

Polyatomic Ions	
NH_4^+	ammonium
$\text{C}_2\text{H}_3\text{O}_2^-$	acetate
ClO_3^-	chlorate
CO_3^{2-}	carbonate
MnO_4^-	permanganate
NO_3^-	nitrate
OH^-	hydroxide
SO_4^{2-}	sulfate
PO_4^{3-}	phosphate

Chemical Name	Metal Cation	Nonmetal Anion	Chemical Formula (include picture of ions summing to zero)
Sodium Sulfide			
Magnesium Oxide			
Calcium Phosphide			
Aluminum Chloride			
Ions that can be selected for drag and drop to build chemical formula			
Na ⁺¹	Na ⁺¹	Mg ⁺²	Ca ⁺²
Ca ⁺²	Ca ⁺²	SO ₄ ⁻²	PO ₄ ⁻³
PO ₄ ⁻³	ClO ₃ ⁻¹	ClO ₃ ⁻¹	ClO ₃ ⁻¹
OH ⁻¹	OH ⁻¹	Al ⁺³	O ⁻²
S ⁻²	P ⁻³	P ⁻³	Cl ⁻¹
Cl ⁻¹	Cl ⁻¹	Cl ⁻¹	

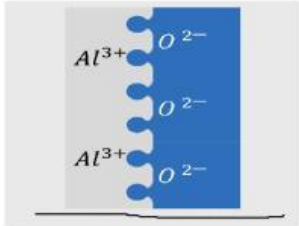
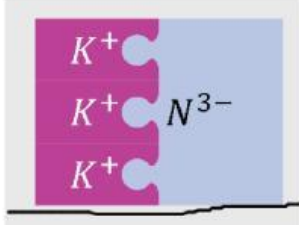
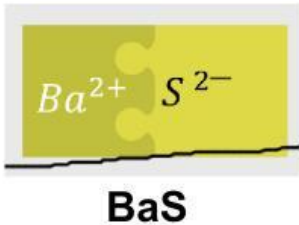
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PO_4^{3-}	phosphate

Chemical Name	Metal Cation	Polyatomic Anion	Chemical Formula (include picture of ions summing to zero)								
Sodium Sulfate											
Magnesium Hydroxide											
Calcium Phosphate											
Aluminum Chlorate											
Ions that can be selected for drag and drop to build chemical formula											
Na ⁺¹	Na ⁺¹	Mg ⁺²	Ca ⁺²	Ca ⁺²	Ca ⁺²	SO ₄ ⁻²	PO ₄ ⁻³	PO ₄ ⁻³	ClO ₃ ⁻¹	ClO ₃ ⁻¹	ClO ₃ ⁻¹
OH ⁻¹	OH ⁻¹	Al ⁺³	O ⁻²			S ⁻²	P ⁻³	P ⁻³	Cl ⁻¹	Cl ⁻¹	Cl ⁻¹

PERIODIC TABLE OF THE ELEMENTS																	
+1 +2																+3 +4 -3 -2 -1 0	
1 H Hydrogen 1.01	2 He Helium 4.00															18 Ne Neon 20.18	19 K Potassium 39.10
3 Li Lithium 6.94	4 Be Beryllium 9.01															10 Ar Argon 39.95	20 Ca Calcium 40.08
11 Na Sodium 22.99	12 Mg Magnesium 24.31															36 Kr Krypton 83.80	28 Ni Nickel 58.69
19 K Potassium 39.10	20 Ca Calcium 40.08	21 Sc Scandium 44.96	22 Ti Titanium 47.87	23 V Vanadium 50.94	24 Cr Chromium 52.00	25 Mn Manganese 54.94	26 Fe Iron 55.85	27 Co Cobalt 58.93	28 Ni Nickel 58.69	29 Cu Copper 63.55	30 Zn Zinc 65.38	31 Ga Gallium 69.72	32 Ge Germanium 72.63	33 As Arsenic 74.92	34 Se Selenium 78.96	35 Br Bromine 79.90	36 Kr Krypton 83.80
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 95.94	43 Tc Technetium 98.91	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.91	46 Pd Palladium 106.42	47 Ag Silver 107.87	48 Cd Cadmium 112.41	49 In Indium 114.82	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.60	53 I Iodine 126.91	54 Xe Xenon 131.29
55 Cs Cesium 132.91	56 Ba Barium 137.33	57-71 La-Lu Lanthanides	72 Hf Hafnium 178.49	73 Ta Tantalum 180.95	74 W Tungsten 183.84	75 Re Rhenium 186.21	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.97	80 Hg Mercury 200.59	81 Tl Thallium 204.38	82 Pb Lead 207.2	83 Bi Bismuth 208.98	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)
87 Fr Francium (223)	88 Ra Radium (226)	89-103 Ac-Lr Actinides	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (277)	109 Mt Meitnerium (268)	110 Ds Darmstadtium (271)	111 Rg Roentgenium (272)	112 Cn Copernicium (285)	113 Nh Nihonium (286)	114 Fl Flerovium (289)	115 Mc Moscovium (290)	116 Lv Livermorium (293)	117 Ts Tennessine (294)	118 Og Oganesson (294)
57 La Lanthanum 138.91	58 Ce Cerium 140.12	59 Pr Praseodymium 140.91	60 Nd Neodymium 144.24	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.96	64 Gd Gadolinium 157.25	65 Tb Terbium 158.93	66 Dy Dysprosium 162.50	67 Ho Holmium 164.93	68 Er Erbium 167.26	69 Tm Thulium 168.93	70 Yb Ytterbium 173.05	71 Lu Lutetium 174.97			
89 Ac Actinium (227)	90 Th Thorium 232.04	91 Pa Protactinium 231.04	92 U Uranium 238.03	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)			

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SO ₄ ⁻²	sulfate
PO ₄ ⁻³	phosphate

Chemical Name	Metal Cation	Nonmetal Anion	Chemical Formula (include picture of ions summing to zero)
			 Al₂O₃
			 K₃N
			 BaS

