Science KS4 Chemistry Learning Journey Topic 9: Atmosphere GCSE Exams: Triple or combined Topic 10: Earth's Resources Assessment Early to modern LCA's atmosphere Potable Water & Sewage Greenhouse effect Treatment Atmospheric pollution **Topic 8**: Pure substances & Analysis Topic 7: Crude Oil: **Topic 6**: Rates of reaction: Pure substances & Formulations Assessment Fractional distillation Concentration Chromatography Alkanes & Alkenes Surface area & Catalysts Gas tests Triple - Organic Reversible reactions Triple – ion tests & spectroscopy compounds & polymers Topic 5: Exo & Endothermic Theory **Topic 3:** Surface area Topic 6: Rates of **Energy Changes & Profiles** Graph skills reaction: Triple: Percentage yield, Bond Energy Calculations (H & Triple) Collision theory Triple – Batteries and cells, fuel cells. atom economy Temperature & rate **Topic 3:** Masses in reactions: Topic 4: Acid reactions Moles Neutralisation Writing equations Titration (H & Triple) Percentages by mass Topic 4: Oxidation & reduction **Topic 2:** Covalent giant structures Reactivity series Metallic bonding & alloys Carbon reduction Triple – Polymers, ceramics & Electrolysis composites, nanoparticles **Topic 2:** Bonding & Properties: Topic 1: States of matter & Ionic structures Separation techniques: Ions & ionic bonding Atoms, compounds & isotopes Covalent bonding & Simple molecules Periodic table & groups West Norfolk Academies Trust