first practical microscopes, thus leading to his biological discoveries in which he became famous for.

- Leeuwenhoek was the first person to see and describe bacteria (1674), yeast plants, the life in a drop of water, and the circulation of blood corpuscles in capillaries.
- He used his lenses to make pioneer studies on extraordinary variety of things (both living and nonliving), and reported his findings.

- Matthias Schleiden (1838) found out that all plants are made of cells, thus he communicated his findings to Theodor Schwann who had found similar structures in other cells.
  - Other researchers confirmed the similarity, as explained in his book, where he made the conclusion "All living things are composed of cells and cell products." Thus this became the classical cell theory (1839).
  - Schwann stated that the different parts of the plant organism are composed of cells.
  - Schleiden and Schwann became the first to formulate what was then an informal belief as a principle of biology equal in importance to the atomic theory of chemistry.
  - Schwann also recognized the importance of the cell nucleus, tthus sensed its connection with the [illegible].
- Most biologists believed that life arose spontaneously from inanimate matter, but such details of the events happened remain unknown, thus the time scale was long. However, Rudolf Virchow (1855), a famous German pathologist famously wrote "omnis cellula e cellula" — all cells come from other cells which means spontaneous generation of living things from inanimate matter does not occur over a short period such as lifetime.
  - Pre-existing cells became the foundation of division, even if the process was not fully understood.