

## **Activity sheet**

## **Activity 1.2 Periodic trends**

The periodic table has been constructed to cluster atoms with similar properties. As you go through the chemistry course this year identify how these properties changes as you move across the table from left to right or down the table from top to bottom.

hydrogen	]																helium 2
Ĥ																	He
1.008																	4.003
lithium	beryllium	1										boron	carbon	nitrogen	oxygen	flourine	neon
3	4											5	6	7	8	9	10
Li	Be											В	C	N	0	F	Ne
6.941	9.012											10.811	12.011	14.007	15.999	18.998	20.180
Sodium 11	Magnesium 12	]										aluminium 13	silicon 14	phosphorus 15	sulfur 16	chlorine 17	argon 18
Na	Mg											ΑI	Si	Р	S	CI	Ar
22.990	24.305											26.982	28.086	30.974	32.066	35.453	39.948
potassium 19	calcium 20	scandium 21	titanium 22	vanadium 23	chronium 24	manganese 25	iron 26	cobalt 27	nickel 28	copper 29	zinc 30	gallium 31	germanium 32	arsenic 33	selenium 34	bromine 35	krypton 36
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
39.098	40,078	44,956	47,88	_	51.996	54.938	55.933	58.933	58,693	63.546	65.39	69,732	72.61	74,922	78.09	79.904	84,80
rubidium	strontium	yttrium	zirconium	50.942 niobium	molybdenum	technetic	ruthenium	rhodium	palladium	silver	cadmium	indium	72.61 tin	antimony	78.09 tellurium	iodine	xenon
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Rb	Sr	Y	Zr	Nb	Мо	Tc	Ru	Rh	Pd	Ag	Cd	ln	Sn	Sb	Te		Xe
84.468	87.62	88.906	91.224	92.906	95.94	98.907	101.07	102.906	106.42	107.868	112.411	114.818	118.71	121.760	127.6	126.904	131.29
cesium 55	barium 56		hafnium 72	tantalum 73	tungsten 74	rhenium 75	osmium 76	iridium 77	platinum 78	gold 79	mercury 80	thallium 81	lead 82	bismuth 83	polonium 84	astatine 85	radon 86
Cs	Ba	57-71	Hf	Ta	w	Re	Os	lr	Pt	Au	Hg	TI	Pb	Bi	Po	At	Rn
132,905	137,327	/ '	178,49	180,948	183.85	186,207	190,23	192,22	195.08	196,967	200.59	204.383	207.2	208,980	208,982	209.987	222.018
francium	radium		rutherfordium	debnium	seaborgium	bohrium	hassium	meitnerium	darmstadtium	roentgenium	copernicium	204.303	flerovium	200.980	livermorium	207.907	222.018
87	88		104	105	106	107	108	109	110	111	112		114		116		
Fr	Ra	88-103	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn		FI		Lv		
223.020	226.025		[261]	[262]	[266]	[264]	[269]	[268]	[269]	[272]	[277]		[289]		[298]		

lanthanum 57	cerium 58	praseodymium 59	neodynium 60	promethium 61	samarium 62	europium 63	gadolinium 64	terbium 65	dysprosium 66	holmium 67	erbium 68	thulium 69	ytterbium 70	lutetium 71
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Но	Er	Tm	Yb	Lu
138.906	140.115	140.908	144.24	144.913	150.36	151.966	157.25	158.925	162.50	164.930	167.26	168.934	173.04	174.967
actinium 89	thorium 90	protactinium 91	uranium 92	neptunium 93	plutonium 94	americium 95	curium 96	berkelium 97	californium 98	einsteinium 99	fermium 100	mendelevium 101	nobelium 102	lawrencium 103
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr
277.028	232.038	231.036	238.029	237.048	244.064	243.061	247.070	247.070	251.080	[254]	257.095	258.1	259.101	[262]