Learning Journey Partnership rear Year Mastering Variables (IVs Planning experiments Evaluation of scientific Developing basic Collecting and and Hypothesising Control variables and principles and presenting data practical skill Assessing risks validity techniques Analysis of data Sustainability Cracking Flame Alcohols, esters Chromatography Burning Life Cycle Potable emission and carboxylic Ceramics, fuels Pure substances and waste Assessments Gas tests spectroscopy acids Alkanes Reactions polymers and Fractional Formulations water of alkenes Testing for composites distillation DNA ions (T) Changing equilibrium Exam & and Le Chatelier Post - 16 **Organic Chemistry** Using resources **Chemical Analysis** Dynamic **Destination** equilibrium IUPAC Flame Human impact Rate calculations and Renewable and Scientific Calculate reactions nomenclature Explain everyday and vocabulary tests Haber Improving on environment non-renewable Rf values technological Interpret Closed system methods **Process** Comparisons applications of science observations Hydrated/anhydrous Reversible reversible Continuous/categoric data reactions Tangents and Plot experimental data Predict gradients Risk Develop a Drawing and Meniscus Repeatable Line of best fit products Develop a Observations to hypothesis assessment interpreting Reproducible Collecting gas Mean hypothesis characterise a Numerical value | Extrapolate graphs to Half equations Gas syringe Sketch graph Turbidity substance determine rate from a graph Interconvert units **YEAR** Calculating rate Change the Rates of reactions **Electrolysis Energy changes** of reaction subject of an equation Calculate **Quantitative Chemistry Factors** Exo and Use ratios, Collision Extraction of aluminium Atom economy energy affecting rate fractions theory endothermic and % yield changes Electrolysis of and Reaction profile molten compounds Concentration percentages Cells, diagrams and solutions Reacting masses batteries & fuel cells Making salts Diamond, graphite Conservation of mass Significant Ionic structures figures & polymers Strong and Moles Simple Nanoscience Extracting Visualising States of weak acids Relative molecules Oxidation and metals structures in 2D (Triple) Substitute qatter molecular **YEAR** and 3D numerical reduction values into Atmospheric algebraic**Chemical changes** pollutants Structure and bonding equations Recognise and use Carbon decimal and Prefixes and Limitations of **Empirical** Risk Ethics of new Use of footprint and standard forms powers of 10 Order of models formula Describe patterns assessment water bath technologies CO₂ reduction magnitude SA:Volume and trends from 3D calculations Describe a Chemistry Safe handling of models ratio Using 'excess' Peer review and the media liquids and solids Crystallisation practical Ethical argument Global procedure Recognise Using warming and Dot and Modification Models and Ratios, substances Visualise Hazards and algebraic climate change Use SI units and cross of scientific 9 diagrams to fractions and in 2D reducing risk from equations the prefix nano theory diagrams represent ideas percentages and 3D diagrams Selecting Greenhouse techniques and effect **Atomic Structure and Periodic** apparatus Introduction to bonding Table , Chemistry Development of the Separating Development of atmosphere Ionic Structure of Covalent Metallic Scientific mixtures Alloys Periodic Table bonding the atom bonding bonding terminology Basic Writing Groups of the Development of model of formulae Periodic Table the atom Atoms, elements, Balancing compounds and equations Metals and Global warming Structure of the Extraction of mixtures recap Earth's limited non-metals Recap acids and climate earth metals Testing for Reactivity resources and alkalis change

