

Periodic Table

[Science](#) >> [Chemistry for Kids](#)

The Periodic Table is a way of listing the [elements](#). Elements are listed in the table by the structure of their atoms. This includes how many protons they have as well as how many electrons they have in their outer shell. From left to right and top to bottom, the elements are listed in the order of their atomic number, which is the number of protons in each atom.

Group Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1 H																	2 He
2	3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
3	11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
4	19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
5	37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
6	55 Cs	56 Ba	57 La *	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
7	87 Fr	88 Ra	89 Ac *	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	112 Cn	113 Nh	114 Fl	115 Mc	116 Lv	117 Ts	118 Og
				* 58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu	
				* 90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr	

Periodic Table of Elements

[Click for larger view](#)

Why is it called the Periodic Table?

It is called "periodic" because elements are lined up in cycles or periods. From left to right elements are lined up in rows based on their atomic number (the number of protons in their nucleus). Some columns are skipped in order for elements with the same number of valence electrons to line up on the same columns. When they are lined up this way, elements in the columns have similar properties.

Each horizontal row in the table is a period. There are seven (or eight) total periods. The first one is short and only has two elements, hydrogen and helium. The sixth period has 32 elements. In each period the left most element has 1 electron in its outer shell and the right most element has a full shell.

Groups

Groups are the columns of the periodic table. There are 18 columns or groups and different groups have different properties.

One example of a group is the noble or inert gases. These elements all line up in the eighteenth or last column of the periodic table. They all have a full outer shell of electrons, making them very stable (they tend not to react with other elements). Another example is the alkali metals which all align on the left-most column. They are all very similar in that they have only 1 electron in their outer shell and are very reactive. You can see all the groups in the table below.

This lining-up and grouping of similar elements helps chemists when working with elements. They can understand and predict how an element might react or behave in a certain situation.

Element Abbreviations

Each element has its own name and abbreviation in the periodic table. Some of the abbreviations are easy to remember, like H for hydrogen. Some are a bit harder like Fe for iron or Au for gold. For gold the "Au" comes from the Latin word for gold "aurum".

Who invented it?

The periodic table was proposed by Russian chemist Dmitri Mendeleev in 1869. Using the table, Mendeleev was able to accurately predict the properties of many elements before they were actually discovered.

Fun facts about the Periodic Table

- Carbon is unique in that it is known to form up to 10 million different compounds. Carbon is important to the existence of life.
- Francium is the rarest element on earth. There are probably no more than a few ounces of it on earth at any given time.
- The only letter not in the periodic table is the letter J.
- The country Argentina is named after the element silver (symbol Ag) which is argentum in Latin.
- Although there is helium on Earth, it was first discovered by observing the sun.