St George's School
CHEMISTRY
KS4 Curriculum

PRIOR KNOWLEDGE *Knowledge and skills developed in KS3*	Chemistry specific knowledge as detailed in our KS3 curriculum maps. Skills developed: • Knowledge of key facts • Describing concepts using models • Scientific method - linking experiment to hypothesis • Describing, explaining and sequencing steps in a process • Linking causes to effects • Practical skills (required practical) • Interpretation of data in tables and graphs • Numerical and logic skills • Research skills
COURSE DELIVERY & STRUCTURE *How the curriculum is delivered*	**Lessons:** 1.5 hours a week / *2.5 hours a week (yr10) & 2 hours a week (yr11)* **Grouping:** Setting based on previous year results and teacher assessment / *Separate Science Class* **Structure:** Theory lessons and practical based lessons **Prep:** 1 prep per week (*2 for separate*) with 1 assessed homework per chapter
QUALIFICATION *Exam Board, aim and objectives*	**AQA** GCSE (9-1) in Combined Science (8464), GCSE (9-1) in Chemistry (8462) Qualification aims and objectives: GCSE specifications in combined award science should enable students to: • develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics • develop understanding of the nature, processes and methods of science, through different types of scientific enquiries that help them to answer scientific questions about the world around them • develop and learn to apply observational, practical, modelling, enquiry and problem-solving skills, both in the laboratory, in the field and in other learning environments • develop their ability to evaluate claims based on science through critical analysis of the methodology, evidence and conclusions, both qualitatively and quantitatively
ASSESSMENT *Internal monitoring and final assessment*	**Internal Assessment:** End of Topic Tests for each chapter, Year 10 Exam, Yr 11 Mock Exam **Final assessment:** GCSE Exams: 2 exams - 1 hour 15 mins each / ***2 exams - 1 hour 45 mins each***
BREADTH *Opportunities, trips, wider reading, cultural capital*	

	SUBJECT KNOWLEDGE *Overview of topics*	**SKILLS & STRATEGIES** *Procedural knowledge*
Autumn Y10	Chapter 3 – Structure and Bonding Chapter 5 – Chemical Changes Required practical 1 - Making copper sulfate	• Knowledge of key facts • Describing concepts using models • Scientific method - linking experiment to hypothesis • Describing, explaining and sequencing steps in a process • Linking causes to effects • Practical skills (required practical) • Interpretation of data in tables and graphs • Numerical and logic skills • Research skills
Spring Y10	Chapter 4 – Chemical Calculations *Required practical 2 - Titration* Chapter 10 – Chemical Analysis *(Chapter 12 for separate science)* Required practical 6 - Chromatography *Required practical 7 - Identification tests*	• Knowledge of key facts • Describing concepts using models • Scientific method - linking experiment to hypothesis • Describing, explaining and sequencing steps in a process • Linking causes to effects • Practical skills (required practical) • Interpretation of data in tables and graphs • Numerical and logic skills
Summer Y10	Study Leave and mock exams Chapter 8a – Rates of Reaction Required practical 5a and b - Measuring rate of reaction (2 methods) *Chapter 10 - Organic Chemistry* *Chapter 11 - Polymers*	• Knowledge of key facts • Describing concepts using models • Scientific method - linking experiment to hypothesis • Describing, explaining and sequencing steps in a process • Linking causes to effects • Practical skills (required practical) • Interpretation of data in tables and graphs • Numerical and logic skills
Autumn Y11	Chapter 6 – Electrolysis Required practical 3 - Electrolysis of solutions Chapter 7 – Energy Changes Required practical - Temperature change of a reaction Study Leave and Mock Exams	• Knowledge of key facts • Describing concepts using models • Scientific method - linking experiment to hypothesis • Describing, explaining and sequencing steps in a process • Linking causes to effects • Practical skills (required practical) • Interpretation of data in tables and graphs • Numerical and logic skills
Spring Y11	Chapter 8b – Equilibria Chapter 2 – The Periodic Table	• Knowledge of key facts • Describing concepts using models • Scientific method - linking experiment to hypothesis • Describing, explaining and sequencing steps in a process • Linking causes to effects • Practical skills (required practical) • Interpretation of data in tables and graphs • Numerical and logic skills
Summer Y11	Revision Study Leave and GCSE exams	• Knowledge of key facts • Describing concepts using models • Scientific method - linking experiment to hypothesis • Describing, explaining and sequencing steps in a process • Linking causes to effects • Practical skills (required practical) • Interpretation of data in tables and graphs • Numerical and logic skills