NHSG Key Stage 3 Unit Overview for Y8 Chemistry: Simple Chemical Reactions

Scheme of Learning	Simple Chemical Reactions
Learning Objectives	• Naming simple compounds, identify mixtures/compounds/elements and be able to distinguish between them. • Deduce ratio of chemical formula using diagrams. • Infer what a chemical reaction is and when one has occurred. • Recall that acids react with some metals to produce new substances, including hydrogen and with carbonates to form carbon dioxide. • To record relevant observations and identify and describe patterns in qualitative data • Identify results which do not appear to fit a pattern (anomalies) • Form word and symbol equations from chemical reactions.
Key Question	What is a chemical reaction?
Content	• What signs are there to indicate a chemical reaction is taking place? • Write simple chemical reactions using the element's formulae. • Carry out and be confident in handling chemicals, following instructions and perform basic reactions in appropriate glassware. • Record observations using accurate terminology.
Ongoing Assessment	• Mid-topic ass • Assessment on chemical reactions and balancing equations. End of topic test, 30 marks in 35 minutes. Including a mixture of MCQ, short answer and long answer questions. With mark schemes moderated by the team, with notes on standardised language. • 2 lesson investigation to discover "the murderer" in a practical based on knowledge of previous work • Deep Thinking Challenge or extended question to answer in each lesson. • Homework • Revision checklists
Final Assessment	Assessment of in the form of a test comprising of multiple choice and short answer questions. Questions are based on practical knowledge of the skills required as well as recall of observations expected in the laboratory.
Content	This topic follows Mixtures and Compounds which looks closer at the concepts and chemistry behind the differences and similarities. The key concepts are also revisited throughout all Chemistry studies.

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Careers	Chemistry explores chemical reactions in detail – their trends, patterns, mechanisms and data analysis. The skills of understanding chemical reactions underpin technology, medicine, food technology, air analysis, pollution controls, synthesis of novel materials, fusion in stars and even the origins of the Big Bang.
Diversity and Inclusion	Celebration of people from ethnic minorities displayed in the relevant lessons, where their work has had an influence in the particular topic.
Support	Learning checklist and key terminology are highlighted throughout. Online textbook via Kerboodle includes working scientifically, glossary and literacy support. Adaptive teaching in the classroom supports all learners.
Challenge	Stretch challenge question on end of topic test to apply knowledge in novel situations. Stretch and challenge question sheet. Discussion opportunity – what links the linking of neurons to build your memory to the formation elements when a star goes supernova? Answer – chemical reactions!