



Chemistry

Please complete one line from the task list below. All students must complete the middle task:

Make a model of an isomer	Create a rap/poem/song/parody about the structure of an atom, an isotope and an ion	Write a description of each of the following A mole, Ionic bonding, covalent bonding, metallic bonding, periods and groups in the periodic table
Complete logical task 1	“Chemistry is more important than biology when studying medicine” Write a 500 word discursive essay.	Complete logical task 2
Obtain a copy of a Chemistry Review, Focus or New scientist magazine and write a summary of one interesting chemistry article	Find 5 common chemistry misconceptions on YouTube and ask 5-10 people their understanding. Write a brief report of your findings	Make a model/poster of an atom. Include details of number of particles present. Show how it would differ if it were an isotope and an ion

Suggested book/reading list:

- CGP Ltd, Head Start to A level Chemistry (CGP, 2015)
- Ryan L., Advanced Chemistry For You Second Edition (OUP, 2015)
- Ramsden, E., , Calculations for A level Chemistry fourth edition (Nelson Thornes, 2001)
- McGowan, D., Maths Skills for A level Chemistry(Nelson Thornes, 2013)

Wider Reading

- Bryson, B., A Short history of nearly everything (Black Swan, 2004)

Chemistry Logical Task 1

- Which type of bonding would you expect in the following compounds? You will need to look at your periodic table and show a bonding diagram
- potassium oxide
- propane
- lithium chloride
- chlorine
- magnesium oxide

Potassium oxide

Propane

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Logical Task 1- continued

Lithium chloride

Chlorine

Magnesium oxide

Chemistry Logical Task 2

Naming compounds and writing their formulae.

For two element compounds all you need is the periodic table. You need to look at the number above the groups. Groups go down. (Periods go across). The total +’s and -’s for a compound need to be zero.

+1	+2	+3	+or-4	-3	-2	-1	0
H							He
Li	Be	B	C	N	O	F	Ne
Na	Mg	Al	Si	P	S	Cl	Ar

Eg, lithium and fluorine is Li (+1) and F (-1) . One lithium cancels out the fluorine and so the formula is LiF. This is called lithium fluoride. Notice the metal name stays the same but the non-metal part gets an -ide.

Again Sodium and oxygen . Na (+1) and O (-2). In this case we need two lots of Na and so the formula is Na₂O. Sodium oxide.

For the following -give the formulae and the names of the compounds they form.

elements	formula	name
Hydrogen and chlorine		
Lithium and oxygen		
Magnesium and chlorine		
Hydrogen and carbon		
Aluminium and chlorine		
Aluminium and oxygen		