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

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| IAS Chemistry (1st Year of IAL) |

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| 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. | |

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| 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 | Evaluate  Analyse  Accuracy  Formulae  Intermolecular  Moles  Equilibria  Redox Reactions  Bonding  Moles  Bond angles  Chirality  Quantum energy levels  Ionisation energies  Polarisation  Electronegativity  Yield  Lattice energy  Electron configuration  Calculate  Electrostatic  Orbitals | Explaining words  Elements 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**