GES IAS Chemistry (Sept-Oct, 2019-20)

|  |
| --- |
| IAS Chemistry (1st Year of IAL) |

|  |  |
| --- | --- |
| Theme: To explore Inorganic Chemistry and associated practical skills | Level: Year 12 |
| Objectives: To develop an understanding of the scientific concepts in Inorganic Chemistry and practical applications in industry.  |

|  |  |
| --- | --- |
| Focusing Questions | Key Words |
| 1. How do we calculate reacting masses?
2. Define moles
3. Explain the link between moles, mass and Mr
4. Write balanced chemical and ionic equations
5. Calculate yield of products in industrial processes
6. Calculate the concentration of liquids
7. Make stock solutions of acids
8. How can we explain the behaviour of elements?
9. Describe the trends in the periodic table
10. Link the periodic table to the sub-orbitals
11. Calculate the relevant atomic mass of elements and the relative molecular mass of compounds
12. Describe the sub shells in the quantum energy levels and their orbital paths
13. Represent the electron configurations of elements
14. Describe and explain the ionisation energies of the first 36 elements
15. What are the reasons behind the properties of compounds?
16. Describe the ionic radii of isoelectronic ions
17. Describe polarisation in compounds and explain how this affects compound properties
18. Draw dot and cross diagrams of covalent compounds
19. Explain the term electronegativity and how it applies to compounds
20. Describe the shapes of compounds and state their bond angles
 |  EvaluateAnalyseAccuracyFormulaeIntermolecularMolesEquilibriaRedox ReactionsBondingMolesBond anglesChiralityQuantum energy levelsIonisation energiesPolarisationElectronegativityYieldLattice energyElectron configurationCalculateElectrostaticOrbitals | Explaining wordsElements behave in a particular way because…..The intermolecular forces have an effect on compounds by….We are able to make a stock solution of hydrochloric acid by calculating….The trends in ionic radii are because….Polarisation is able to explain the behaviour of….The lattice energy of a compound is defined as….. |

**Resources: departmental textbooks and worksheets/ exam board resources**