

## High school students' knowledge in chemistry: is it adequate?

**Abstract:** Out of around 3 different high schools as a science teacher I have been, with different genders, the concept of pure chemistry knowledge has a problem on the students. In a class of 74 students either boys or girls, you will find roughly 20 students are the one understanding and able to illustrate pure chemistry concept. This indicates the large number of high school students who finish the curriculum join tertiary institutions with half-baked chemistry knowledge. This has been attributed as they lay foundation in form 2 with periodic table concept, most teachers may have rushed through the principles of elements or students just give up so early before even getting to senior classes.

**Keywords:** conceptual understanding, analytical chemistry, industrial chemistry, chemical engineering

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### Introduction

Students joining high school with high marks in primary science and high ambitions of quality grades especially in sciences. As they continue with secondary school knowledge, general chemistry concept puts them well until they get to form two. Research and experience shows at this level most of learners start to have attitudes towards teachers not because they are bad nor don't prepare them well but because the concept has deep understanding and its demanding seriousness and focus. In this level, students discuss elements, symbols and even how they react writing the correct balanced chemical equations. Students become afraid and the fear of chemistry builds up to failure up to form four and also colleges.

It's now clear that both the gender is finding chemistry to be tough in their own analogy that's false affecting the courses they are having in colleges as analytical chemistry, industrial chemistry, chemical engineering and even the field of medicine. It will force the teachers of chemistry in colleges to bridge what was learned in high school chemistry to help in understanding. It's the same group that will graduate and become world teachers who will add to this complication by operating on interrelating three levels of thought the macro tangible practical's, micro atomic concepts and molecular understanding and representation use of symbols and mathematics. Understanding the periodic table concept well on elements their symbols, position, relative masses, how they react will solve the idea around misunderstanding of chemistry from our students well for once

The simple periodic table is attached below;

H																	He	
Li	Be											B	C	N	O	F	Ne	
Na	Mg											Al	Si	P	S	Cl	Ar	
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	
Cs	Ba	*	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	**	Lr	Rf	Db	Sg	Bh	Hs	Mt	110	111	112						
		*	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb		
		**	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No		