



**Ministry of Higher Education and Scientific
Research
AL-Mustaqbal University College of Science
Department of Biochemistry**



biology

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By
Hawraa aead ali



((Types of microscopes and Parts of the Microscope))

MICROSCOPES

.A MICROSCOPE IS A DEVICE FOR MAGNIFYING SMALL OBJECTS THAT CANNOT BE SEEN WITH THE NAKED EYE OR FOR SHOWING FINE DETAILS OF OBJECTS IN ORDER TO DISCOVER THEIR COMPOSITION AND STUDY THEM. THE SCIENCE CONCERNED WITH EXPLORING SMALL OBJECTS OR FINE DETAILS OF OBJECTS USING MICROSCOPIC DEVICES IS CALLED “MICROSCOPY.”

.IT IS ONE OF THE MOST WIDELY USED TOOLS IN BIOLOGICAL RESEARCH, ALLOWING SCIENTISTS TO STUDY THE STRUCTURES AND FUNCTIONS OF CELLS, TISSUES, AND OTHER MICROSCOPIC ENTITIES.

Types of the Microscope:

1-Light Microscope

2-Bright field Microscope

3-Dark field the Microscope

4-Ultraviolet Microscope

5-Fluorescent Microscope

6-Phase contrast Microscope

7-Electron Microscope

Structural parts of a microscope

There are three structural parts of the microscope i.e. head, arm, and base.

1. **Head** – The head is a cylindrical metallic tube that holds the eyepiece lens at one end and connects to the nose piece at other end. It is also called a body tube or eyepiece tube.
2. **Arm** – This is the part connecting the base to the head and the eyepiece tube to the base of the microscope. It supports the head of the microscope and is also used when carrying the microscope. Some high-quality microscopes have an articulated arm with more than one joint, allowing more movement of the microscopic head for better viewing.
3. **Base** – The base is the lowermost part of the microscope that supports the entire microscope structure. It provides stability for the microscope. Illuminators, light switches, and electrical wiring systems are fitted in the base.

Optical parts of a microscope and their functions

The optical parts of the microscope are used to view, magnify, and produce an image from a specimen placed on a slide. These parts include:

- **Eyepiece**
- **Eyepiece tube**
- **Diopter Adjustment**
- **Nose piece**
- **Objective lenses**
- **Stage**
- **Microscopic illuminator**
- **Condenser Diaphragm**
- **The rack stop**
- **Light Switch**
- **Brightness Adjustment**

Microscope Parts

