



Interactive periodic table explains the chemistry of life

The progression from summer to fall is one of the many periodic transitions in the cycle of life. The change is especially drastic for those still in school. Sunny days of unscheduled bliss are replaced with highly regimented periods of mandatory attendance and assigned seating charts. Unless you're a teacher, graduating from school means leaving summer vacation behind for a lifetime of regimentation.

Of course, just because you are out of school doesn't mean you should stop learning. The internet is full of sites that can help you expand your knowledge. One such site is inl.gov/periodic-table/. This is actually just one section of Idaho National Laboratory's website. It features an interactive periodic table of elements.



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Most people have seen the table of elements, but unless you're a scientist, you probably don't know a lot about it. The table takes all of the elements that make up those summer days of unscheduled bliss and organizes them into a seating chart of life. There is some order in the chaos of the universe, and the periodic table is one of mankind's attempts to make sense of it all.

The top of the homepage features a screen-filling title slide with a stylized version of the table in the background and animated

molecular diagrams gently rotating all around. As you scroll down, you encounter an explanation of the table and then the table itself. The table fills the screen with a colorful grid depicting all 118 known elements. A key at the top of the table explains what the letters and numbers in each element stand for and organizes them by color into related groups.

Clicking on an element opens a pop-up window with information about it. The characteristics of the element, its history, its function in the web of life, its scientific and commercial uses, and its interactions with other elements are described. The descriptions are written in plain English, but there is plenty of terminology regarding chemical reactions that will

go over a layman's head. Even if you don't understand everything in the description, you will learn the basics about each element and its place in the makeup of the universe.

Below the table is a light-hearted look at the favorite elements of some of the current and former scientists at INL. Next is a history of the development of the periodic table. Scientists had been trying to classify and organize the elements in ways that explained their behavior since the 1700s. It wasn't until 1869 that a Russian chemist named Dmitri Ivanovich Mendeleev came up with the solution still used to this day. He realized that elements had periodic patterns in their chemical properties. He organized the 63 elements known at

the time into a chart that left blank spaces for elements that had not yet been discovered, but that he predicted existed based on the characteristics of the known elements. His predictions turned out to be correct.

At the bottom of the page is a series of short, entertaining and educational videos about the periodic table. They feature heated competition among scientists, spoons dissolving in hot tea and "Harry Potter" star Daniel Radcliffe rapping all 118 elements. This site was built by scientists with a solid knowledge of chemistry, but it's designed in a way to be approachable and useful to everyone.

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