

18th century : Darwin

Lesson N°06 : Eighteenth century (18th) : Darwin

I. Characteristics of the 18th century [24]

The 18th century was the Age of Light, a period of the modern age characterized by great intellectual and cultural development in Europe and the United States.

It was the source of many discoveries, inventions and revolutions. It was a fundamental period for the study and understanding of the living world. Scientists and intellectuals focused on botany, zoology, exotic plants, invertebrates (Jean-Baptiste de Lamarck) and ornithology.

A second major change in the Light movement compared to the previous century was the publication of the Encyclopedists. In **1751**, the philosopher Denis Diderot and the mathematician d'**Alembert** published the **Encyclopédie**, des arts et des métiers, which took stock of the state of knowledge at the time. The Encyclopédie thus became a hymn to scientific progress.

II. Charles Darwin in 1809 to 1882 : [25]

- ❖ The English naturalist Charles Robert Darwin was one of the most eminent biologists of all time.
- ❖ He established the notion of biological evolution, revealing one of its essential mechanisms, natural selection; his works, notably *The Origin of Species*, marked a new era in human thought.

The **theory of evolution** suggests that all living species are in perpetual transformation, evolving morphologically and genetically over time and generations. This concept was introduced by Charles Darwin in his book *The Origin of Species*, published on November 24, 1859. Since then, it has revolutionized biology, providing the key to explaining instability and variation in living organisms [26].

According to the British naturalist's theory, evolution can lead, over varying periods of time, to the appearance of new species and the disappearance of others. This is achieved through various phenomena, including natural selection. **Natural selection** refers to the mechanism by which, within a given species, the individuals best adapted to their environment reproduce more rapidly than others [26].

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III. Examples of 18th-century savants

Theories	savants	Years
Evolution	<ul style="list-style-type: none">• Jean-Baptiste-Pierre-Antoine de Monet et chevalier de Lamarck (transformisme)• Georges Cuvier (fixisme)• Charles Darwin (natural selection)	<ul style="list-style-type: none">• 1744-1829• 1769-1832• 1809-1882
Cellular	Mathias-Jacob Schleiden for the plant kingdom Théodore Schwann for the animal kingdom	1804-1881 1810-1882
Genetics	Johann Gregor Mendel	1822-1884
Experimental physiology	François Magendie Claude Bernard	1783-1855 1813-1878
Microbiology	Louis Pasteur et Koch	1822-1895
Biochemistry	Justus Von Liebig	1803-1873