

# Periodic Table

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## What is the Periodic Table of The Elements?

**"It is a huge, efficient resource!"**

The periodic table is the most important chemistry reference there is. It arranges all the known elements in an informative array. Elements are arranged left to right and top to bottom in order of increasing [atomic number](#).. This order generally coincides with increasing [atomic mass](#)

The different rows of elements are called periods. The period number of an element signifies the highest energy level an electron in that element occupies (in the unexcited state). The number of elements in a period increases as one traverses down the periodic table because as the energy level of the atom increases, the number of energy sub-levels per energy level increases.

Using the data in the table scientists, students, and others that are familiar with the periodic table can extract information concerning individual elements. For instance, a scientist can use carbon's [atomic mass](#) mass to determine how many carbon atoms there are in a 1 kilogram block of carbon.

People also gain information from the periodic table by looking at how it is put together. By examining an element's position on the periodic table, one can infer the electron configuration. Elements that lie in the same column on the periodic table (called a "group") have identical [valance electron configurations](#) and consequently behave in a similar fashion chemically. For instance, all the group 18 elements are inert gases. The periodic table contains an enormous amount of important information. People familiar with how the table is put together can quickly determine a significant amount of information about an element, even if they have never heard of it.

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