

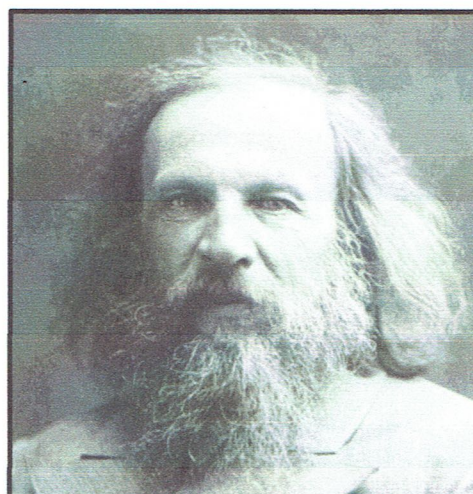
DMITRI MENDELEEV

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(1) One of the most iconic images of science is the periodic table, and I, Dmitri Mendeleev am known as the Father of the Periodic Table. At the age of 35, after years of obsessing over the elements, I proposed the periodic table in 1869. My periodic table was so accurate that it predicted the existence and properties of elements that had yet to be discovered. Due to this periodic table, science was changed forever.

(2) No one would have thought that I would have become a famous scientist. I was born on February 8th in 1834 in Siberia, Russia. I was one of over twelve siblings (I stopped counting after the twelfth!). My father became blind when I was a child and was unable to support the family. This forced my mom to open a glass factory to support all of us. Bad luck struck again when my dad died when I was 13 and my mom's factory burned down two years later. When I turned 16, my mother was determined that I would get a good education. She believed in my potential and took me across Russia, from Siberia to Moscow to see if the university there would take me as a student. They refused, so my mother took me further until we reached the university in St. Petersburg where my father had studied. They agreed to take me and thus my university education began. I began studying the sciences and training to become a teacher.

(3) While studying, I got sick with tuberculosis and was bedridden. This didn't stop me from studying as I just studied in bed! My hard work paid off as I graduated at the top of my class at the age of 20, even though I was unpopular with many of my classmates and teachers due to my violent bursts of temper. Two years later, in 1856, I got my Master's degree in chemistry. I won an award to study abroad in Germany at the University of Heidelberg. This is where my eyes were really opened to the exploration of science. I became convinced that there was a better way to conduct science and to standardize chemistry. The study of chemistry, up until then, was just a loose mishmash of unconnected findings. I became more and more passionate about chemistry while studying in Germany. They were so advanced in their scientific thinking and their techniques! This exposure made me painfully aware that Russia was falling behind in its scientific training and education and I was determine to fix this.



Dmitri Mendeleev
Chemist, Inventor (1834-1907)

(4) When I was 27, I embarked on a crazy project to make a Russian language textbook called *Organic Chemistry*. It was 500 pages long and I wrote it in 61 days. This was the first of several science textbooks I wrote to help elevate science education in Russia. I continued to teach in various academic positions and was considered a very engaging and charismatic lecturer. In 1867, at the age of 33, I became the Chair of Chemistry at the University of St. Petersburg which was a very prestigious position. Two years later I wrote the internationally acclaimed textbook, *The Principles of Chemistry*.

(5) Not surprisingly, I had been fascinated with the elements for quite some time. I thought the elements' atomic masses were the key to connecting them in some sort of pattern. In an attempt to figure out this secret pattern, I made description cards of each of the 65 known elements at that time. On each card, I wrote the element's atomic mass as well as the other important physical and chemical properties of that element. When all of the cards were complete, I moved them around my desk trying to decipher a pattern. I kept trying for hours without success until I became exhausted and fell asleep at my desk. While asleep, I dreamt of the table of elements and saw the cards floating in the air and then landing into the correct place. I woke up with the periodic table clearly visualized in my mind. I published my findings two weeks later.

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(6) It's a good thing I presented my findings when I did because other chemists were on to the same idea. Lothar Meyer was a fellow chemist who had proposed his own periodic table in 1864, and it was similar to mine, but he delayed in publishing his findings until a year after I published mine. Too late and too bad for him! John Newlands published a periodic table 4 years before I did, and it was a good one too, however, people ignored his findings as the scientific community wasn't ready to accept his ideas. As with many revolutionary ideas through the ages, timing determines whether or not an idea will be embraced. Luckily for me, my ideas came at the right time.

(7) My periodic table was by no means complete. I arranged the element cards on the table with gaps left for undiscovered elements,

because only with these gaps could the table form a pattern. I was convinced that these elements would be discovered in the future and I predicted the masses and the properties of these elements. Four of these are germanium, scandium, gallium and technetium. As each element was discovered, the credibility of my periodic table grew. These days, the periodic table you study is not the exact one I created. It contains important differences including a better placement for hydrogen, and the inclusion of noble gases, the lanthanide series and actinide series.

(8) I died in 1907, but in 1955, element 101 was discovered by bombarding the element einsteinium with alpha particles. The discoverers named the element Mendeleevium in my honor.