Learning Tracker; Elements of Life

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| **SPECIFICATION HEADINGS** | **R** | **Y** | **G** |
| **Formulae, equations and amount of substance** |  |  |  |
| Write balanced chemical equations |  |  |  |
| Use terms from specification statement (a) with confidence.  |  |  |  |
| Mole calculations |  |  |  |
| Determining empirical formula |  |  |  |
| Determining % composition of a compound |  |  |  |
| Determining water of crystallisation |  |  |  |
| Calculations involving concentrations and dilutions |  |  |  |
| Techniques for making and diluting standard solutions |  |  |  |
| **ATOMIC STRUCTURE** |  |  |  |
| Electron configuration (including sub-shells and orbitals) and how to draw |  |  |  |
| Development of the model of the atom |  |  |  |
| Sub-atomic particles |  |  |  |
| Nuclear fusion reactions |  |  |  |
| **BONDING AND STRUCTURE** |  |  |  |
| Drawing ‘dot & cross’ diagrams |  |  |  |
| Physical properties of different structures |  |  |  |
| Shapes of Molecules |  |  |  |
| **INORGANIC CHEMISTRY AND THE PERIODIC TABLE** |  |  |  |
| Development of the periodic table. |  |  |  |
| What the periodic table can tell us about an element (e.g charge on ion) |  |  |  |
| Periodic trends |  |  |  |
| Relationship between position in PT and charges etc |  |  |  |
| Group 2 element and compound chemical behaviour |  |  |  |
| Ionisation Enthalpy and trends |  |  |  |
| Charge density and Thermal Stability |  |  |  |
| Solubility of different compounds |  |  |  |
| **EQUILIBRIA (ACID-BASE)** |  |  |  |
| Names and formula common acids & bases |  |  |  |
| Making salts (soluble & insoluble) |  |  |  |
| Basic nature of Group 2 oxides/hydroxides |  |  |  |
| Solubility of different compounds |  |  |  |
| **ENERGY AND MATTER** |  |  |  |
| Order of electromagnetic spectrum |  |  |  |
| Explanations for appearance of AES |  |  |  |
| Relationships between energy, frequency and wavelength of EMS |  |  |  |
| **MODERNANALYTICAL TECHNIQUES** |  |  |  |
| Calculating RAM from mass spec. data |  |  |  |