

Periodic Table of Elements

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
1	1 H Hydrogen 1.00794	Atomic # Symbol Name Atomic Mass																2 He Helium 4.002602		
2	3 Li Lithium 6.941	4 Be Beryllium 9.012182																		
3	11 Na Sodium 22.98976928	12 Mg Magnesium 24.3050																		
4	19 K Potassium 39.0983	20 Ca Calcium 40.078	21 Sc Scandium 44.955912	22 Ti Titanium 47.887	23 V Vanadium 50.9415	24 Cr Chromium 51.9961	25 Mn Manganese 54.938045	26 Fe Iron 55.845	27 Co Cobalt 58.933195	28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.92160	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.798		
5	37 Rb Rubidium 85.4678	38 Sr Strontium 87.62	39 Y Yttrium 88.90585	40 Zr Zirconium 91.224	41 Nb Niobium 92.90638	42 Mo Molybdenum 95.96	43 Tc Technetium (97.9072)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.90550	46 Pd Palladium 106.42	47 Ag Silver 107.8682	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.710	51 Sb Antimony 121.760	52 Te Tellurium 127.60	53 I Iodine 126.90447	54 Xe Xenon 131.293		
6	55 Cs Caesium 132.9054519	56 Ba Barium 137.327	57–71			72 Hf Hafnium 178.49	73 Ta Tantalum 180.94788	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217	78 Pt Platinum 195.084	79 Au Gold 196.966569	80 Hg Mercury 200.59	81 Tl Thallium 204.3833	82 Pb Lead 207.2	83 Bi Bismuth 208.98040	84 Po Polonium (208.9824)	85 At Astatine (209.9871)	86 Rn Radon (222.0176)
7	87 Fr Francium (223)	88 Ra Radium (226)	89–103			104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (281)	109 Mt Meitnerium (288)	110 Ds Darmstadtium (271)	111 Rg Roentgenium (272)	112 Uub Ununbium (285)	113 Uut Ununtrium (284)	114 Uuq Ununquadium (289)	115 Uup Ununpentium (288)	116 Uuh Ununhexium (292)	117 Uus Ununseptium (286)	118 Uuo Ununoctium (294)

For elements with no stable isotopes, the mass number of the isotope with the longest half-life is in parentheses.

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57 La Lanthanum 138.90547	58 Ce Cerium 140.116	59 Pr Praseodymium 140.90768	60 Nd Neodymium 144.242	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.92535	66 Dy Dysprosium 162.500	67 Ho Holmium 164.93032	68 Er Erbium 167.259	69 Tm Thulium 168.93421	70 Yb Ytterbium 173.054	71 Lu Lutetium 174.9668
89 Ac Actinium (227)	90 Th Thorium 232.03806	91 Pa Protactinium 231.03588	92 U Uranium 238.02891	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)	97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

The Origin of the Solar System Elements

1 H	big bang fusion 					cosmic ray fission 					2 He						
3 Li	4 Be	merging neutron stars 					exploding massive stars 					5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg	dying low mass stars 					exploding white dwarfs 					13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
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
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
55 Cs	56 Ba		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
87 Fr	88 Ra																
		57 La	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	
		89 Ac	90 Th	91 Pa	92 U												

Los Alamos National Laboratory Chemistry Division

Periodic Table of the Elements

Los Alamos National Laboratory Chemistry Division																					
Periodic Table of the Elements																					
1A 1 H hydrogen 1.008	2A 2 He helium 4.003															3A 5 B boron 10.81	4A 6 C carbon 12.01	5A 7 N nitrogen 14.01	6A 8 O oxygen 16.00	7A 9 F fluorine 19.00	8A 10 Ne neon 20.18
3 Li lithium 6.94	4 Be beryllium 9.012															13 Al aluminum 26.98	14 Si silicon 28.09	15 P phosphorus 30.97	16 S sulfur 32.06	17 Cl chlorine 35.45	18 Ar argon 39.95
11 Na sodium 22.99	12 Mg magnesium 24.31	3B 21 Sc scandium 44.96	4B 22 Ti titanium 47.88	5B 23 V vanadium 50.94	6B 24 Cr chromium 52.00	7B 25 Mn manganese 54.94	8B 26 Fe iron 55.85		27 Co cobalt 58.93	28 Ni nickel 58.69	11B 29 Cu copper 63.55	12B 30 Zn zinc 65.39	31 Ga gallium 69.72	32 Ge germanium 72.64	33 As arsenic 74.92	34 Se selenium 78.96	35 Br bromine 79.90	36 Kr krypton 83.79			
37 Rb rubidium 85.47	38 Sr strontium 87.62	39 Y yttrium 88.91	40 Zr zirconium 91.22	41 Nb niobium 92.91	42 Mo molybdenum 95.96	43 Tc technetium (98)	44 Ru ruthenium 101.1	45 Rh rhodium 102.9	46 Pd palladium 106.4	47 Ag silver 107.9	48 Cd cadmium 112.4	49 In indium 114.8	50 Sn tin 118.7	51 Sb antimony 121.8	52 Te tellurium 127.6	53 I iodine 126.9	54 Xe xenon 131.3				
55 Cs cesium 132.9	56 Ba barium 137.3	*	72 Hf hafnium 178.5	73 Ta tantalum 180.9	74 W tungsten 183.9	75 Re rhenium 186.2	76 Os osmium 190.2	77 Ir iridium 192.2	78 Pt platinum 195.1	79 Au gold 197.0	80 Hg mercury 200.5	81 Tl thallium 204.4	82 Pb lead 207.2	83 Bi bismuth 209.0	84 Po polonium (209)	85 At astatine (210)	86 Rn radon (222)				
87 Fr francium (223)	88 Ra radium (226)	**	104 Rf rutherfordium (267)	105 Db dubnium (268)	106 Sg seaborgium (269)	107 Bh bohrium (270)	108 Hs hassium (277)	109 Mt meitnerium (278)	110 Ds darmstadtium (281)	111 Rg roentgenium (282)	112 Cn copernicium (285)	113 Nh nihonium (286)	114 Fl flerovium (289)	115 Mc moscovium (289)	116 Lv livermorium (293)	117 Ts tennessine (294)	118 Og ognesson (294)				
Lanthanide Series*			57 La lanthanum 138.9	58 Ce cerium 140.1	59 Pr praseodymium 140.9	60 Nd neodymium 144.2	61 Pm promethium (145)	62 Sm samarium 150.4	63 Eu europium 152.0	64 Gd gadolinium 157.2	65 Tb terbium 158.9	66 Dy dysprosium 162.5	67 Ho holmium 164.9	68 Er erbium 167.3	69 Tm thulium 168.9	70 Yb ytterbium 173.0	71 Lu lutetium 175.0				
Actinide Series**			89 Ac actinium (227)	90 Th thorium 232	91 Pa protactinium 231	92 U uranium 238	93 Np neptunium (237)	94 Pu plutonium (244)	95 Am americium (243)	96 Cm curium (247)	97 Bk berkelium (247)	98 Cf californium (251)	99 Es einsteinium (252)	100 Fm fermium (257)	101 Md mendelevium (258)	102 No nobelium (259)	103 Lr lawrencium (262)				

Lanthanide Series*

Actinide Series**

element names in **blue** are liquids at room temperature
 element names in **red** are gases at room temperature
 element names in **black** are solids at room temperature

The Periodic Table of the Elements, in Pictures

Periods ↓ 1 2 3 4 5 6 7	Alkali Metals Group 1		Alkali Earth Metals Group 2		Transition Metals										Boron Group 13	Carbon Group 14	Nitrogen Group 15	Oxygen Group 16	Halogens 17	Noble Gases 18											
	H Hydrogen Sun and Stars		Be Beryllium Emeralds												B Boron Sports Equipment	C Carbon Basis of Life's Molecules	N Nitrogen Protein	O Oxygen Air	F Fluorine Toothpaste	Ne Neon Advertising Signs											
	Li Lithium Batteries		Mg Magnesium Chlorophyll												Al Aluminum Airplanes	Si Silicon Stone, Sand, and Soil	P Phosphorus Bones	S Sulfur Eggs	Cl Chlorine Swimming Pools	Ar Argon Light Bulbs											
	Na Sodium Salt		K Potassium Fruits and Vegetables												Ca Calcium Shells and Bones	Sc Scandium Bicycles	Ti Titanium Aerospace	V Vanadium Springs	Cr Chromium Stainless Steel	Mn Manganese Earthmovers	Fe Iron Steel Structures	Co Cobalt Magnets	Ni Nickel Coins	Cu Copper Electric Wires	Zn Zinc Brass Instruments	Ga Gallium Light-Emitting Diodes (LEDs)	Ge Germanium Semiconductor Electronics	As Arsenic Poison	Se Selenium Copiers	Br Bromine Photography Film	Kr Krypton Flashlights
	Rb Rubidium Global Navigation		Sr Strontium Fireworks												Y Yttrium Lasers	Zr Zirconium Chemical Pipelines	Nb Niobium Mag Lev Trains	Mo Molybdenum Cutting Tools	Tc Technetium Radioactive Diagnosis	Ru Ruthenium Electric Switches	Rh Rhodium Searchlight Reflectors	Pd Palladium Pollution Control	Ag Silver Jewelry	Cd Cadmium Paint	In Indium Liquid Crystal Displays (LCDs)	Sn Tin Plated Food Cans	Sb Antimony Car Batteries	Te Tellurium Thermoelectric Coolers	I Iodine Disinfectant	Xe Xenon High-Intensity Lamps	
	Cs Cesium Atomic Clocks		Ba Barium X-Ray Diagnosis												Rare Earth Metals		Hf Hafnium Nuclear Submarines	Ta Tantalum Mobile Phones	W Tungsten Lamp Filaments	Re Rhenium Rocket Engines	Os Osmium Pen Points	Ir Iridium Spark Plugs	Pt Platinum Labware	Au Gold Jewelry	Hg Mercury Thermometers	Tl Thallium Low-Temperature Thermometers	Pb Lead Weights	Bi Bismuth Fire Sprinklers	Po Polonium Anti-Static Brushes	At Astatine Radioactive Medicine	Rn Radon Surgical Implants
	Fr Francium Laser		Ra Radium Luminous		Actinide Metals		Rf Rutherfordium	Db Dubnium	Sg Seaborgium	Bh Bohrium	Hs Hassium	Mt Meitnerium	Ds Darmstadtium	Rg Roentgenium	Cn Copernicium	Nh Nihonium	Fl Flerovium	Mc Moscovium	Lv Livermorium	Ts Tennessine	Og Oganesson										
Superheavy Elements																															

The Periodic Table of Elements is the Alphabet of the Universe

Mendeleev's Periodic Table

TABELLE II

REIHEN	GRUPPE I. — R ² O	GRUPPE II. — RO	GRUPPE III. — R ² O ³	GRUPPE IV. RH ⁴ RO ²	GRUPPE V. RH ³ R ² O ⁵	GRUPPE VI. RH ² RO ³	GRUPPE VII. RH R ² O ⁷	GRUPPE VIII. — RO ⁴
1	H=1							
2	Li=7	Be=9,4	B=11	C=12	N=14	O=16	F=19	
3	Na=23	Mg=24	Al=27,3	Si=28	P=31	S=32	Cl=35,5	
4	K=39	Ca=40	—=44	Ti=48	V=51	Cr=52	Mn=55	Fe=58, Co=59, Ni=59, Cu=63.
5	(Cu=63)	Zn=65	—=68	—=72	As=75	Se=78	Br=80	
6	Rb=85	Sr=87	?Yt=88	Zr=90	Nb=94	Mo=96	—=100	Ru=104, Rh=104, Pd=106, Ag=108.
7	(Ag=108)	Cd=112	In=113	Sn=118	Sb=122	Te=125	J=127	
8	Cs=133	Ba=137	?Di=138	?Ce=140	—	—	—	— — — —
9	(—)	—	—	—	—	—	—	
10	—	—	?Er=178	?La=180	Ta=182	W=184	—	Os=195, Ir=197, Pt=198, Au=199
11	(Au=199)	Hg=200	Tl=204	Pb=207	Bi=208	—	—	— — — —
12	—	—	—	Th=231	—	U=240	—	— — — —



Dmitri Mendeleev

Figure 2.5 Dmitri Mendeleev's 1872 periodic table. The spaces marked with blank lines represent elements that Mendeleev deduced existed but were unknown at the time, so he left places for them in the table. The symbols at the top of the columns (e.g., R²O and RH⁴) are molecular formulas written in the style of the 19th century.

				Ti = 50	Zr = 90	? = 180
				V = 51	Nb = 94	Ta = 182
				Cr = 52	Mo = 96	W = 186
				Mn = 55	Rh = 104,4	Pt = 197,4
				Fe = 56	Ru = 104,4	Ir = 198
			Ni =	Co = 59	Pd = 106,6	Os = 199
H = 1				Cu = 63,4	Ag = 108	Hg = 200
	Be = 9,4	Mg = 24		Zn = 65,2	Cd = 112	
	B = 11	Al = 27,4		? = 68	Ur = 116	Au = 197?
	C = 12	Si = 28		? = 70	Sn = 118	
	N = 14	P = 31		As = 75	Sb = 122	Bi = 210?
	O = 16	S = 32		Se = 79,4	Te = 128?	
	F = 19	Cl = 35,5		Br = 80	J = 127	
Li = 7	Na = 23	K = 39		Rb = 85,4	Cs = 133	Tl = 204
		Ca = 40		Sr = 87,6	Ba = 137	Pb = 207
		? = 45		Ce = 92		
		?Er = 56		La = 94		
		?Yt = 60		Di = 95		
		?In = 75,6		Th = 118?		

Mendeleev's Periodic Table

Tabelle II.

Reihen	Gruppe I. — R'O	Gruppe II. — R'O	Gruppe III. — R'O ³	Gruppe IV. RH ⁴ RO ²	Gruppe V. RH ⁵ R'O ⁵	Gruppe VI. RH ⁶ RO ³	Gruppe VII. RH R'O ⁷	Gruppe VIII. — RO ⁴
1	H=1							
2	Li=7	Be=9,4	B=11	C=12	N=14	O=16	F=19	
3	Na=23	Mg=24	Al=27,3	Si=28	P=31	S=32	Cl=35,5	
4	K=39	Ca=40	—=44	Ti=48	V=51	Cr=52	Mn=55	Fe=56, Co=59, Ni=59, Cu=63.
5	(Cu=63)	Zn=65	—=68	—=72	As=75	Se=78	Br=80	
6	Rb=85	Sr=87	?Yt=88	Zr=90	Nb=94	Mo=96	—=100	Ru=104, Rh=104, Pd=106, Ag=108.
7	(Ag=108)	Cd=112	In=113	Sn=118	Sb=122	Te=125	J=127	
8	Cs=133	Ba=137	?Di=138	?Co=140	—	—	—	— — — —
9	(—)	—	—	—	—	—	—	
10	—	—	?Er=178	?La=180	Ta=182	W=184	—	Os=195, Ir=197, Pt=198, Au=199.
11	(Au=199)	Hg=200	Tl=204	Pb=207	Bi=208	—	—	
12	—	—	—	Th=231	—	U=240	—	— — — —

Periodic Table of the Elements

18 Rows

1 H Hydrogen	2																13						14	15	16	17	2 He Helium
3 Li Lithium	4 Be Beryllium	Groups																5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon				
11 Na Sodium	12 Mg Magnesium	3	4	5	6	7	8	9	10	11	12	13 Al Aluminium	14 Si Silicon	15 P Phosphorous	16 S Sulfur	17 Cl Chlorine	18 Ar Argon										
19 K Potassium	20 Ca Calcium	21 Sc Scandium	22 Ti Titanium	23 V Vanadium	24 Cr Chromium	25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper	30 Zn Zinc	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton										
37 Rb Rubidium	38 Sr Strontium	39 Y Yttrium	40 Zr Zirconium	41 Nb Niobium	42 Mo Molybdenum	43 Tc Technetium	44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver	48 Cd Cadmium	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon										
55 Cs Caesium	56 Ba Barium	57- 71 La-Lu Lanthanides	72 Hf Hafnium	73 Ta Tantalum	74 W Tungsten	75 Re Rhenium	76 Os Osmium	77 Ir Iridium	78 Pt Platinum	79 Au Gold	80 Hg Mercury	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon										
87 Fr Francium	88 Ra Radium	89-103 Ac-Lr Actinides	104 Rf Rutherfordium	105 Db Dubnium	106 Sg Seaborgium	107 Bh Bohrium	108 Hs Hassium	109 Mt Meitnerium	110 Ds Darmstadtium	111 Rg Roentgenium	112 Cn Copernicium	113 Uut Ununtrium	114 Uuq Ununquadium	115 Uup Ununpentium	116 Uuh Ununhexium	117 Uus Ununseptium	118 Uuo Ununoctium										

Lanthanides

57 La Lanthanum	58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium
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Actinides

89 Ac Actinium	90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium
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																17 Cl Chlorine
																18 Ar Argon
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																28 Ni Nickel
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2

8

8

18

18

32

32

118



4:54 / 14:13



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non-metals

Lanthanides

57 La Lanthanum	58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium
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Actinides

89 Ac Actinium	90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium
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Periodic Table of the Elements

1 H Hydrogen	2																13	14	15	16	17	2 He Helium	1
3 Li Lithium	4 Be Beryllium											5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon	2					
11 Na Sodium	12 Mg Magnesium	3	4	5	6	7	8	9	10	11	12	13 Al Aluminium	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine	18 Ar Argon	3					
19 K Potassium	20 Ca Calcium	21 Sc Scandium	22 Ti Titanium	23 V Vanadium	24 Cr Chromium	25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper	30 Zn Zinc	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton	4					
37 Rb Rubidium	38 Sr Strontium	39 Y Yttrium	40 Zr Zirconium	41 Nb Niobium	42 Mo Molybdenum	43 Tc Technetium	44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver	48 Cd Cadmium	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon	5					
55 Cs Cesium	56 Ba Barium	57-71 La-Lu Lanthanides	72 Hf Hafnium	73 Ta Tantalum	74 W Tungsten	75 Re Rhenium	76 Os Osmium	77 Ir Iridium	78 Pt Platinum	79 Au Gold	80 Hg Mercury	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon	6					
87 Fr Francium	88 Ra Radium	89-103 Ac-Lr Actinides	104 Rf Rutherfordium	105 Db Dubnium	106 Sg Seaborgium	107 Bh Bohrium	108 Hs Hassium	109 Mt Meitnerium	110 Ds Darmstadtium	111 Rg Roentgenium	112 Cn Copernicium	113 Uut Ununtrium	114 Uuq Ununquadium	115 Uup Ununpentium	116 Uuh Ununhexium	117 Uus Ununseptium	118 Uuo Ununoctium	7					
Lanthanides			57 La Lanthanum	58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium						
Actinides			89 Ac Actinium	90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium						

A periodic table of elements is shown with a red diagonal line running from Boron (B) to Astatine (At). Five elements are circled in green: Carbon (C), Phosphorus (P), Sulfur (S), Selenium (Se), and Iodine (I). The elements are arranged in rows and columns, with their atomic numbers, symbols, and names displayed. The background is dark gray, and the text is white. The red diagonal line is a prominent feature, separating the elements into two groups. The green circles highlight the specific elements mentioned in the text.

										2 He Helium
										10 Ne Neon
										18 Ar Argon
										36 Kr Krypton
										54 Xe Xenon
										86 Rn Radon

Periodic Table of the Elements

18 Rows

1 Hydrogen		2										13										14	15	16	17	Noble Gases
Alkali Metals		Groups										5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	13 Al Aluminium	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine						
Alkaline Earth Metals		3	4	5	6	7	8	9	10	11	12	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton									
		21 Sc Scandium	22 Ti Titanium	23 V Vanadium	24 Cr Chromium	25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper	30 Zn Zinc	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon									
		39 Y Yttrium	40 Zr Zirconium	41 Nb Niobium	42 Mo Molybdenum	43 Tc Technetium	44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver	48 Cd Cadmium	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon									
		57-71 La-Lu Lanthanides	72 Hf Hafnium	73 Ta Tantalum	74 W Tungsten	75 Re Rhenium	76 Os Osmium	77 Ir Iridium	78 Pt Platinum	79 Au Gold	80 Hg Mercury	113 Uut Ununtrium	114 Uuq Ununquadium	115 Uup Ununpentium	116 Uuh Ununhexium	117 Uhs Ununseptium	118 Uuo Ununoctium									
		89-103 Ac-Lr Actinides	104 Rf Rutherfordium	105 Db Dubnium	106 Sg Seaborgium	107 Bh Bohrium	108 Hs Hassium	109 Mt Meitnerium	110 Ds Darmstadtium	111 Rg Roentgenium	112 Cn Copernicium															

Lanthanides

57 La Lanthanum	58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium
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Actinides

89 Ac Actinium	90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium
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Periodic Table of the Elements

1 H Hydrogen																2 He Helium																																															
3 Li Lithium		4 Be Beryllium														5 B Boron		6 C Carbon		7 N Nitrogen		8 O Oxygen		9 F Fluorine		10 Ne Neon																																					
11 Na Sodium		12 Mg Magnesium														13 Al Aluminium		14 Si Silicon		15 P Phosphorus		16 S Sulfur		17 Cl Chlorine		18 Ar Argon																																					
19 K Potassium		20 Ca Calcium														21 Sc Scandium		22 Ti Titanium		23 V Vanadium		24 Cr Chromium		25 Mn Manganese		26 Fe Iron		27 Co Cobalt		28 Ni Nickel		29 Cu Copper		30 Zn Zinc		31 Ga Gallium		32 Ge Germanium		33 As Arsenic		34 Se Selenium		35 Br Bromine		36 Kr Krypton																	
37 Rb Rubidium		38 Sr Strontium														39 Y Yttrium		40 Zr Zirconium		41 Nb Niobium		42 Mo Molybdenum		43 Tc Technetium		44 Ru Ruthenium		45 Rh Rhodium		46 Pd Palladium		47 Ag Silver		48 Cd Cadmium		49 In Indium		50 Sn Tin		51 Sb Antimony		52 Te Tellurium		53 I Iodine		54 Xe Xenon																	
55 Cs Caesium		56 Ba Barium		57 La Lanthanum		58 Ce Cerium		59 Pr Praseodymium		60 Nd Neodymium		61 Pm Promethium		62 Sm Samarium		63 Eu Europium		64 Gd Gadolinium		65 Tb Terbium		66 Dy Dysprosium		67 Ho Holmium		68 Er Erbium		69 Tm Thulium		70 Yb Ytterbium		71 Lu Lutetium		72 Hf Hafnium		73 Ta Tantalum		74 W Tungsten		75 Re Rhenium		76 Os Osmium		77 Ir Iridium		78 Pt Platinum		79 Au Gold		80 Hg Mercury		81 Tl Thallium		82 Pb Lead		83 Bi Bismuth		84 Po Polonium		85 At Astatine		86 Rn Radon	
87 Fr Francium		88 Ra Radium		89 Ac Actinium		90 Th Thorium		91 Pa Protactinium		92 U Uranium		93 Np Neptunium		94 Pu Plutonium		95 Am Americium		96 Cm Curium		97 Bk Berkelium		98 Cf Californium		99 Es Einsteinium		100 Fm Fermium		101 Md Mendelevium		102 No Nobelium		103 Lr Lawrencium		104 Rf Rutherfordium		105 Db Dubnium		106 Sg Seaborgium		107 Bh Bohrium		108 Hs Hassium		109 Mt Meitnerium		110 Ds Darmstadtium		111 Rg Roentgenium		112 Cn Copernicium		113 Uut Ununtrium		114 Uuq Ununquadium		115 Uup Ununpentium		116 Uuh Ununhexium		117 Uus Ununseptium		118 Uuo Ununoctium	



Periodic Table of the Elements

1 H Hydrogen																2 He Helium																																															
3 Li Lithium		4 Be Beryllium														5 B Boron		6 C Carbon		7 N Nitrogen		8 O Oxygen		9 F Fluorine		10 Ne Neon																																					
11 Na Sodium		12 Mg Magnesium														13 Al Aluminium		14 Si Silicon		15 P Phosphorus		16 S Sulfur		17 Cl Chlorine		18 Ar Argon																																					
19 K Potassium		20 Ca Calcium														21 Sc Scandium		22 Ti Titanium		23 V Vanadium		24 Cr Chromium		25 Mn Manganese		26 Fe Iron		27 Co Cobalt		28 Ni Nickel		29 Cu Copper		30 Zn Zinc		31 Ga Gallium		32 Ge Germanium		33 As Arsenic		34 Se Selenium		35 Br Bromine		36 Kr Krypton																	
37 Rb Rubidium		38 Sr Strontium														39 Y Yttrium		40 Zr Zirconium		41 Nb Niobium		42 Mo Molybdenum		43 Tc Technetium		44 Ru Ruthenium		45 Rh Rhodium		46 Pd Palladium		47 Ag Silver		48 Cd Cadmium		49 In Indium		50 Sn Tin		51 Sb Antimony		52 Te Tellurium		53 I Iodine		54 Xe Xenon																	
55 Cs Caesium		56 Ba Barium		57 La Lanthanum		58 Pr Praseodymium		59 Nd Neodymium		60 Pm Promethium		61 Sm Samarium		62 Eu Europium		63 Gd Gadolinium		64 Tb Terbium		65 Dy Dysprosium		66 Ho Holmium		67 Er Erbium		68 Tm Thulium		69 Yb Ytterbium		70 Lu Lutetium		71 Hf Hafnium		72 Ta Tantalum		73 W Tungsten		74 Re Rhenium		75 Os Osmium		76 Ir Iridium		77 Pt Platinum		78 Au Gold		79 Hg Mercury		80 Tl Thallium		81 Pb Lead		82 Bi Bismuth		83 Po Polonium		84 At Astatine		85 Rn Radon			
87 Fr Francium		88 Ra Radium		89 Ac Actinium		90 Th Thorium		91 Pa Protactinium		92 U Uranium		93 Np Neptunium		94 Pu Plutonium		95 Am Americium		96 Cm Curium		97 Bk Berkelium		98 Cf Californium		99 Es Einsteinium		100 Fm Fermium		101 Md Mendelevium		102 No Nobelium		103 Lr Lawrencium		104 Rf Rutherfordium		105 Db Dubnium		106 Sg Seaborgium		107 Bh Bohrium		108 Hs Hassium		109 Mt Meitnerium		110 Ds Darmstadtium		111 Rg Roentgenium		112 Cn Copernicium		113 Nh Nihonium		114 Fl Flerovium		115 Mc Moscovium		116 Lv Livermorium		117 Ts Tennessine		118 Og Oganesson	

Uranium

Periodic Table of the Elements

18 Rows

																		2
																		He
3	4											5	6	7	8	9	10	Ne
Li	Be											B	C	N	O	F	Ne	
Lithium	Beryllium											Boron	Carbon	Nitrogen	Oxygen	Fluorine	Neon	
11	12	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Na	Mg											Al	Si	P	S	Cl	Ar	
Sodium	Magnesium											Aluminium	Silicon	Phosphorus	Sulfur	Chlorine	Argon	
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	
Potassium	Calcium	Scandium	Titanium	Vanadium	Chromium	Manganese	Iron	Cobalt	Nickel	Copper	Zinc	Gallium	Germanium	Arsenic	Selenium	Bromine	Krypton	
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	
Rubidium	Strontium	Yttrium	Zirconium	Niobium	Molybdenum	Technetium	Ruthenium	Rhodium	Palladium	Silver	Cadmium	Indium	Tin	Antimony	Tellurium	Iodine	Xenon	
55	56	57-71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	
Cs	Ba	La-Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	
Caesium	Barium	Lanthanides	Hafnium	Tantalum	Tungsten	Rhenium	Osmium	Iridium	Platinum	Gold	Mercury	Thallium	Lead	Bismuth	Polonium	Astatine	Radon	
87	88	89-103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	
Fr	Ra	Ac-Lr	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Uut	Uuq	Uup	Uuh	Uus	Uuo	
Francium	Radium	Actinides	Rutherfordium	Dubnium	Seaborgium	Bohrium	Hassium	Meitnerium	Darmstadtium	Roentgenium	Copernicium	Ununtrium	Ununquadium	Ununpentium	Ununhexium	Ununseptium	Ununoctium	

Lanthanides

57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Lanthanum	Cerium	Praseodymium	Neodymium	Promethium	Samarium	Europium	Gadolinium	Terbium	Dysprosium	Holmium	Erbium	Thulium	Ytterbium	Lutetium

Actinides

89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr
Actinium	Thorium	Protactinium	Uranium	Neptunium	Plutonium	Americium	Curium	Berkelium	Californium	Einsteinium	Fermium	Mendelevium	Nobelium	Lawrencium

13:06 / 14:13



List of Chemical Elements

Symbol	Element Name	Atomic #	Symbol	Element Name	Atomic #	Symbol	Element Name	Atomic #
Ac	Actinium	89	Ge	Germanium	32	Pu	Plutonium	94
Ag	Silver	47	H	Hydrogen	1	Ra	Radium	88
Al	Aluminum	13	He	Helium	2	Rb	Rubidium	37
Am	Americium	95	Hf	Hafnium	72	Re	Rhenium	75
Ar	Argon	18	Hg	Mercury	80	Rf	Rutherfordium	104
As	Arsenic	33	Ho	Holmium	67	Rg	Roentgenium	111
At	Astatine	85	Hs	Hassium	108	Rh	Rhodium	45
Au	Gold	79	I	Iodine	53	Rn	Radon	86
B	Boron	5	In	Indium	49	Ru	Ruthenium	44
Ba	Barium	56	Ir	Iridium	77	S	Sulfur	16
Be	Beryllium	4	K	Potassium (Kalium)	19	Sb	Antimony	51
Bh	Bohrium	107	Kr	Krypton	36	Sc	Scandium	21
Bi	Bismuth	83	La	Lanthanum	57	Se	Selenium	34
Bk	Berkelium	97	Li	Lithium	3	Sg	Seaborgium	106
Br	Bromine	35	Lr	Lawrencium	103	Si	Silicon	14
C	Carbon	6	Lu	Lutetium	71	Sm	Samarium	62
Ca	Calcium	20	Md	Mendelevium	101	Sn	Tin	50
Cd	Cadmium	48	Mg	Magnesium	12	Sr	Strontium	38
Ce	Cerium	58	Mn	Manganese	25	Ta	Tantalum	73
Cf	Californium	98	Mo	Molybdenum	42	Tb	Terbium	63
Cl	Chlorine	17	Mt	Meitnerium	109	Tc	Technetium	43
Cm	Curium	96	N	Nitrogen	7	Te	Tellurium	52
Cn	Copernicium	112	Na	Sodium	11	Th	Thorium	90
Co	Cobalt	27	Nb	Niobium	41	Ti	Titanium	22
Cr	Chromium	24	Nd	Neodymium	60	Tl	Thallium	81
Cs	Cesium (Cesium)	55	Ne	Neon	10	Tm	Thulium	69
Cu	Copper	29	Ni	Nickel	28	U	Uranium	92
Db	Dubnium	105	No	Nobelium	102	Uuh	Ununhexium	116
Ds	Darmstadtium	110	Np	Neptunium	93	Uuo	Ununoctium	118
Dy	Dysprosium	66	O	Oxygen	8	Uup	Ununpentium	115
Er	Erbium	68	Os	Osmium	76	Uuq	Ununquadium	114
Es	Einsteinium	99	P	Phosphorus	15	Uus	Ununseptium	117
Eu	Europium	63	Pa	Protactinium	91	Uut	Ununtrium	113
F	Fluorine	9	Pb	Lead	82	V	Vanadium	23
Fe	Iron	26	Pd	Palladium	46	W	Tungsten	74
Fm	Fermium	100	Pm	Promethium	61	Xe	Xenon	54
Fr	Francium	87	Po	Polonium	84	Y	Yttrium	39
Ga	Gallium	31	Pr	Praseodymium	59	Yb	Ytterbium	70
Gd	Gadolinium	64	Pt	Platinum	78	Zn	Zinc	30
						Zr	Zirconium	40