

International Year of the Periodic Table of Elements (IYPTE-2019)

NELSON MANDELA
UNIVERSITY

Periodic Table of the Elements

										NELSON MANDELA UNIVERSITY																												
IA												VIII A																										
1.00794	H											10.811	C	12.011	N	14.0067	O	15.9994	F	18.9984	Ne	20.1797																
1												5		6		7		8		9		10																
6.941	Li	9.01218	Be											26.9815	B	28.0855	C	30.9738	N	32.066	O	35.4527	F	39.948														
2		4												13		14		15		16		17		18														
22.989769	Na	24.3050	Mg	III B	IV B	V B	VI B	VII B	VIII B	VIII	VIII	IB	IIB	Al	Si	P	S	Cl	Ar																			
11		12												13	14	15	16	17	18																			
39.0983	K	40.078	Ca	44.9559	Sc	47.867	Ti	50.9415	V	51.9961	Cr	54.9381	Mn	55.845	Fe	58.9332	Co	58.9332	65.6034	Ni	63.546	Cu	65.39	Zn	69.723	Ga	72.61	Ge	74.9216	As	78.96	Se	79.904	Br	83.80	Kr		
19		20		21		22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38
85.4678	Rb	87.62	Sr	88.9059	Y	91.224	Zr	92.9064	Nb	95.94	Mo	97.9072	Tc	101.07	Ru	102.905	Rh	106.42	Pd	107.868	Ag	112.411	Cd	114.818	In	118.710	Sn	121.760	Sb	127.60	Te	126.904	I	127.29	Xe			
37		38		39		40		41		42		43		44		45		46		47		48		49		50		51		52		53		54		55		
132.905	Cs	137.327	Ba	57 - 71	Hf	178.49	Ta	180.948	W	183.84	Re	186.207	Os	190.23	Ir	192.227	Pt	195.08	Au	196.967	Hg	200.59	Tl	204.381	Pb	207.2	Bi	208.980	Po	209.987	At	209.987	Rn	222.018				
55		56				72		73		74		75		76		77		78		79		80		81		82		83		84		85		86		87		
223.020	Fr	226.025	Ra	89 - 103	Rf	261.109	Db	262.114	Sg	263.118	Bh	262.12	Hs	(269)	Mt	(268)	Ds	(281)	Rg	(280)	Cn	(277)	Nh	(287)	Fl	(288)	Mc	(289)	Lv	(293)	Ts	(292)	Og	(294)				
87		88				104		105		106		107		108		109		110		111		112		113		114		115		116		117		118				

Lanthanides	138.905	140.115	140.908	144.24	146.915	150.36	157.25	162.50	168.931	173.04	174.967				
	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
Actinides	227.028	232.038	231.036	238.029	237.048	244.064	243.061	247.070	247.070	251.083	252.083	257.095	258.099	259.101	260.103
	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr
	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103

The periodic table is not just a typical wall decoration in science lecture rooms, it is an exceptional tool for scientists to understand, and even predict, the properties of the elements. 2019 marks 150 years since it was founded and the United Nations General Assembly proclaimed this year as the International Year of the Periodic Table and it should be celebrated all over the world. The Nelson Mandela University's Department of Chemistry will be taking part in the celebrations through public lectures, chemistry demonstration events and through social media to create awareness. 2019 is also the International Year of Indigenous Languages, and the Department of Chemistry will collaborate with the School of Languages experts at NMU to coin African names (particularly in IsiXhosa) for the elements of the Periodic Table. Some elements are named after places of discovery as well as names of scientists or institutions that discovered them, but some are named after the characteristics of the elements, and the naming project will target such elements. The full programme appears on the next page:

The programme is as follows:

Activity	Proposed Date	Responsible persons
1. Public lecture by Dr R. Betz Title: The Periodic Table of the Elements - Where from? Where at? Where to?	29 May 2019 (NMU, Building 127 Auditorium, 13:00-14:00)	Mr Nehemiah Latolla, Ms Zimkitha Dyan, Ms Anita Noah, Dr Buyiswa Hlangothi, Prof Zeni Tshentu and Dr Richard Betz
2. Chemistry Demonstrations and naming exercise (Western Suburbs schools)	12 June 2019 (NMU, 35:01:01, 14:00-16:00)	Mr J. Austin, Mr N. Latolla, Dr R. Betz, Dr G. Rubidge, Ms A. Noah, Dr Z. Kondowe, Dr B. Hlangothi, Mr A. Klaas, Ms Y. Sonqishe, Dr M. Phiri, and Prof. Z. Tshentu
3. EXTRA Papenkuils Primary Show	PP School hall, 100 children, 10:30-12:30	GR
4. Chemistry Demonstrations and naming exercise (Motherwell Schools)	18 July 2019 (Raymond Mhlaba center, 12:00-14:00)	Mr M. Swartbooi, Mr N. Latolla, Dr R. Betz, Dr G. Rubidge, Ms A. Noah, Dr Z. Kondowe, Dr B. Hlangothi, Mr A. Klaas, Ms Y. Sonqishe, Dr M. Phiri, and Prof. Z. Tshentu
5. Chemistry Demonstrations and naming exercise (NMU Students and Staff) TO BE RESCHEDULED		Mr N. Latolla, Dr R. Betz, Dr G. Rubidge, Ms A. Noah, Dr Z. Kondowe, Dr B. Hlangothi, Mr A. Klaas, Ms Y. Sonqishe, Dr M. Phiri, Mrs Kina Muller and Prof. Z. Tshentu
6. Chemistry Demonstrations and naming exercise (Cala)	Canceled	Dr Rubidge, Mr Nehemiah Latolla, and other
7. Chemistry show for Expo Event Diaz Primary	25 July 11:30-12:30	Dr Rubidge and ISTs
8. Chemistry Demonstration – Expert Minds (Walmer)	26 July 8:30-9:30	Dr Rubidge & Son
9. Chemistry Stall and Show Walmer High	29 July 9:00 – 12:00	Dr Rubidge, T Swartbooi, Ocean Sciences Staff
10. Chemistry Demonstrations and naming exercise (Kwazakhele/Zwide Schools)	Postponed – new date to be determined after clearance	Mr Qweqwe, Mr N. Latolla, Dr R. Betz, Ms A. Noah, Dr Z. Kondowe, Dr B. Hlangothi, Mr A. Klaas, Ms Y. Sonqishe, Dr M. Phiri, Mrs Kina Muller and Prof. Z. Tshentu
11. Chemistry Demonstrations and naming exercise (Northern Suburbs Schools) No confirmation	Postponed – new date to be determined after clearance No venues available at Missionvale	Mr. C. Frank, Mr N. Latolla, Dr R. Betz, Dr G. Rubidge, Ms A. Noah, Dr Z. Kondowe, Dr B. Hlangothi, Mr A. Klaas, Ms Y. Sonqishe, Dr M. Phiri, Mrs Kina Muller and Prof. Z. Tshentu
12. Public lecture by Dr M. Weigt. Title: The creation of the elements of the periodic table in stars.	NSW, 1 August 2019, (NMU, Building 127 Auditorium, 13:00-14:00)	Dr G. Rubidge, Dr R. Betz, Mr Nehemiah Latolla, Ms Zimkitha Dyan, Dr Buyiswa Hlangothi, Prof Zeni Tshentu and Dr Martin Weigt.
13. Chemistry Demonstrations and naming exercise (NMB Science and Technology Centre)	NSW, 2 August 2019, NMB Science and Technology Centre in Uitenhage (10:00-12:00)	Mrs Singathwa Kuli, Mr N. Latolla, Dr R. Betz, Dr G. Rubidge, L Waka, K Govender, Ms A. Noah, Dr Z. Kondowe, Dr B. Hlangothi, Mr A. Klaas, Ms Y. Sonqishe, Dr M. Phiri, Mrs Kina Muller and Prof. Z. Tshentu
14. Eskom Expo – Juniors chem show and possibly naming	6 Aug Missionvale Sports center ~12:00	Dr G Rubidge, K Govender, L Waka
15. Eskom Expo – Seniors chem show and possibly naming	7 Aug Missionvale Sports center ~12:00	Dr G Rubidge, K Govender, L Waka
16. Public lecture on “A journey on naming of chemical elements	9 September???? 2019, NMU, Council Chambers,	Mr N. Latolla, Dr R. Betz, Dr G. Rubidge, Ms A. Noah, Dr Z. Kondowe, Dr B. Hlangothi, Mr A. Klaas, Ms Y.

in indigenous languages” at NMU	Main Building, (13:00-14:00)	Sonqishe, Dr M. Phiri, Mrs Kina Muller and Prof. Z. Tshentu
17. Prepare a manuscript for publication to the South African Journal of Chemistry	Submit the manuscript in November 2019	Mr Latolla, Dr Betz, Dr G. Rubidge, Ms Noah, Dr Kondowe, Dr Hlangothi, and Prof. Z. Tshentu (original list but will be expanded based on contributions)