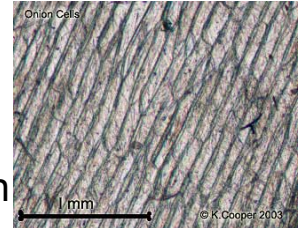
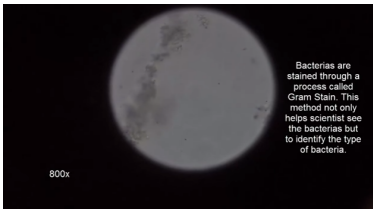
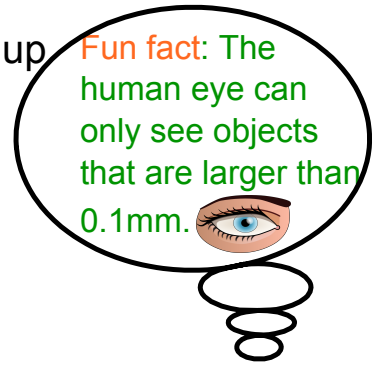




## Microscope and Cells



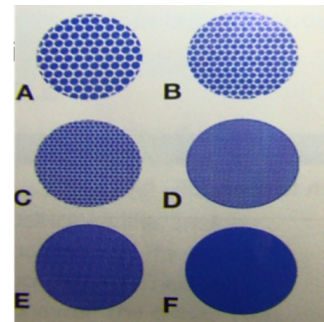
**Magnifying** an object makes it appear larger. A dutch linen merchant named Anton van Leeuwenhoek had a hobby of making magnifying lenses. He made instruments called **microscopes**, which magnified up to 300 times (300x). He began writing about them around 1674. Both light and electron microscopes are used extensively today by scientist. This has changed the way we look at nature, especially the cell. This is something that can not be seen by the naked eye, but is very clear under a microscope.



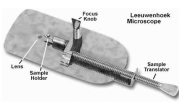
Part under a Microscope [40x 100x 400x 800x]  
Bacteria SFENI



Microscope Live Pond Life



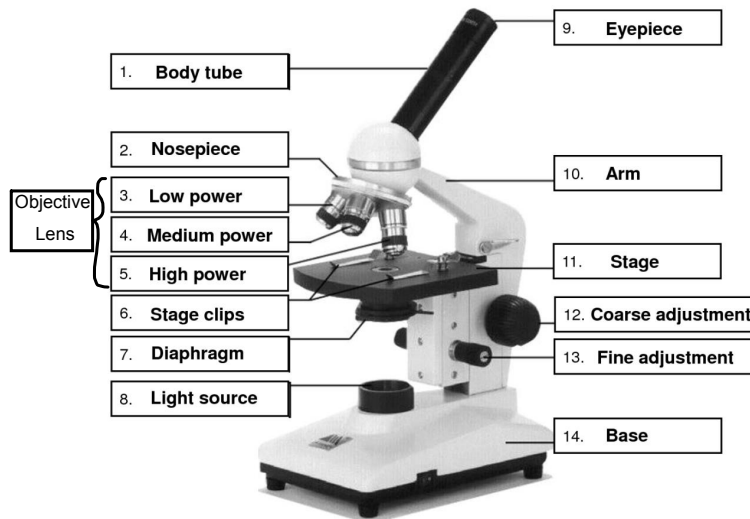
All circles are made of separate but the last ones look solid since the dots are not more than 0.1mm apart.



Electron Microscope



Compound Microscope



**Eyepiece** (or ocular lens) - The part you look through. Magnifies objects 10x.

**Body tube** - Holds the eyepiece and objective lenses at proper distance apart

**Nose Piece** - Revolves and holds objective lenses. Turn to change lenses

**Objective Lenses**- High 100x, Medium 40x, Low 10x marked on lens. Magnify the object.

**Stage Clips** - Metal clips to hold slides in position

**Stage** - Supports the microscope slide. A hole in the center of the stage allows the light from the light source to pass through the slide.

**Diaphragm** - Use this to control the amount of light reaching the object being viewed.

**Light Source** - May be a mirror or light bulb but it shines on the boject making it easier to see details.

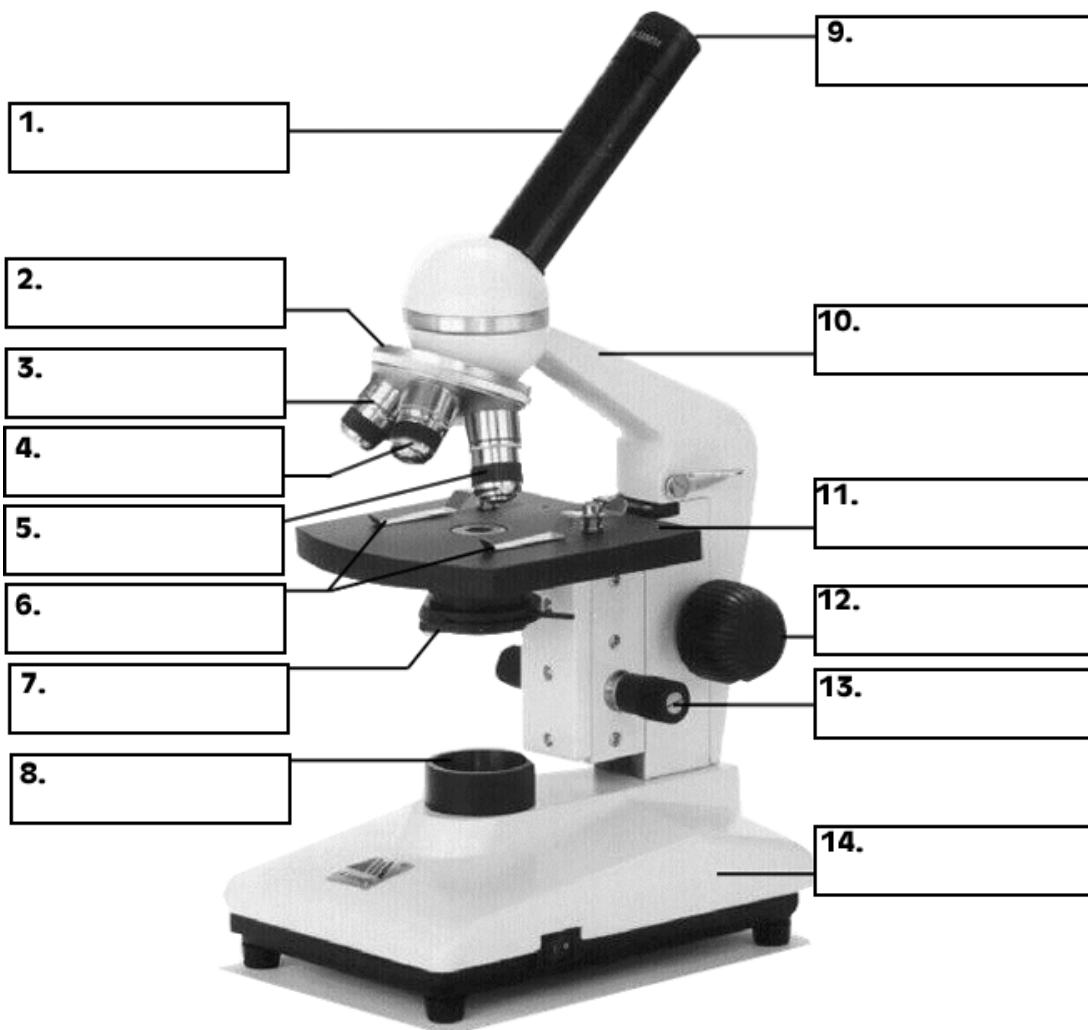
**Arm** - Connects the base and tube. Used to carry microscope.

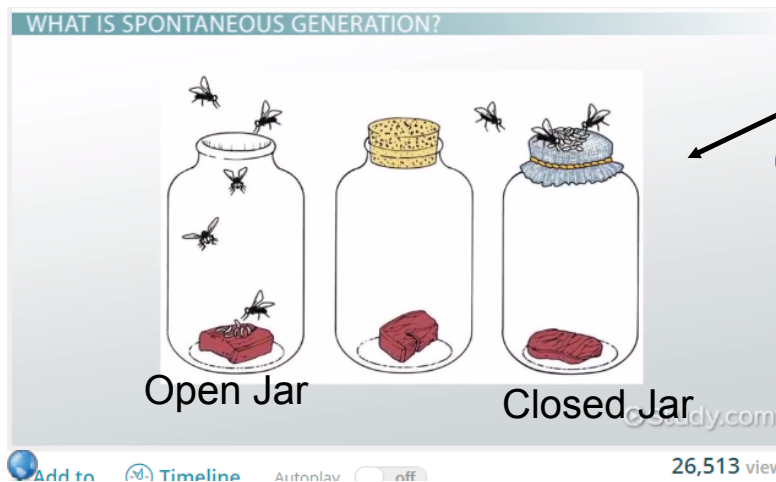
**Course-adjustment knob** (Big) - Moves the tube or stage up or down to bring the object into focus. Use it only with the low-power objective lens.

**Fine-adjustment knob** (Small) - Use with medium- and high-powered magnification to bring object into sharper focus.

**Base** - Bottom of microscope.Used for carrying.

### Compound Microscope





Francesco Redi's Experiment

**Spontaneous Generation**- The belief that living things developed from non-living material. Proven wrong after using the microscope.

Ex) Maggots appeared out of nowhere on dead decaying meat.