely linked to the invention of the microscope. In this experiment you will learn how to use an optical microscope.

You will use it to observe eukaryotic animal and plant cells, and to try to identify some differences between them.

MATERIAL

- Optical microscope.
- Biological samples.
- Textbook.
- Classroom workbook.

PROCEDURE

1. Identify the parts in the microscope in front of you, according to the picture on the screen.
2. Place one of the samples on the microscope stage and position it with the stage clips. Start observation with the low magnification objective (4X), then raise the stage as much as you can.
3. Look at the sample through the ocular lens and focus it using the coarse adjustment focus knob (moving the stage away from the objective lens).
4. Turn the revolver to observe the sample through greater magnification, always going from smaller to larger. Now you must use the fine adjustment focus knob.

Repeat this procedure for other samples.

ANSWER THE QUESTIONS

1. Name the parts of the microscope in the picture on the next page.
2. Draw a simple picture of the cells you have observed (animal cell and plant cell). Name the main parts you have observed.
3. What type of cells are these, prokaryotic or eukaryotic ones? How do you know?

4. Magnification power:
- a) What microscope magnification did you use when you looked at the samples with the lens that has the smallest magnifying power?
 - b) What about when you used the lens with the largest magnifying power?
 - c) Calculate the magnification at which you observe the sample if you use a 10X ocular lens and a 20X objective lens?

Microscope parts:

