GRADE 9

CHRISTMAS TERM PLAN

CHEMISTRY

2023-2024

SEPTEMBER 4 – DECEMBER 19

DATE		TOPICS	QUIZZES & ASSIGNMENTS
SEPTEMBER			
SEPTEMBER 4-8	**WEEK 1**	**INTRODUCTION** • Class rules • Expectations • Quizzes, Homework and Assignments • Test • Subject Topics or Term Plan	Assign the PHET simulation on atomic structure and the students must use this to record the number of protons,electrons and neutrons for the first ten elements
SEPTEMBER 11-15	**WEEK 2**	**ATOMIC STRUCTURE** • Differentiate among atoms, molecules, elements, compounds, mixtures and ions. • Discuss the composition of an atom (subatomic particles) and their characteristics.	Use a worksheet that represents elements compound and mixtures using objects to differentiate between the three of them. *Reminder* *Atomic structure table is due next week*
SEPTEMBER 18-22	**WEEK 3**	**ATOMIC STRUCTURE CONT'D**	**Coursework#1** The students will be given an element from

		• Draw and label the atomic structures of the first 20 elements, note the electronic configurations. • Demonstrate how atomic number and mass number can be used to determine atomic structure. • Periodic table and trends (how the elements are arranged in periodic table)	the first 20 elements on the periodic table individually to draw the structure. for each element the following must be present: • the location of the protons and neutrons • the region in which the protons and neutrons are located • the total number of electron • the number of electrons on each shell must be correct • before the electrons are paired each corner of the shell must have at least one electron Each drawing will be worth 5 marks each. assignment total = **100 marks**
SEPTEMBER 25-29	**WEEK 4**	**ATOMIC STRUCTURE** • Review of the periodic table and the first 20 elements (names and symbols) • Define groups and periods • Label groups 1-8/0 and periods 1-4 on the periodic table	**FORMATIVE ASSESSMENT BY EACH TEACHER** **Coursework#2** Each student will be given a blank periodic table and they will be asked to use the table to identify the groups the

		• Recognize important groups in the periodic table and their characteristics (noble gases, alkali metals, alkaline earth metals, halogens).	elements chosen by the teacher belong to as well as their E.C., group # and period #. To be submitted at the end of the class.
OCTOBER			
OCTOBER 2-6	**WEEK 5**	**PROPERTIES OF METAL AND NON-METAL** • Define metal and non-metal • Locate the position of the metals and nonmetals in the periodic table • Differentiate between the physical properties of metals and non-metals (appearance, hardness and strength, density, malleability, ductility, state of matter, melting and boiling point, conduction of heat, conduction of electricity, magnetism). • Simple properties of Group I, II, III, VII & VIII states, metals/non-metals (location)	
OCTOBER 9-11	**WEEK 6**	**ALLOYS** • Define Alloys • Identify their physical properties • Connect their physical properties and uses to their composition	

OCTOBER 12-16 MID-TERM BREAK			
October 17-20	**WEEK 7**	**ALLOYS** • Define Alloys • Identify their physical properties • Connect their physical properties and uses to their composition	
October 23-27	**WEEK 8**	**1st Sixth WEEK TEST**	**1ST STANDARDIZED TEST**(on atomic structure and the properties of the elements)
NOVEMBER			
OCTOBER 30 - NOVEMBER 3	**WEEK 9**	**BONDING** • Metallic bonding (Using diagrams to demonstrate the metallic bonding in metals of groups 1,2 and 3. • Bonding- Ionic, Covalent, Metallic	**REVIEW OF TEST AND FEEDBACK**
NOVEMBER 6-10	**WEEK 10**	**BONDING FORMATION OF IONS** • Formation of cations from group 1,2,&3 • Electronic configuration of the element vs the electronic configuration	

NOVEMBER 13-17	**WEEK 11**	**BONDING FORMATION OF IONS** • Formation of cations from group 5,6&7 • Electronic configuration of the element vs the electronic configuration	**COURSEWORK 4 -** Write the cations for the respective elements and the electronic configurations.
NOVEMBER 20-24	**WEEK 12**	**BONDING - IONIC** • Exchange of electrons between metals and non-metals and the naming of ions, ionic compounds and formula writing.	
NOVEMBER 27 – DECEMBER 1	**WEEK 13**	**BONDING - COVALENT** • Bonding between diatomic molecules (O2 ,H2,Cl2, F2)	
DECEMBER			
DECEMBER 4-8	**WEEK 14**		**2ND STANDARDIZED TEST**
DECEMBER 11-15	**WEEK 15**		**REVIEW OF TEST**

NB – The contents of this term plan is subject to change during the term.