

Joy jenkins

[Science](#), [Chemistry](#)



Joy Jenkins Changing of the periodic table Today, the periodic table organizes the elements in horizontal rows, or periods, by order of increasing atomic number. The elements are also organized in vertical columns, or groups, based on similar physical characteristics and chemical behavior. I believe the periodic table will continue to evolve as new elements are discovered. One of the earliest attempts to organize the elements based on their chemical and physical properties was made by German chemist Johann Dobereiner. In 1817 Dobereiner noticed that certain elements that were chemically similar could be grouped together in threes, for example, calcium, strontium, and barium; lithium, sodium, and potassium; chlorine, bromine, and iodine. In each group of three, the atomic weight of one element fell halfway between the atomic weights of the other two elements. Based on his discoveries, Dobereiner proposed the Law of Triads in 1829. His work made other scientists want to find patterns among even larger groups of elements. The next milestone in the development of the periodic table was set by the Russian chemist Dmitri Mendeleev, who is generally acknowledged as the "father" of the modern periodic table. Mendeleev wrote out the names of the elements, along with their atomic weights and other properties, on cards, which he then laid out in rows and columns much like a game of solitaire. When the elements were ordered according to atomic weight, Mendeleev, could see that certain chemical properties were repeated periodically; however, not all the elements fit this pattern neatly. Mendeleev's solution was to move certain elements to new positions, despite their accepted weight, in order to group them with other elements sharing similar properties. (Nearly half a century later, after the periodic table was revised

according to atomic number rather than atomic weight, these elements fell into place.) The first major revision of the entire periodic table was made by Henry Gwyn-Jeffries Moseley, an English physicist who began his research under Ernest Rutherford. In 1914, he showed that each atomic nucleus could be assigned a number that was equal to the number of units of positive charge associated with it. Once the periodic table was reorganized according to this atomic number instead of atomic weight, the few problems in Mendeleev's system disappeared. All in all, the periodic table will be REVISED and revised only. I do not feel a drastic change will be made because through my findings in research scientist ADDED onto whatever they felt could be perfected. As the years progressed other revisions of the table have been made, including the incorporation of the rare-earth elements (lanthanide) and the synthetic elements.