

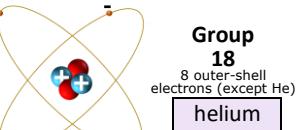
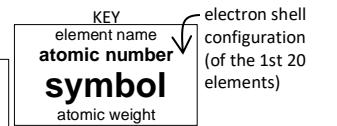
Periodic Table of the Elements

Period	Group 1															Group 18																				
	1 outer-shell electron	hydrogen	Group 2															8 outer-shell electrons (except He)	helium																	
1	1 H 1.008		2 outer-shell electrons															2 He 4.00																		
2	lithium	3 Li 6.94	beryllium	4 Be 9.01																																
3	sodium	11 Na 22.99	magnesium	12 Mg 24.31																																
4	potassium	19 K 39.10	calcium	20 Ca 40.08	scandium	titanium	vanadium	chromium	manganese	iron	cobalt	nickel	copper	zinc	gallium	germanium	arsenic	selenium	bromine	krypton																
5	rubidium	37 Rb 85.47	strontium	38 Sr 87.62	yttrium	39 Y 88.91	zirconium	40 Zr 91.22	niobium	41 Nb 92.91	molybdenum	42 Mo 95.95	technetium	ruthenium	44 Ru (98)	rhodium	45 Rh 101.07	palladium	46 Pd 102.91	silver	47 Ag 106.42	cadmium	48 Cd 112.41	indium	49 In 114.82	tin	50 Sn 118.71	antimony	51 Sb 121.76	tellurium	52 Te 127.60	iodine	53 I 126.90	xenon	54 Xe 131.29	
6	caesium	55 Cs 132.91	barium	56 Ba 137.33	lanthanides	57-71 178.49	hafnium	72 Hf 180.95	tantalum	73 Ta 183.84	tungsten	74 W 186.21	rhenium	75 Re 190.23	osmium	76 Os 192.22	iridium	77 Ir (277)	platinum	78 Pt (278)	gold	79 Au (281)	mercury	80 Hg 200.59	thallium	81 Tl 204.38	lead	82 Pb (209)	bismuth	83 Bi 208.98	polonium	84 Po (210)	astatine	85 At (220)	radon	86 Rn (222)
7	francium	87 Fr (223)	radium	88 Ra (226)	actinides	89-103 (267)	rutherfordium	104 Rf (267)	dubnium	105 Db (268)	seaborgium	106 Sg (269)	bohrium	107 Bh (270)	hassium	108 Hs (277)	meitnerium	109 Mt (278)	darmstadtium	110 Ds (281)	roentgenium	111 Rg (282)	copernicium	112 Cn (285)	nihonium	113 Nh (286)	flerovium	114 Fl (289)	moscovium	115 Mc (290)	livermorium	116 Lv (293)	tennesine	117 Ts (294)	oganesson	118 Og (294)

Most elements are metals.
B, Si, Ge, As etc. (shaded yellow and bordered by the black and white border) are metalloids.
The rest (C, N, P, O, S, Se etc.) are non-metals.
The elements that have atomic weights shown in brackets have no stable isotopes; the number shown is the mass number of the isotope with the longest half-life.

lanthanum 57 La 138.91	cerium 58 Ce 140.12	praseodymium 59 Pr 140.91	neodymium 60 Nd 144.24	prometheum 61 Pm (145)	samarium 62 Sm 150.36	euroium 63 Eu 151.96	gadolinium 64 Gd 157.25	terbium 65 Tb 158.93	dysprosium 66 Dy 162.50	holmium 67 Ho 164.93	erbium 68 Er 167.26	thulium 69 Tm 168.93	ytterbium 70 Yb 173.05	lutetium 71 Lu 174.97
actinium 89 Ac (227)	thorium 90 Th 232.04	protactinium 91 Pa 231.04	uranium 92 U 238.03	neptunium 93 Np (237)	plutonium 94 Pu (244)	americium 95 Am (243)	curium 96 Cm (247)	berkelium 97 Bk (247)	californium 98 Cf (251)	einsteinium 99 Es (252)	fermium 100 Fm (257)	mendelevium 101 Md (258)	nobelium 102 No (259)	lawrencium 103 Lr (266)

Download a copy of this periodic table at www.liacoseducationalmedia.com. Visit the **Shedding Light on Atoms Episode 4: The Periodic Table** page.



Group	Group	2
16	17	He
outer-shell electrons	7 outer-shell electrons	4.00
oxygen	fluorine	neon
8	9	10
O	F	Ne
6.00	19.00	20.18
sulfur	chlorine	argon
16	17	18
S	Cl	Ar
8.06	35.45	39.95
tin	bromine	krypton
34	35	36
Se	Br	Kr
8.97	79.90	83.80
uranium	iodine	xenon
52	53	54
Te	I	Xe
7.60	126.90	131.29
thorium	astatine	radon
84	85	86
Po	At	Rn
(209)	(210)	(222)
promethium	tennesine	oganesson
16	117	118
L	Ts	Og
(293)	(294)	(294)

