

History of the Elements of the Periodic Table

© AUS-e-TUTE SCHOOL

Atomic Number (z)	Element Name	Element Symbol	Year Discovered	Discovered By	Derivation of Name/Symbol
1	hydrogen	H	1766	Henry Cavendish	From the Greek hydro for 'water' and genes for 'forming' as it burned in air to form water.
2	helium	He	1868	Pierre-Jules-Cesar Janssen	From the Greek helios for 'sun'. It was discovered by spectroscopy during a solar eclipse in the sun's chromosphere.
3	lithium	Li	1818	Johan August Arfvedson	From the Latin lithos for 'stone' because lithium was thought to exist only in minerals as it was first found in the mineral petalite.
4	beryllium	Be	1798	Nicholas-Louis Vauquelin	From the Greek beryllos for 'beryl' the gemstone in which it was first found.
5	boron	B	1808 (isolated)	Humphry Davy	From the Arabic buraq for 'white'. It was first isolated in an impure state by Louis-Joseph Gay-Lussac and Louis-Jacques Thenard, but it was Humphry Davy who first prepared pure boron using electrolysis.
6	carbon	C	-	known since ancient times	From the Latin carbo for 'charcoal'. In 1797, Smithson Tennant showed that diamond is pure carbon.
7	nitrogen	N	1772	Daniel Rutherford	From the Latin nitrium and Greek nitron for 'native soda' and genes for 'forming' because it is found in potassium nitrate, saltpeter or nitre or

					native soda.
8	oxygen	O	1774	Joseph Priestly	From the Greek oxys for 'acid' and genes for 'forming' since Antoine-Laurent Lavoisier originally thought that oxygen was an acid producer because when he burnt phosphorus and sulfur and dissolved them in water they produced acids.
9	fluorine	F	1886 (isolated)	Ferdinand Frederic, <u>Henri Moissan</u>	From the Latin fluere for 'flow or flux' as the mineral fluorspar was used as a flux in metallurgy because of its low melting point
10	neon	Ne	1898	<u>Sir William Ramsay</u> , Morris M. Travers	From the Greek neos for 'new'
11	sodium	Na	1807	Sir Humphry Davy	From the English soda and Latin sodanum for 'headache remedy'. The chemical symbol derives from the Latin natrium for soda.
12	magnesium	Mg	1808 (separation from mineral)	Sir Humphry Davy	From Magnesia a district in Thessalia in northeastern Greece
13	aluminium	Al	1825 (isolated)	Hans Christian Oersted	From the Latin alum and alumen for 'stringent' since the early Romans called any substance with a stringent taste alum.
14	silicon	Si	1924	<u>Jons Jacob Berzelius</u>	From the Latin silex and silicis for 'flint'. Originally it was thought to be a metal and called silicium, when this was shown to be wrong the name was changed to silicon.
15	phosphorus	P	1669	Hennig Brand	From the Greek phosphorus for 'bringing light' as white phosphorus

					oxidises spontaneously in air and glows in the dark
16	sulfur/sulphur	S	-	known since ancient times	From Latin sulfurium and the Sanskrit sulveri. Sulfur was known as brenne stone, combustible stone, from which brim-stone is derived
17	chlorine	Cl	1774	Carl Wilhelm Scheele	From the Greek chloros for 'pale green', the colour of the element.
18	argon	Ar	1894	Sir William Ramsay, Lord Raleigh	From the Greek argos for 'lazy' because it does not combine with other elements.
19	potassium	K	1807 (isolated)	Sir Humphry Davy	From the English potash as it was found in caustic potash (KOH). The chemical symbol derives from the Latin kalium via the Arabic qali for alkali
20	calcium	Ca	1808 (isolated)	Sir Humphry Davy	From the Latin calx for 'lime or limestone' in which it is found.
21	scandium	Sc	1879	Lars Fredrik Nilson	From the Latin scandia for Scandanavia where the mineral was found
22	titanium	Ti	1791	The Reverend William Gregor	From the Latin titans, mythological first sons of the earth
23	vanadium	V	1801/1830	Andres Manuel del Rio y Fernandez/Nils Gabriel Sefstrom	From the Scandanavian Freyja Vanadis, goddess of love and beauty, because of its many beautiful coloured compounds
24	chromium	Cr	1797	Louis-Nicholas Vauquelin	From the Greek chroma for 'colour' as there are many coloured compounds of chromium
25	manganese	Mn	1774 (isolated)	Johan Gottlieb Gahn	From the Latin magnes for 'magnet'

					since the mineral pyrolusite (MnO ₂) has magnetic properties
26	iron	Fe	-	known since ancient times	From the Anglo Saxon iron. The symbol is derived from the Latin ferrum for 'firmness'
27	cobalt	Co	1739	Georg Brandt	From the German kobold for 'evil spirits' who were thought to cause miners problems since the mineral contained arsenic which was detrimental to their health.
28	nickel	Ni	1751	Axel Fredrik Cronstedt	From the German nickel for 'deceptive spirit' as miners called the mineral niccolite kupfernicker (false copper) as it resembled copper ores in appearance but no copper was found in the ore.
29	copper	Cu	-	known since ancient times	From the Latin cuprum for 'Cyprus' where the Romans first obtained copper
30	zinc	Zn	-	known since ancient times	From the German zink
31	gallium	Ga	1875	Paul-Emile Lecoq de Boisbaudran	From the Latin gallia for France, or possibly from the Latin gallus for 'le coq or cock' after its French discoverer. Predicted by Mendeleev who called it eka-aluminium.
32	germanium	Ge	1886	Clemens Winkler	From the Latin germania for Germany after its German discoverer. Predicted by Mendeleev who called it eka-silicon.
33	arsenic	As	-	known since ancient times	From the Latin arsenicum and the Greek arsenikos for the yellow

arsenic ore, sounds similar to the Greek arsenikon for 'male or potent' possibly referring to its toxicity.

34	selenium	Se	1817	<u>Jons Jacob Berzelius</u>	From the Greek Selene, goddess of the moon, because the element is found with tellurium (named after Tellus, Roman goddess of the earth)
35	bromine	Br	1826	Antoine-Jerome Balard	From the Greek bromos for 'stench'
36	krypton	Kr	1898	Sir William Ramsay, Morris M. Travers	From the Greek kryptos for 'hidden'
37	rubidium	Rb	1861	Robert Bunsen, Gustav Kirchoff	From the Latin rubidus for deepest red because of the two deep red lines in its spectrum
38	strontium	Sr	1792	Thomas Charles Hope	From Strontian a town in Scotland where the mineral strontianite is found
39	yttrium	Y	1794	Johan Gadolin	From the Swedish village of Ytterby where the mineral gadolinite (ytterbite) was found
40	zirconium	Zr	1789	Martin Heinrich Klaproth	From the Arabic zargun for 'gold-like'
41	niobium	Nb	1801	Charles Hatchett	From the Greek Niobe, daughter of Tantalus, since the elements niobium and tantalum were originally thought to be identical elements
42	molybdenum	Mo	1778	Carl Wilhelm Scheele	From the Greek molybdos for 'lead' as the ancient Greeks used this term for any black mineral which left a mark
43	technetium	Tc	1937 (synthesised)	Carlo Perrier, Emilio Segre	From the Greek technetos for 'artificial'.

44	ruthenium	Ru	1844 (isolated)	Karl Karlovich Klaus	From the latin ruthenia, the old name for Russia
45	rhodium	Rh	1803	William Hyde Wollaston	From the Greek rhodon for rose because of the rose coloured solutions of its salts
46	palladium	Pd	1803	William Hyde Wollaston	From the second largest asteroid of the Solar System, Pallas, named after the goddess of wisdom and arts, Pallas Athene, as the element was discovered 1 year after the discovery of the asteroid.
47	silver	Ag	-	known since ancient times	From the Anglo-Saxon seofor and solfur. The chemical symbol derives from the Latin argentum and Sanskrit argunas for 'bright'
48	cadmium	Cd	1817	Friedrich Strohmeyer	From the Greek kadmeia for 'calamine, zinc carbonate' as it was found as an impurity with zinc carbonate in nature
49	indium	In	1863	Ferdinand Reich, Hieronymus Theodor Richter	From indigo for the indigo-blue line in the element's spectrum
50	tin	Sn	-	known since ancient times	From the Anglo-Saxon tin. The chemical symbol is derived from the Latin stannum for alloys containing lead
51	antimony	Sb	-	known since ancient times	From the Greek anti and monos for 'not alone' because it was found in many compounds. The symbol Sb comes from the original name, stibium.
52	tellurium	Te	1782	Franz Joseph Muller von	From the Latin Tellus, Roman

				Reichenstein	goddess of the earth
53	iodine	I	1811	Barnard Courtois	From the Greek ioeides for 'violet coloured' because of its violet vapours
54	xenon	Xe	1898	Sir William Ramsay, Morris M. Travers	From the Greek xenon for 'stranger'
55	cesium/caesium	Cs	1860	Robert Wilhelm Bunsen, Gustav Robert Kirchoff	From the Latin caesius for 'sky blue colour' which was the colour of the caesium line in the spectroscope.
56	barium	Ba	1808 (isolated)	Sir Humphry Davy	From the Greek barys for 'heavy' as it was found in the mineral heavy spar.
57	lanthanum	La	1839	Carl Gustaf Mosander	From the Greek lanthanein 'to escape notice' because it hid in cerium ore and was difficult to separate out
58	cerium	Ce	1803	Jons Jacob Berzelius, Wilhelm von Hisinger, Martin Heinrich Klaproth	From the planetoid Ceres which was named after the Roman goddess of agriculture.
59	praseodymium	Pr	1885	Carl F. Auer von Welsbach	From the Greek prasios for 'green' and didymos for 'twin' because of the pale green salts it forms. Carl F. Auer von Welsbach separated praseodymium and neodymium from a didymium sample.
60	neodymium	Nd	1885 (isolated from mineral)	Carl F. Auer von Welsbach	From the Greek neos for 'new' and 'didymos' for twin after Carl Auer von Welsbach separated didymium into new elements, one of which he called neodymium
61	promethium	Pm	1944 (synthesised)	Jacob A. Marinsky, Lawrence E. Glendenin, Charles D. Coryell	From Prometheus who stole fire from heaven and gave it to the human race, since it was found by

harnessing nuclear energy which is also a threat

62	samarium	Sm	1878	Marc Delafontaine	From the mineral Samarskite in which it is found and which was named after Colonel von Samarski, a Russian mine official
63	europium	Eu	1896 (separation from mineral)	Eugene-Antole Demarcay	From the continent Europe. Demarcay isolated europium in 1901
64	gadolinium	Gd	1880	Jean Charles Galissard de Marignac	From the mineral gadolinite in which it is found and which was named after Johan Gadolin
65	terbium	Tb	1843	Carl Gustaf Mosander	From the village of Ytterby in Sweden where the mineral ytterbite was first found
66	dysprosium	Dy	1886	Paul-Emile Lecoq de Boisbaudran	From the Greek dysprositos for 'hard to get at' because it is difficult to separate dysprosium from the holmium mineral in which it is found
67	holmium	Ho	1879	Per Theodor Cleve	From the Latin holmia for Stockholm, or possibly after Holmberg who first isolated it.
68	erbium	Er	1843	Carl Gustaf Mosander	From the Swedish town of Ytterby where the ore gadolinite was first mined.
69	thulium	Tm	1879	Per Theodor Cleve	From Thule, the earliest name for Scandanavia
70	ytterbium	Yb	1878	Jean Charles Galissard de Marignac	From the Swedish village of Ytterby where the mineral ytterbite was found
71	lutetium	Lu	1907	Georges Urbain	From the Latin lutetia the Latin name for the city of Paris

72	hafnium	Hf	1923	Dirk Coster, Charles de Hevesy	From the Latin hafnia for Copenhagen where it was first discovered.
73	tantalum	Ta	1802	Anders Gustaf Ekeberg	From the Greek tantalos, the mythological character who was banished to Hades unable to eat or drink, because the element was insoluble in acids.
74	tungsten	W	1783 (isolated)	Don Juan Jose and Don Fausto d'Elhuyar	From the Swedish tung sten for 'heavy stone'. The chemical symbol is derived from the German wolfram which was found with tin and interferred with the smelting of tin, it was said to eat up tin like a wolf eats up sheep
75	rhenium	Re	1925	Ida Tacke-Noddack, Walter Noddack, Otto Carl Berg	From the Latin rhenus for the Rhine Ralley in Germany
76	osmium	Os	1803	Smithson Tennant	From the Greek some for 'smell' because of the sharp odour of the volatile oxide
77	iridium	Ir	1803	Smithson Tennant	From the Latin Iris, the Greek goddess of rainbows because of the variety of colours in the element's salt solutions
78	platinum	Pt	1735	Antonio de Ulloa	From the Spanish platina for 'silver'
79	gold	Au	-	known since ancient times	From the Sanskrit jval 'to shine'. The symbol Au derives from the Latin aurum for Aurora the Roman goddess of the dawn.
80	mercury	Hg	-	known since ancient times	From the Roman god Mercury, the messenger of the gods. The symbol

					derives from the Greek hydragyrium for 'liquid silver' or quick silver
81	thallium	Tl	1861	Sir William Crookes	From the Greek thallos for 'green shoot' because of the bright green lines in its spectrum
82	lead	Pb	-	known since ancient times	From Anglo Saxon lead. The symbol is derived from the Latin plumbum for 'lead'
83	bismuth	Bi	1753	Claude-Francois Geoffroy the Younger	From the German weisse masse for 'white mass', the colour of its oxides
84	polonium	Po	1898	Pierre and Marie Curie	From Poland, the native country of Marie Sklodowska Curie
85	astatine	At	1940 (synthesised)	Dale R. Carson, K.R. MacKenzie, Emilio Segre	From the Greek astatos for 'unstable' as it is an unstable element.
86	radon	Rn	1900	Friedrich Ernst Dorn	Originally called radium emanation, Em, because it was a decay product of radium. The name radon reflects its origin from radium
87	francium	Fr	1939	Marguerite Catherine Perey	From France the country in which it was first discovered
88	radium	Ra	1898	Marie Sklodowska Curie, Pierre Curie	From the Latin radius for 'beam or ray' because of its ray-emitting power
89	actinium	Ac	1899	Andre-Louis Debierne	From the Greek aktis or akinis for 'beam or ray' because it is a good source of alpha radiation
90	thorium	Th	1828	Jons Jacob Berzelius	From Thor, Scandanavian god of thunder
91	protactinium	Pa	1913	Kasimir Fajans, O.H. Gohring	From the Greek protos for 'first' and actinium, since it was found to be the parent of actinium

92	uranium	U	1789	Martin Heinrich Klaproth	From the planet Uranus named after the Roman 'Father Heaven', Uranus was discovered in 1781.
93	neptunium	Np	1940 (synthesised)	Edwin M. McMillan, Philip H. Abelson	From Neptune, the Roman god of the sea, since it is the next outermost planet beyond Uranus in the Solar System and this element is the next one beyond Uranium in the Periodic Table
94	plutonium	Pu	1941 (synthesised)	Glenn T. Seaborg, Joseph W. Kennedy, Edward M. McMillan, Arthur C. Wohl	From the planet Pluto, the Roman god of the underworld, as Pluto is the next planet in the Solar System beyond Neptune and the element plutonium is the next element beyond neptunium
95	americium	Am	1944 (synthesised)	Glenn T. Seaborg, Ralph A. James, Leon O. Morgan, Albert Ghiorso	From the analogy to europium the sixth element in the lanthanide series since americium is the sixth element in the actinide series.
96	curium	Cm	1944 (synthesised)	Glenn T. Seaborg, Ralph A. James, Albert Ghiorso	From 'Pierre and Marie Curie' who discovered radium and polonium
97	berkelium	Bk	1949 (synthesised)	Glenn T. Seaborg, Stanley G. Thompson, Albert Ghiorso	From Berkeley, California, where it was first synthesised
98	californium	Cf	1950 (synthesised)	Stanley G. Thompson, Glenn T. Seaborg, Kenneth Street, Jr., Albert Ghiorso	From the state and university of California where the element was first synthesised.
99	einsteinium	Es	1952 (synthesised)	Albert Ghiorso	From 'Albert Einstein'. Eisteinium-252 first found in the debris of thermonuclear weapons
100	fermium	Fm	1952	Albert Ghiorso	From Enrico Fermi, the physicist who

			(synthesised)		built the first nuclear reactor. First found in the debris of a thermonuclear weapon explosion
101	mendelevium	Md	1955 (synthesised)	Stanley G. Thompson, Glenn T. Seaborg, Barnard G. Harvey, Gregory R. Choppin, Albert Ghiorso	From <u>Dimitri Mendeleev</u> who developed the Periodic Table of the Elements. Original chemical symbol was My but was changed in 1955.
102	nobelium	No	1958 (synthesised)	Albert Ghiorso, Glenn T. Seaborg, Torbjorn Sikkeland, John R. Walton	From Alfred Nobel the discoverer of dynamite and founder of the <u>Nobel Prize</u>
103	lawrencium	Lr	1961 (synthesised)	Albert Ghiorso, Torbjorn Sikkeland, Almon E. Larsh, Robert M. Latimer	From Ernest O. Lawrence who developed the cyclotron. The original symbol was Lw but was changed
104	rutherfordium	RE	1964/1969 (synthesised)	Russian Scientists at Dubna/Albert Ghiorso	From Ernest Rutherford who developed a theory of radioactive transformations
105	dubnium	Db	1967/1970 (synthesised)	Russian Scientists in Dubna/Lawrence Berkeley Laboratory	From the location of the Russian research centre in Dubna
106	seaborgium	Sg	1974 (synthesised)	Albert Ghiorso	From <u>Glenn Theodore Seaborg</u> who led the team that first synthesised a number of transuranic elements
107	bohrium	Bh	1981 (synthesised)	Centre for Heavy-Ion Research , Germany	From Neils Bohr who developed a theory of the electronic structure of the atom
108	hassium	Hs	1984 (synthesised)	Peter Armbruster, Gottfried Munzenber	From the Latin hassia for the German state of Hesse whose former capital was Darmstadt where the element was first synthesised

109	meitnerium	Mt	1980 (synthesised)	Peter Armbruster, Gottfried Munzenber	From Lise Meitner who discovered protactinium
110	darmstadtium	Ds	1994 (synthesised)	Peter Armbruster, Gottfried Munzenber	From Darmstadt the region where the research centre is located
111	-	-	1994 (synthesised)	multinational team of scientists at the Heavy Ion Research Centre, Darmstadt, Germany	No name recorded
112	-	-	1996 (synthesised)	multinational team of scientists at the Heavy Ion Research Centre, Darmstadt, Germany	No name recorded
114	-	-	1998 (synthesised)	multinational team of scientists at the Joint Institute for Nuclear Research, Dubna, Russia	No name recorded
116	-	-	2000 (synthesised)	multinational team of scientists at the Joint Institute for Nuclear Research, Dubna, Russia	No name recorded