

# STAAR CHEMISTRY REFERENCE MATERIALS

## PERIODIC TABLE OF THE ELEMENTS

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18																																																																																		
1A		2A		3B		4B		5B		6B		7B		8B		9B		10B		11B		12B		3A		4A		5A		6A		7A		8A																																																																																		
1	<b>H</b> 1.008 Hydrogen	3	<b>Li</b> 6.941 Lithium	19	<b>K</b> 39.098 Potassium	21	<b>Sc</b> 44.956 Scandium	22	<b>Ti</b> 47.867 Titanium	23	<b>V</b> 50.942 Vanadium	24	<b>Cr</b> 51.996 Chromium	25	<b>Mn</b> 54.938 Manganese	26	<b>Fe</b> 55.845 Iron	27	<b>Co</b> 58.933 Cobalt	28	<b>Ni</b> 58.693 Nickel	29	<b>Cu</b> 63.546 Copper	30	<b>Zn</b> 65.38 Zinc	31	<b>Ga</b> 69.723 Gallium	32	<b>Ge</b> 72.64 Germanium	33	<b>As</b> 74.922 Arsenic	34	<b>Se</b> 78.96 Selenium	35	<b>Br</b> 79.904 Bromine	36	<b>Kr</b> 83.798 Krypton																																																																															
2	4	<b>Be</b> 9.012 Beryllium	12	<b>Mg</b> 24.305 Magnesium	20	<b>Ca</b> 40.078 Calcium	38	<b>Sr</b> 87.62 Strontium	56	<b>Ba</b> 137.328 Barium	88	<b>Ra</b> (226) Radium	103	<b>Lu</b> 174.967 Lutetium	104	<b>Hf</b> 178.49 Hafnium	105	<b>Ta</b> 180.948 Tantalum	106	<b>W</b> 183.84 Tungsten	107	<b>Re</b> 186.207 Rhenium	108	<b>Os</b> 190.23 Osmium	109	<b>Ir</b> 192.217 Iridium	110	<b>Pt</b> 195.085 Platinum	111	<b>Au</b> 196.967 Gold	112	<b>Hg</b> 200.59 Mercury	113	<b>Tl</b> 204.383 Thallium	114	<b>Pb</b> 207.2 Lead	115	<b>Bi</b> 208.980 Bismuth	116	<b>Po</b> (209) Polonium	117	<b>At</b> (210) Astatine	118	<b>Rn</b> (222) Radon																																																																								
3	11	<b>Na</b> 22.990 Sodium	11	<b>Na</b> 22.990 Sodium	19	<b>K</b> 39.098 Potassium	21	<b>Sc</b> 44.956 Scandium	22	<b>Ti</b> 47.867 Titanium	23	<b>V</b> 50.942 Vanadium	24	<b>Cr</b> 51.996 Chromium	25	<b>Mn</b> 54.938 Manganese	26	<b>Fe</b> 55.845 Iron	27	<b>Co</b> 58.933 Cobalt	28	<b>Ni</b> 58.693 Nickel	29	<b>Cu</b> 63.546 Copper	30	<b>Zn</b> 65.38 Zinc	31	<b>Ga</b> 69.723 Gallium	32	<b>Ge</b> 72.64 Germanium	33	<b>As</b> 74.922 Arsenic	34	<b>Se</b> 78.96 Selenium	35	<b>Br</b> 79.904 Bromine	36	<b>Kr</b> 83.798 Krypton																																																																														
4	20	<b>Ca</b> 40.078 Calcium	20	<b>Ca</b> 40.078 Calcium	28	<b>Ca</b> 40.078 Calcium	38	<b>Sr</b> 87.62 Strontium	56	<b>Ba</b> 137.328 Barium	88	<b>Ra</b> (226) Radium	103	<b>Lu</b> 174.967 Lutetium	104	<b>Hf</b> 178.49 Hafnium	105	<b>Ta</b> 180.948 Tantalum	106	<b>W</b> 183.84 Tungsten	107	<b>Re</b> 186.207 Rhenium	108	<b>Os</b> 190.23 Osmium	109	<b>Ir</b> 192.217 Iridium	110	<b>Pt</b> 195.085 Platinum	111	<b>Au</b> 196.967 Gold	112	<b>Hg</b> 200.59 Mercury	113	<b>Tl</b> 204.383 Thallium	114	<b>Pb</b> 207.2 Lead	115	<b>Bi</b> 208.980 Bismuth	116	<b>Po</b> (209) Polonium	117	<b>At</b> (210) Astatine	118	<b>Rn</b> (222) Radon																																																																								
5	37	<b>Rb</b> 85.468 Rubidium	37	<b>Rb</b> 85.468 Rubidium	55	<b>Cs</b> 132.905 Cesium	87	<b>Fr</b> (223) Francium	101	<b>La</b> 138.905 Lanthanum	102	<b>Ce</b> 140.116 Cerium	103	<b>Pr</b> 140.908 Praseodymium	104	<b>Nd</b> 144.242 Neodymium	105	<b>Pm</b> (145) Promethium	106	<b>Sm</b> 150.36 Samarium	107	<b>Eu</b> 151.964 Europium	108	<b>Gd</b> 157.25 Gadolinium	109	<b>Tb</b> 158.925 Terbium	110	<b>Dy</b> 162.500 Dysprosium	111	<b>Ho</b> 164.930 Holmium	112	<b>Er</b> 167.259 Erbium	113	<b>Tm</b> 168.934 Thulium	114	<b>Yb</b> 173.055 Ytterbium	115	<b>Lu</b> 174.967 Lutetium	116	<b>Hf</b> 178.49 Hafnium	117	<b>Ta</b> 180.948 Tantalum	118	<b>W</b> 183.84 Tungsten	119	<b>Re</b> 186.207 Rhenium	120	<b>Os</b> 190.23 Osmium	121	<b>Ir</b> 192.217 Iridium	122	<b>Pt</b> 195.085 Platinum	123	<b>Au</b> 196.967 Gold	124	<b>Hg</b> 200.59 Mercury	125	<b>Tl</b> 204.383 Thallium	126	<b>Pb</b> 207.2 Lead	127	<b>Bi</b> 208.980 Bismuth	128	<b>Po</b> (209) Polonium	129	<b>At</b> (210) Astatine	130	<b>Rn</b> (222) Radon																																																
6	55	<b>Cs</b> 132.905 Cesium	55	<b>Cs</b> 132.905 Cesium	71	<b>Lu</b> 174.967 Lutetium	71	<b>Lu</b> 174.967 Lutetium	87	<b>Fr</b> (223) Francium	101	<b>La</b> 138.905 Lanthanum	102	<b>Ce</b> 140.116 Cerium	103	<b>Pr</b> 140.908 Praseodymium	104	<b>Nd</b> 144.242 Neodymium	105	<b>Pm</b> (145) Promethium	106	<b>Sm</b> 150.36 Samarium	107	<b>Eu</b> 151.964 Europium	108	<b>Gd</b> 157.25 Gadolinium	109	<b>Tb</b> 158.925 Terbium	110	<b>Dy</b> 162.500 Dysprosium	111	<b>Ho</b> 164.930 Holmium	112	<b>Er</b> 167.259 Erbium	113	<b>Tm</b> 168.934 Thulium	114	<b>Yb</b> 173.055 Ytterbium	115	<b>Lu</b> 174.967 Lutetium	116	<b>Hf</b> 178.49 Hafnium	117	<b>Ta</b> 180.948 Tantalum	118	<b>W</b> 183.84 Tungsten	119	<b>Re</b> 186.207 Rhenium	120	<b>Os</b> 190.23 Osmium	121	<b>Ir</b> 192.217 Iridium	122	<b>Pt</b> 195.085 Platinum	123	<b>Au</b> 196.967 Gold	124	<b>Hg</b> 200.59 Mercury	125	<b>Tl</b> 204.383 Thallium	126	<b>Pb</b> 207.2 Lead	127	<b>Bi</b> 208.980 Bismuth	128	<b>Po</b> (209) Polonium	129	<b>At</b> (210) Astatine	130	<b>Rn</b> (222) Radon																																														
7	87	<b>Fr</b> (223) Francium	87	<b>Fr</b> (223) Francium	101	<b>La</b> 138.905 Lanthanum	101	<b>La</b> 138.905 Lanthanum	117	<b>Lu</b> 174.967 Lutetium	117	<b>Lu</b> 174.967 Lutetium	123	<b>Pr</b> 140.908 Praseodymium	123	<b>Pr</b> 140.908 Praseodymium	129	<b>Sm</b> 150.36 Samarium	129	<b>Sm</b> 150.36 Samarium	135	<b>Eu</b> 151.964 Europium	135	<b>Eu</b> 151.964 Europium	141	<b>Gd</b> 157.25 Gadolinium	141	<b>Gd</b> 157.25 Gadolinium	147	<b>Tb</b> 158.925 Terbium	147	<b>Tb</b> 158.925 Terbium	153	<b>Dy</b> 162.500 Dysprosium	153	<b>Dy</b> 162.500 Dysprosium	159	<b>Ho</b> 164.930 Holmium	159	<b>Ho</b> 164.930 Holmium	165	<b>Er</b> 167.259 Erbium	165	<b>Er</b> 167.259 Erbium	171	<b>Tm</b> 168.934 Thulium	171	<b>Tm</b> 168.934 Thulium	177	<b>Yb</b> 173.055 Ytterbium	177	<b>Yb</b> 173.055 Ytterbium	183	<b>Lu</b> 174.967 Lutetium	183	<b>Lu</b> 174.967 Lutetium	189	<b>Hf</b> 178.49 Hafnium	189	<b>Hf</b> 178.49 Hafnium	195	<b>Ta</b> 180.948 Tantalum	195	<b>Ta</b> 180.948 Tantalum	201	<b>W</b> 183.84 Tungsten	201	<b>W</b> 183.84 Tungsten	207	<b>Re</b> 186.207 Rhenium	207	<b>Re</b> 186.207 Rhenium	213	<b>Os</b> 190.23 Osmium	213	<b>Os</b> 190.23 Osmium	219	<b>Ir</b> 192.217 Iridium	219	<b>Ir</b> 192.217 Iridium	225	<b>Pt</b> 195.085 Platinum	225	<b>Pt</b> 195.085 Platinum	231	<b>Au</b> 196.967 Gold	231	<b>Au</b> 196.967 Gold	237	<b>Hg</b> 200.59 Mercury	237	<b>Hg</b> 200.59 Mercury	243	<b>Tl</b> 204.383 Thallium	243	<b>Tl</b> 204.383 Thallium	249	<b>Pb</b> 207.2 Lead	249	<b>Pb</b> 207.2 Lead	255	<b>Bi</b> 208.980 Bismuth	255	<b>Bi</b> 208.980 Bismuth	261	<b>Po</b> (209) Polonium	261	<b>Po</b> (209) Polonium	267	<b>At</b> (210) Astatine	267	<b>At</b> (210) Astatine	273	<b>Rn</b> (222) Radon	273	<b>Rn</b> (222) Radon

Mass numbers in parentheses are those of the most stable or most common isotope.

Lanthanide Series

Actinide Series