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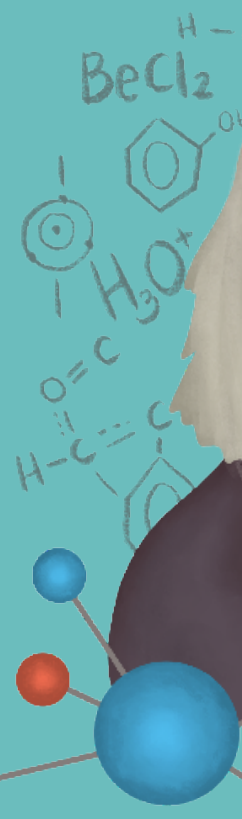


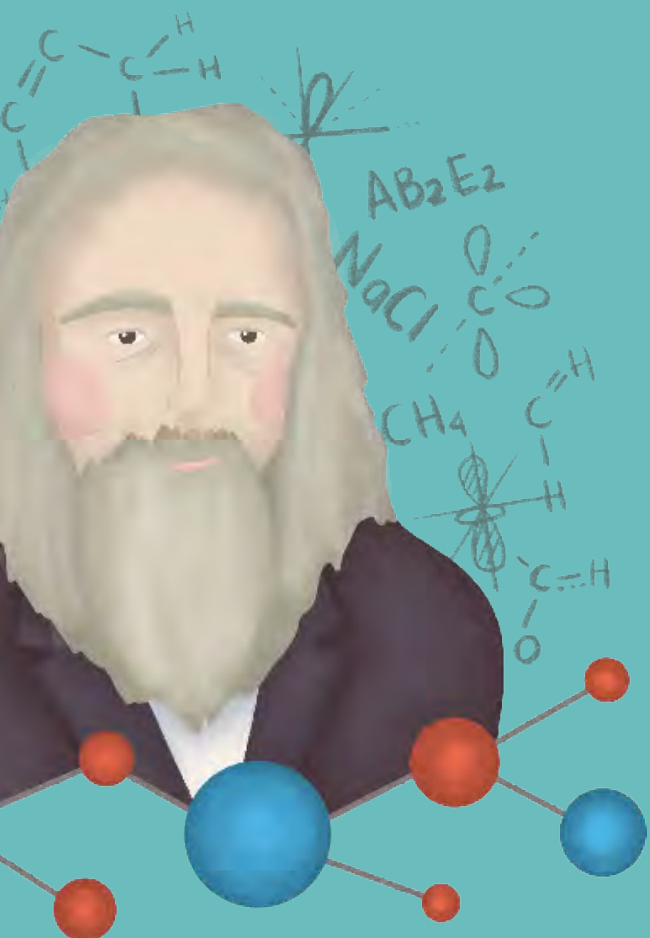
# Twelve ideas you should know about Dmitri Mendeléevev

*"What science sows will be harvested by the people"*  
Dmitri Mendeléevev

The father of the periodic table of elements, which turned 150 in 2019, was a Russian scientist considered one of the greatest masters of his time, because of the way he revolutionized the teaching of modern chemistry.

- 1 Dmitri Mendeléevev was born on February 8, 1834 in Tobolsk, Siberia, to Ivan Pavlovich Mendeléevev and Maria Dmitrievna Kornilieva. He was the youngest of 17 children. His mother was from a family of merchants who opened the first printing press in Siberia.
- 2 His father, Ivan Pavlovich, lost his job as a teacher after becoming blind, and Maria, the mother, was forced to reopen a glass factory that her family had left behind.
- 3 At 21, Mendeléevev obtained the title of science teacher. At 26, he attended the First International Congress of Chemistry, and at 33, he was already a professor. He combined his teaching activity at the university with the consultant exercise for the Government.
- 4 He worked as a professor of chemistry at the Technological Institute of St. Petersburg in 1864, and he taught general chemistry at the University of St. Petersburg in 1867, where he remained for 23 years, until 1890. A crowd of people always attended his classes.
- 5 His discovery of the periodic table did not arise overnight; it was the result of a long and complex process. The elements could be sorted according to their properties, but the periodic pattern needed to be deciphered. And Mendeléevev did it!
- 6 The periodic table emerged in a didactic attempt to explain the chemical elements. He created 63 cards, one for each known element, and he wrote down their atomic weight as well as some other characteristics. Then, he grouped the cards as in a game of solitaire.





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He was able to verify that, by ordering the elements according to their atomic weights in an increasing way, they had similar characteristics. Later, he organized them in a table, where he left some empty boxes, since he postulated that they belonged to unknown elements from which their properties could be deduced.

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The development of increasingly refined chemical techniques revealed new elements with properties not foreseen by the Russian, such as noble gases discovered by British chemist William Ramsay in the last decade of the 19th century.

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This is how his work, *An attempt at a system of the elements based on their atomic weight and chemical affinity*, first appeared in the manual *The Principles of Chemistry* (1869) and, the following year, in the form of a scientific article.

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He was a great thinker and writer. His works include 400 books and numerous unpublished articles and manuscripts that are still preserved in the Dmitri Mendeléeve Museum-Archive at St. Petersburg State University.

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He never received the Nobel Prize, but, half a century after his death, the scientific community wanted to repair this grievance and, in 1955, a group of nuclear physicists, led by the American Glenn T. Seaborg, decided to name the radioactive element that occupies the box 101 of the periodic table *Mendelevium* in his honor.

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Mendeléeve, who died on February 2, 1907, is considered a genius, not only because of the ingenuity he showed to apply all that is known and predict what is not known about chemical elements, but also because of the work done throughout his life in various fields of science, agriculture, livestock, industry and oil.

These 12 facts about the life of **Dmitri Mendeléeve** resulted from an exhaustive search in different sources of public domain. The text was prepared, reviewed and approved by the Editorial Committee of **Ingenio** magazine.

