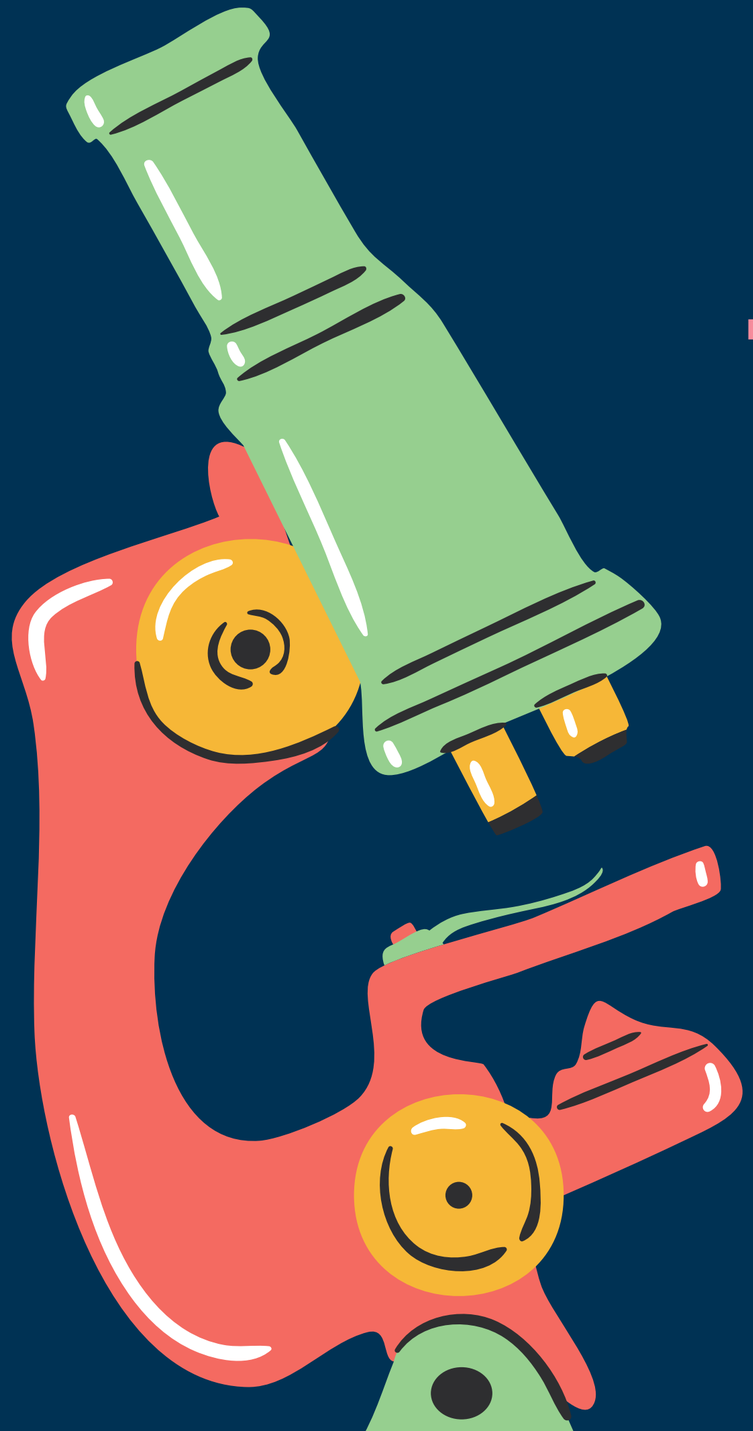
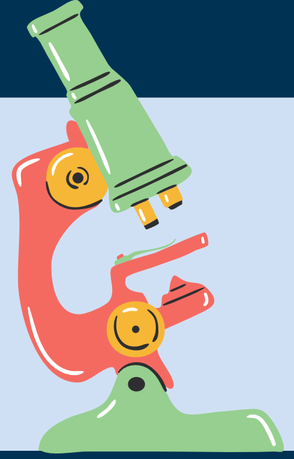


What is Microscope?

- The tool for observing tiny objects, including cells, is a microscope.
- The microscope has at least one lens that increases the picture of an item.
- By bending light in the direction of the eye, this lens increases the size of an item.

History of Microscope.

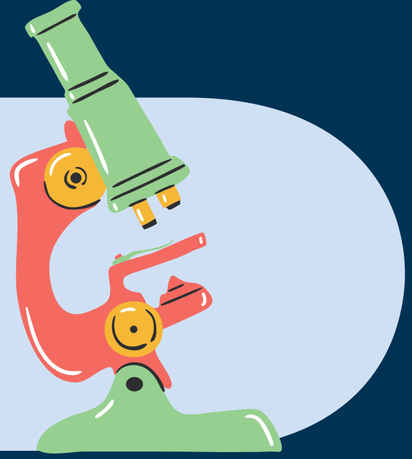
The history of the microscope is a fascinating journey covering centuries and involves the efforts of many experts. Important turning points in its evolution include:



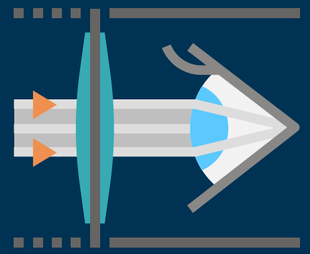
Early Optical Experiments (Antiquity - 16th Century):

- The idea of using lenses to magnify objects has been around since antiquity. The Greeks became aware of the distorting effects of water-filled spheres about 424 BCE.
- The invention of eyeglasses in the thirteenth century in Italy gave rise to a fundamental knowledge of lenses and magnification.

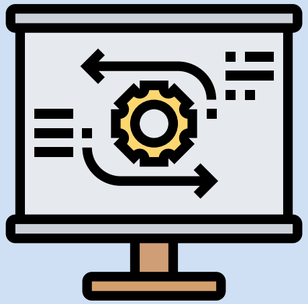
Creation of the Compound Microscope (Late 16th Century) :



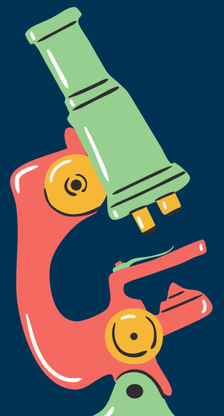
- The compound microscope was invented circa 1590 by Dutch spectacle manufacturers Zacharias Janssen and his father Hans Janssen. It was made up of two convex lenses that could magnify things when put at a set distance apart.



Improvements by Galileo and Hooke (17th Century):

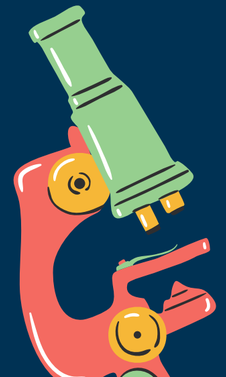


- The legendary Italian scientist Galileo Galilei made major contributions to the creation of the microscope. He upgraded the design and was able to obtain greater magnifications.
- In 1665, English scientist Robert Hooke used a compound microscope to perform extensive investigations of cork, coining the name "cell" to characterise the microscopic compartments he observed.

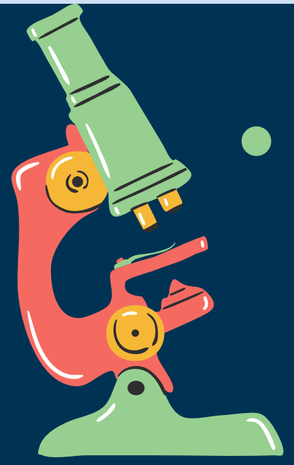


Leeuwenhoek's Single-Lens Microscope (17th Century):

- Dutch scientist Antonie van Leeuwenhoek is often regarded as the founding father of microbiology. He built single-lens microscopes with wonderful precision and examined a wide range of microorganisms for the first time.

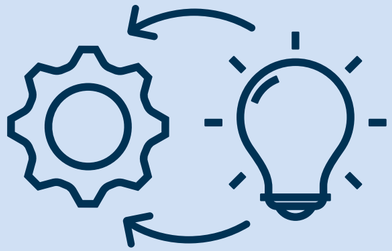


Development of the Compound Microscope (18th Century):



- Improvements in lens polishing and quality of vision led to the creation of increasingly advanced compound microscopes in the 18th century. Carl Linnaeus and others helped to enhance microscope technology.

Introduction of the Binocular Microscope (19th Century):



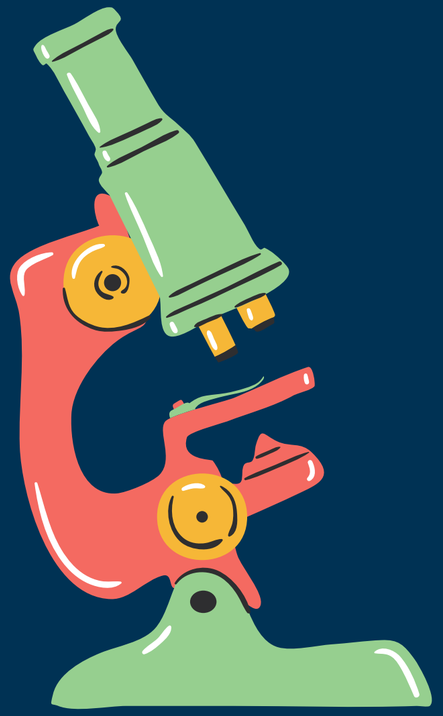
- The invention of binocular microscopes, which allowed for easier and three-dimensional viewing, in the 19th century witnessed significant advances in microscope design.

Invention of the Electron Microscope (20th Century):

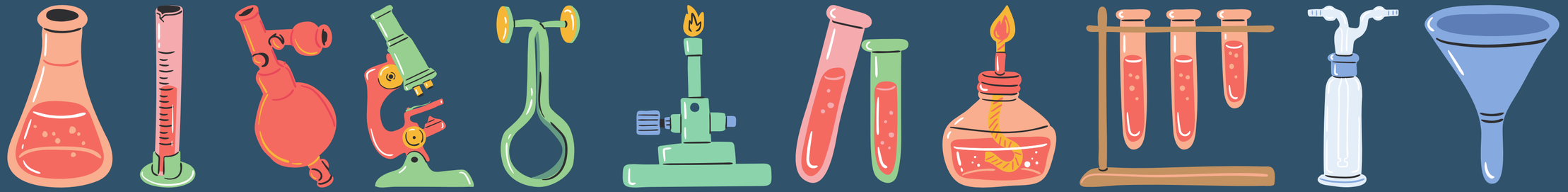
- The first electron microscope was created in 1931 by Ernst Ruska and Max Knoll. It recruited an electron beam rather than light for imaging. Compared to optical microscopes, this made significantly better magnification and resolution possible.

Advancements in Modern Microscopy (20th Century - Present):

- Microscopy technology continued to progress throughout the second half of the 20th century and beyond with the introduction of fluorescence microscopy, confocal microscopy, and super-resolution microscopy, which allowed researchers to examine biological specimens in more detail.



History continue...



Microscopes have become major instruments in a variety of scientific areas, ranging from medical research and biology to the science of materials and much more.