### Arts and Crafts Day!!

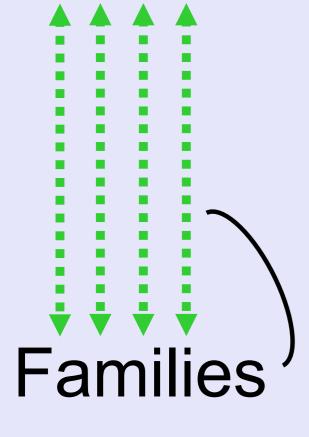
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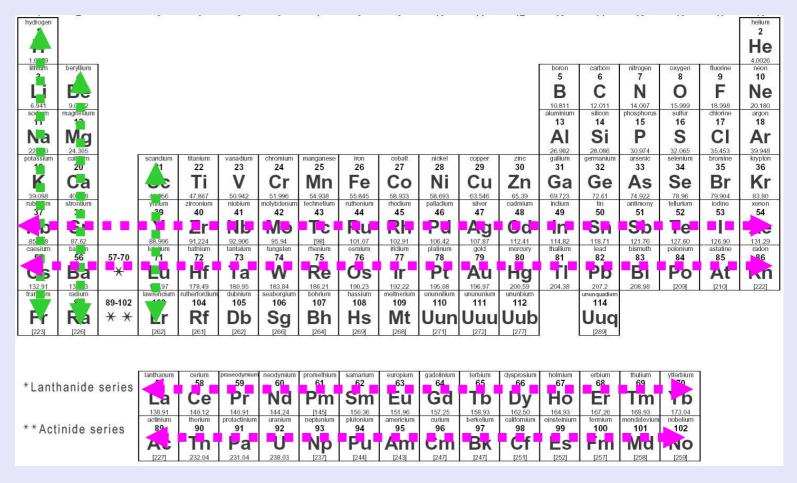
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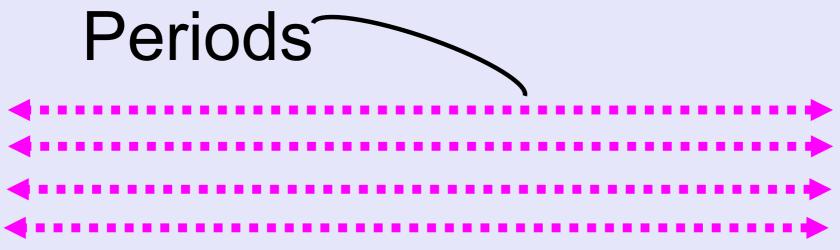
Periodic Table of the Elements																			
	Group 1 1A 1	ſ	_					Alkalai met Alkaline ea			Post-transition metals 8A Metalloids 2								
1	1 H 11 Atomic number   Hydrogen 2 Na Element symbol   1.0078 2A Sodium Element name   3 4 22.990 Atomic weight							Lanthanide Actinides			Other nonme Halogens	etals	13 3A 5	14 4A 6	15 5A	16 6A	17 7A 9	He Helium 4.0026 10	
2	1.1	Beryllium 9.0122			Atomic weig	Inc		Transition metals Unknown properties			Noble gases		B Boron 10.806	Carbon 12.009	N Nitrogen 14.006	Oxygen 15.999	F Fluorine 18.998	Ne Neon 20.180	
3	11 Na Sodium 22.990	12 Mg Magnesium 24,305	3 3B	4 4B	5 5B	6 6B	7 7B	8	9 8B	10 11 12 1B 2B		13 Al Aluminum 26.982	14 Si Silicon 28.084	15 P Phosphorus 30.974	16 <b>S</b> Sulfur 32.059	17 Cl Chlorine 35.446	18 Ar Argon 39.948		
Period	19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.867	23 V Vanadium 50.942	24 Cr Chromium 51,996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 <b>Co</b> Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga	32 Ge Germanium 72.63	33 As Arsenic 74.922	34 Se Selenium 78.96	35 Br Bromine 79,904	36 Kr Krypton 83.798	
5	37	38 Sr Strontium 87,62	39 Y Yttrium 88,906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.96	43 Tc Technetium 98.9062	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 <b>Sn</b> Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.60	53   lodine 126.90	54 Xe Xenon 131.29	
6	55 Cs Cesium	56 Ba Barium	88.706	72 <b>Hf</b> Hafnium	73 <b>Ta</b> Tantalum	74 W Tungsten	75 <b>Re</b> Rhenium	76 Os Osmium	77 <b>İr</b> Iridium	78 <b>Pt</b> Platinum	79 Au Gold	80 Hg Mercury	81 <b>Tl</b> Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 <b>Rn</b> Radon	
7	132.91 87 Fr Francium	137.33 88 Ra Radium		178.49 104 <b>Rf</b> Rutherfordium	180.95 105 <b>Db</b> Dubnium	183.84 106 <b>Sg</b> Seaborgium	186.21 107 <b>Bh</b> Bohrium	190.23 108 Hs Hassium	192.22 109 Mt Meitnerium	195.08 110 Ds Damstadtium	196.97 111 Rg Roentgenium	200.59 112 Cn Copernicium	204.38 113 Unutrium	207.2 114 Fl Flerovium	208.98 115 Uup Ununpentium	(209) 116 Lv Livermorium	(210) 117 Uus Ununseptium	(222) 118 Uuo Ununoctium	
Francium Radium (223) (226) Rutherfordium Dubnium Seaborgium (262) (266) (264) (269) (269) (268)																			
			Lanthanides	Lanthanum		59 Pr Praseodymium	60 Nd Neodymium	61 Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium		66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium	
			Actinides La	138.91 89 Ac Actinium (227)	140.12 90 <b>Th</b> Thorium 232.04	140.91 91 Protactinium 231.04	144.24 92 U Uranium 238.03	(145) 93 Np Neptunium (237)	150.36 94 Pu Plutonium (244)	151.96 95 Am Americium (243)	157.25 96 Cm Curium (247)	158.93 97 <b>Bk</b> Berkelium (247)	162.50 98 Cf Californium (251)	164.93 99 Es Einsteinium (252)	167.26 100 Fm Fermium (257)	168.93 101 Md Mendelevium (258)	173.04 102 No Nobelium (259)	174.97 103 Lr Lawrencium (262)	

SOURCES: National Institute of Standards and Technology, International Union of Pure and Applied Chemistry

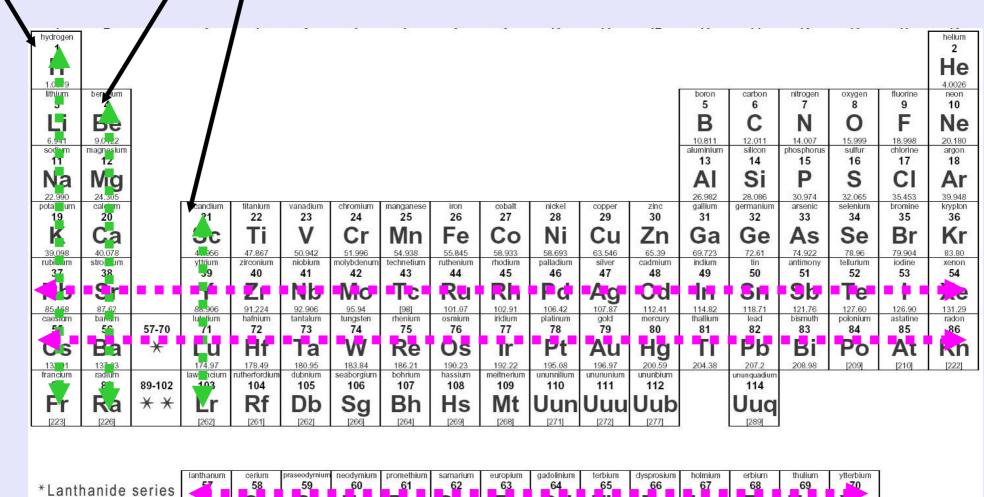
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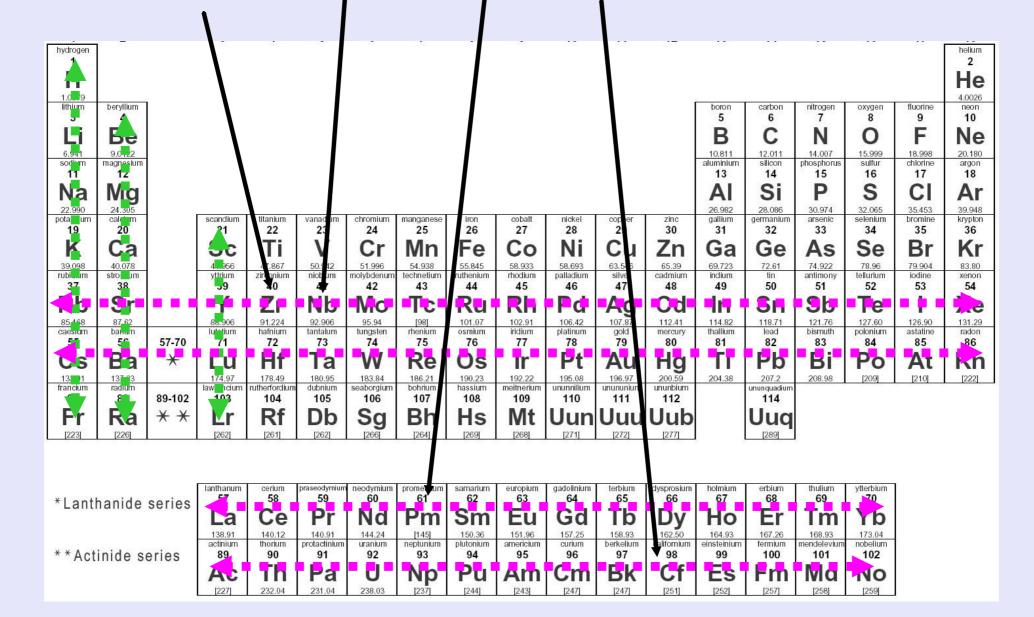


# Families: The vertical columns on the periodic table



*Lanthanide series	57	58	59	60	61	62	63	64	65	66	67	68	69	70
Lanthaniae Series	La	Се	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Но	Er	Tm	Yb
	138.91	140.12	140.91	144.24	[145]	150.36	151.96	157.25	158.93	162.50	164.93	167.26	168.93	173.04
	actinium	thorium	protactinium	uranium	neptunium	plutonium	americium	curium	berkelium	californium	einsteinium	fermium	mendelevium	nobelium
* * Actinide series	89	90	91	92	93	94	95	96	97	98	99	100	101	102
	Ac	Th	Pa	• •	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Ma	NO
	[227]	232.04	231.04	238.03	[237]	[244]	[243]	[247]	[247]	[251]	[252]	[257]	[258]	[259]

# Periods: The horizontal rows on the periodic table



### The periodic table is divided up into several different areas, depending on the atoms properties.

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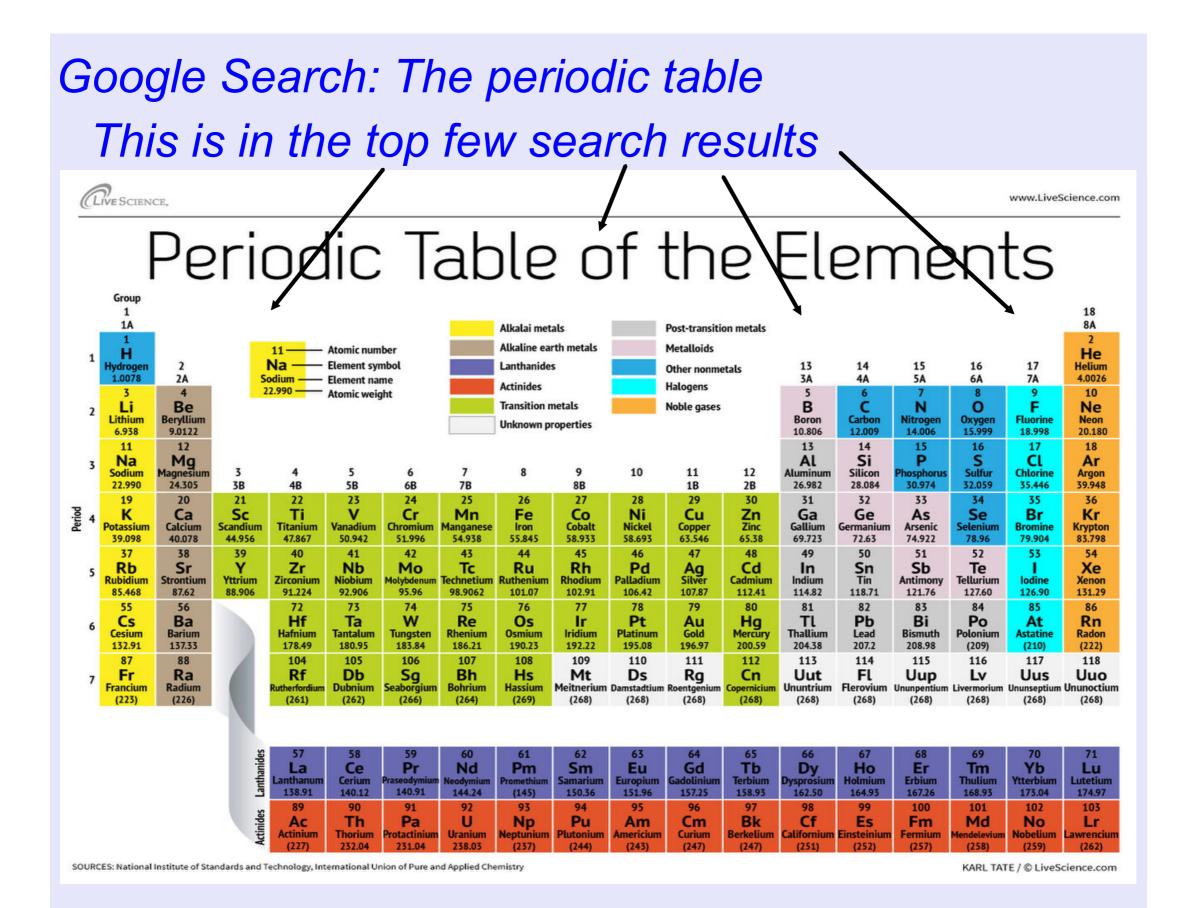
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### Group 18 1 8A 1A Alkalai metals Post-transition metals 2 Alkaline earth metals Metalloids 11 - Atomic number н He 1 Na Element symbol 14 15 17 2 Lanthanides 13 16 lvdrogen Other nonmetals Helium 1.0078 2A Sodium -- Element name 3A 4A 5A 6A 7A 4.0026 Halogens Actinides 22.990 -10 3 4 Atomic weight 5 6 9 Li **Transition metals** Noble gases С 0 F Be В N Ne 2 Lithium Carbon Beryllium Boron Nitrogen 14.006 Oxygen Fluorine Neon Unknown properties 6.938 9.0122 10.806 12.009 15.999 18.998 20.180 13 14 18 11 17 15 16 17 Si Ρ S Na AL Cι Ar Mg 3 5 6 7 8 9 10 11 12 Silicon Sulfur Chlorine Sodium 3 4 Aluminum hosphorus Argon laonesiu 30.974 32.059 22.990 24.305 3B **4B** 5B 6B 7B 8**B 1B** 2B 26.982 28.084 35.446 39.948 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 19 Period κ Ca Sc Ti V Cr Mn Ni Cu Ge Se Br Kr Fe Co Zn Ga As Potassium Calcium Vanadium Cobalt Nickel Zinc Gallium Scandium Copper Germanium Arsenic Bromine Krypton Titaniun Chromium anganes Iron leniu 39.098 40.078 44.956 47.867 50.942 51.996 54.938 55.845 58.933 58.693 63.546 65.38 69.723 72.63 74.922 78.96 79,904 83.798 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 Rb Sr Y Zr Rh Pd Ag Silver Sb Nb Mo Tc Ru Cd In Sn Te Xe 5 Tin Rubidium Yttrium Technetiun Palladium Cadmium Indium Antimony Tellurium lodine Strontium Zirconiun Niobium lutheniu Rhodium Xenon olybden 107.87 112.41 114.82 126 90 85.468 87.62 88 906 91.224 92.906 95.96 98.9062 101.07 102.91 106.42 118.71 121.76 127.60 131.29 55 56 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 Cs Ba Hf w Re Os Pt тι Pb Bi Po Rn Та Ir At Au Hg 6 Cesium Barium Hafnium Tantalum Tungsten Rhenium Osmium Iridium Platinum Gold Thallium Lead Bismuth Polonium Astatine Radon Mercury 132.91 137.33 178.49 180.95 183.84 186.21 190.23 192.22 195.08 196.97 200.59 204.38 207.2 208.98 (209) (210) (222) 88 104 117 118 87 105 106 107 108 109 110 111 112 113 114 115 116 Fr Ra Rf Db Sg Bh Mt Ds Rg Uut Fl Uup Uus Uuo Hs Cn Lv 7 Francium Radium tutherfordium Dubnium eaborgiun Bohrium Hassium Meitnerium Damstadtium Roentae Coperniciu Ununtrium Flerovium Ununpentiu Livermorium Ununseptium Ununoctium (226) (261) (223) (262) (266) (264) (269) (268) (268) (268) (268) (268) (268) (268) (268) (268) (268) 61 62 63 71 Ce Pr Nd Eu Gd Tb Dy Er Yb La Pm Sm Ho Tm Lu Cerium anthan Terbium Iolmiun Erbium Thuliun **/tterbiu** Lutetium urop 138.91 140.91 144.24 150.36 151.96 157.25 158.93 162.50 167.26 168.93 140.12 (145) 164.93 173.04 174.97 89 90 91 97 93 94 95 96 97 98 99 100 101 102 103 Actinides Pa U Pu Bk Cf Es Lr Τh Np Am Cm Fm Md No Ac Actiniun Thorium otactini Uranium Neptuniu Plutoniun mericiun Curium Berkelium alifornium insteiniur Fermium endelevi Nobelium awrenciu (227) 232.04 231.04 238 03 1744 (247 (252) (258) 1247 (251) (257) (259) (262)

## Periodic Table of the Elements

SOURCES: National Institute of Standards and Technology, International Union of Pure and Applied Chemistry

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Things to include on your personal table:

- 1. All the labeled groups included on the previous image.
- 2. Use different colors (highlighters work great) for each different section.
- 3. The following definitions: Families, Periods, Atomic Mass, Atomic Weight
- 4. The following diagrams: The parts of the cell, and the parts of the atom