

YEAR 12 – CHEMISTRY

WEEK 2 (6th Sept to 10th Sept)

Lesson Objective:

- Be able to define the terms ‘relative isotopic mass’ and ‘relative atomic mass’, based on the ^{12}C scale.
- Be able to analyse and interpret data from mass spectrometry to calculate relative atomic mass from relative abundance of isotopes and vice versa
- Be able to predict the mass spectra, including relative peak heights, for diatomic molecules, including chlorine.

Learning outcome:

- Define relative atomic mass and relative molecular mass and suggests why they are compared to C-12.
- Interpret spectral lines of mass spectra to determine the relative atomic mass of an element.
- Predict the mass spectra of elements; predict RAM from mass spectra; deduce RMM from molecular ion detection of positive ions.
- Reason out why there are two molecular ion peaks for chlorine and bromine molecule.

Resources: Text book, Worksheet file, video, power point presentations.

Work sent to the students through Google classroom / Zoom Learning Platform

Date	Lesson	Topic	Mode of Teaching	
08.09.2020 Tuesday	1,2 12G	Mass spectrometry and relative masses of atoms, isotopes and molecules Define relative atomic mass and relative molecular mass and suggests why they are compared to C-12.	Zoom	Teacher uses PowerPoint presentation that contains interactive questions.
07.09.2020 Monday	3 12D	Interpret spectral lines of mass spectra to determine the relative atomic mass of an element.		
08.09.2020 Tuesday	7 12D			
09.09.2020 Wednesday	2 12G	Mass spectrometry and relative masses of atoms, isotopes and molecules Calculate the relative molecular mass of a diatomic molecule which has isotopes.	Zoom	Teacher uses PowerPoint presentation that contains interactive questions.
10.09.2020 Thursday	7 12D	Reason out why there are two molecular ion peaks for chlorine and bromine molecule.		

YEAR 12 - CHEMISTRY

WEEK 2 (6th September to 8th September)

Work Sent to the students through Group email/ Google classroom

Topic 2 – chemical bonding and structure .

Lesson Objective: Structure and Bonding

- identify that metallic bonding is a result of the strong electrostatic attraction between metal cations and delocalised electrons
- recall that ionic bonding is the result of strong electrostatic attraction between oppositely charged ions

Learning Outcome

- understand the effects of ionic radius and ionic charge on the strength of ionic bonding
- understand the reasons for the trends in ionic radii down a group and for a set of isoelectronic ions, for example N^{3-} to Al^{3+}
- understand that the physical properties of ionic compounds and the migration of ions both provide evidence for the existence of ions

Resources: Text book, Worksheet, power point.

Date	Lesson	Topic	Mode of Teaching	
07.09.2020 Monday	6,7 12G	Recall the physical properties of simple molecular compounds, network solids and ionic compounds.	Zoom	Teacher uses PowerPoint presentation that contains interactive questions.
08.09.2020 Tuesday	8 12D	Explanation of Physical properties on the basis of structure and bonding:		
09.09.2020 Wednesday	7 12D	Metallic bonding, Ionic bonding and covalent bonding.		
09.09.2020 Wednesday	1 12G	Read pg. 34-36 of text book	GC	Students solve the worksheet file questions and upload in the google classroom at end of the lesson.
	8 12D			

