Periodic Table of the Elements

NOTE: Atomic Masses have been rounded to the hundredths place for simplicity in student work. These values may not be appropriate for upper level classes.

1 H 1.01																1 H 1.01	2 He 4.00
3 Li 6.94	4 Be 9.01											5 B 10.81	6 C 12.01	7 N 14.01	8 O 16.00	9 F 19.00	10 Ne 20.18
11 Na 23.00	12 Mg 24.30											13 Al 26.98	14 Si 28.09	15 P 30.97	16 S 32.07	17 Cl 35.45	18 Ar 39.95
19 K 39.10	20 Ca 40.08	21 Sc 44.96	22 Ti 47.87	23 V 50.94	24 Cr 52.00	25 Mn 54.94	26 Fe 55.85	27 Co 58.93	28 Ni 58.69	29 Cu 63.55	30 Zn 65.38	31 Ga 69.72	32 Ge 72.63	33 As 74.92	34 Se 78.96	35 Br 79.904	36 Kr 83.798
37 Rb 85.47	38 Sr 87.62	39 Y 88.91	40 Zr 91.22	41 Nb 92.91	42 Mo 95.96	43 Tc 97.91	44 Ru 101.07	45 Rh 102.91	46 Pd 106.42	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.71	51 Sb 121.76	52 Te 127.60	53 I 126.90447	54 Xe 131.293
55 Cs 132.91	56 Ba 137.33	57 La 138.91	72 Hf 178.49	73 Ta 180.95	74 W 183.84	75 Re 186.21	76 Os 190.23	77 Ir 192.22	78 Pt 195.08	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.2	83 Bi 208.98	84 Po 208.98	85 At 209.99	86 Rn 222.02
87 Fr 223.02	88 Ra 226.03	89 Ac 227.03	104 Rf (265.12)	105 Db (268.13)	106 Sg (271.13)	107 Bh (270)	108 Hs (277.15)	109 Mt (276.15)	110 Ds (281.16)	111 Rg (280.16)	112 Cn (285.17)	113 Uut (284.18)	114 Fl** (289.19)	115 Uup (288.19)	116 Lv** (293)	117 Uus (294)	118 UUo (294)

58 Ce 140.12	59 Pr 140.91	60 Nd 144.24	61 Pm (144.91)	62 Sm 150.36	63 Eu 151.96	64 Gd 157.25	65 Tb 158.93	66 Dy 162.50	67 Ho 164.93	68 Er 167.26	69 Tm 168.93	70 Yb 173.054	71 Lu 174.97
90 Th 232.04	91 Pa 231.04	92 U 238.03	93 Np (237.05)	94 Pu (244.06)	95 Am (243.06)	96 Cm (247.07)	97 Bk (247.07)	98 Cf (251.08)	99 Es (252.08)	100 Fm (257.10)	101 Md (258.10)	102 No (259.10)	103 Lr (262.11)

CHARGE TABLE

Cations

	NAME	FORMULA
+1	Copper (I)	Cu^{+1}
	Silver	Ag^{+1}
	Ammonium	NH_4^{+1}
+2	Copper (II)	Cu^{+2}
	Iron (II)	Fe^{+2}
	Lead	Pb^{+2}
	Magnesium	Mg^{+2}
	Mercury	Hg^{+2}
	Nickel	Ni^{+2}
	Zinc	Zn^{+2}
	Manganese	Mn^{+2}
+3	Aluminum	Al^{+3}
	Chromium	Cr^{+3}
	Iron (III)	Fe^{+3}
	Gold	Au^{+3}
+4	Platinum	Pt^{+4}
	Tin	Sn^{+4}

Anions

	NAME	FORMULA
-1	Acetate	$C_2H_3O_2^{-1}$
	Chlorate	ClO_3^{-1}
	Hydroxide	OH^{-1}
	Cyanide	CN^{-1}
	Dihydrogen phosphate	$H_2PO_4^{-1}$
	Hydrogen carbonate also called bicarbonate	HCO_3^{-1}
	Hydrogen sulfate	HSO_4^{-1}
	Permanganate	MnO_4^{-1}
	Nitrite	NO_2^{-1}
	Nitrate	NO_3^{-1}
-2	Carbonate	CO_3^{-2}
	Chromate	CrO_4^{-2}
	Dichromate	$Cr_2O_7^{-2}$
	Peroxide	O_2^{-2}
	Sulfate	SO_4^{-2}
	Sulfite	SO_3^{-2}
	Sulfide	S^{-2}
-3	Phosphate	PO_4^{-3}

ACTIVITY SERIES

ELEMENT	REACTIVITY
Li Rb K Ba Ca Na	React with cold H_2O and acids, replacing hydrogen
Mg Al Mn Zn Cr Fe	React with acids or steam, but usually not liquid water, to replace hydrogen
Ni Sn Pb	All react with acids, but not water, to replace hydrogen
H_2 Cu Hg	All react with oxygen to form oxides
Ag Pt Au	Mostly unreactive

THE HALOGENS

ELEMENT	REACTIVITY
F_2 Cl_2 Br_2 I_2	Listed from most reactive to least reactive

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