UTC Chemistry Department Learning Cycles 2019 – Year 11

Cycle 2.6 Quantitative changes and Chemical Changes 1. The rate and extent of chemical change and Energy change	**Cycle 2.7** Chemical Analysis	**Cycle 2.8** Chemistry of the atmosphere	**Cycle 2.9** Using resources	**Cycle 2.10** **Revision of Both Years**
Topics - Chemical measurements - Moles HT ONLY - Amount of substance in equations HT ONLY - Using moles HT ONLY - Limiting reactants HT ONLY - Concentration of solutions - Percentage yield - Atom economy - Using concentration of solutions HT ONLY - Amount of substance and gases HT ONLY - Equilibrium - Factors affecting the position of equilibrium HT ONLY Effect of temperature, concentration and pressure on the position of equilibrium HT ONLY REQUIRED PRACTICALS Temperature Changes Rates of Reaction	Topics **Content:** - Pure substances - Formulations - Chromatography - Identification of common gases - Flame tests - Spectroscopy - Metal hydroxides - Carbonates - Halides - Sulphates REQUIRED PRACTICALS Chromotography Identifying Ions	Topics **Content:** - Using the Earth's resources and sustainable development - Potable water - Waste water treatment - Alternative methods for extracting metals HT ONLY - Life cycle assessment - Reducing use of resources - Corrosion and it's prevention - Alloys as useful materials - Ceramics, polymers and composites - The Haber process and fertilisers - Production of NPK fertilisers	Topics **Content:** - Using the Earth's resources and sustainable development - Potable water - Waste water treatment - Alternative methods for extracting metals HT ONLY - Life cycle assessment - Reducing use of resources - Corrosion and it's prevention - Alloys as useful materials - Ceramics, polymers and composites - The Haber process and fertilisers - Production of NPK fertilisers REQUIRED PRACTICAL Water Purification	Topics •