

Periodic Table — Element Uses & Applications

Short real-world applications for all 118 elements · historical uses are identified

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	H Rocket fuel; ammonia																	2 He Balloons; MRI cooling
2	3 Li Rechargeable batteries	4 Be X-ray windows; aerospace											5 B Borosilicate glass; detergents	6 C Steel; plastics; all life	7 N Fertilisers; food packaging	8 O Breathing; steelmaking	9 F Toothpaste; non-stick coatings	10 Ne Neon signs; lasers
3	11 Na Table salt; streetlights	12 Mg Light alloys; flares											13 Al Cans; aircraft; foil	14 Si Computer chips; glass	15 P Fertilisers; matches	16 S Sulfuric acid; rubber	17 Cl Water treatment; PVC	18 Ar Welding shields; light bulbs
4	19 K Fertilisers; soaps	20 Ca Cement; bones; plaster	21 Sc Aluminium alloys; lamps	22 Ti Implants; aircraft frames	23 V Steel hardening; catalysts	24 Cr Chrome plating; stainless steel	25 Mn Steel; dry-cell batteries	26 Fe Steel; haemoglobin	27 Co Magnets; blue pigment	28 Ni Stainless steel; coins	29 Cu Wiring; plumbing	30 Zn Galvanising; sunscreen	31 Ga LEDs; semiconductors	32 Ge Fibre optics; infrared lenses	33 As Semiconductors; historic preservatives	34 Se Photocopiers; glassmaking	35 Br Flame retardants; dyes	36 Kr High-performance lighting
5	37 Rb Atomic clocks; research	38 Sr Red fireworks; magnets	39 Y LED phosphors; superconductors	40 Zr Nuclear cladding; ceramics	41 Nb Superconducting magnets	42 Mo High-strength steel alloys	43 Tc Medical imaging tracer	44 Ru Electrical contacts; catalysts	45 Rh Catalytic converters	46 Pd Catalytic converters; electronics	47 Ag Jewellery; electronics; mirrors	48 Cd Batteries; pigments	49 In Touchscreen coatings	50 Sn Solder; tin plating	51 Sb Flame retardants; alloys	52 Te Solar panels; alloys	53 I Antiseptics; thyroid health	54 Xe Headlights; ion thrusters
6	55 Cs Atomic clocks; drilling fluids	56 Ba Medical imaging; drilling	57 La Camera lenses; batteries	72 Hf Nuclear control rods	73 Ta Capacitors; surgical implants	74 W Filaments; cutting tools	75 Re Jet engine superalloys	76 Os Pen tips; electrical contacts	77 Ir Spark plugs; crucibles	78 Pt Catalysts; jewellery	79 Au Jewellery; electronics	80 Hg Scientific instruments; lamps	81 Tl Electronics; infrared detectors	82 Pb Batteries; radiation shielding	83 Bi Cosmetics; stomach remedies	84 Po Historic antistatic devices	85 At Research only	86 Rn Geological tracing; historic therapy
7	87 Fr Research only	88 Ra Historic luminous paint	89 Ac Neutron sources	104 Rf Research only	105 Db Research only	106 Sg Research only	107 Bh Research only	108 Hs Research only	109 Mt Research only	110 Ds Research only	111 Rg Research only	112 Cn Research only	113 Nh Research only	114 Fl Research only	115 Mc Research only	116 Lv Research only	117 Ts Research only	118 Og Research only
			57 La Camera lenses; batteries	58 Ce Catalysts; polishing	59 Pr Aircraft engines; magnets	60 Nd Powerful magnets; lasers	61 Pm Specialist nuclear batteries	62 Sm Magnets; cancer treatment	63 Eu Red phosphors; security	64 Gd MRI contrast agents	65 Tb Green phosphors; sonar	66 Dy Magnets; reactor control	67 Ho Lasers; magnetic research	68 Er Fibre-optic amplifiers	69 Tm Portable X-ray sources	70 Yb Atomic clocks; lasers	71 Lu PET scan detectors	
			89 Ac Neutron sources	90 Th Nuclear research; historic mantles	91 Pa Scientific research	92 U Nuclear fuel; rock dating	93 Np Neutron detectors	94 Pu Nuclear fuel; spacecraft power	95 Am Smoke detectors	96 Cm Spacecraft power sources	97 Bk Research only	98 Cf Neutron sources; well logging	99 Es Research only	100 Fm Research only	101 Md Research only	102 No Research only	103 Lr Research only	

Applications are concise examples; some radioactive and synthetic elements are used only in research.