



St George's School
Biology
KS4 Curriculum

<p>PRIOR KNOWLEDGE <i>Knowledge and skills developed in KS3</i></p>	<p>Biology specific knowledge as detailed in our KS3 curriculum maps.</p> <p>Skills developed:</p> <ul style="list-style-type: none"> ● 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
<p>COURSE DELIVERY & STRUCTURE <i>How the curriculum is delivered</i></p>	<p>Lessons: 1.5 hours a week / 2.5 hours a week</p> <p>Grouping: Setting based on previous year results and teacher assessment / <i>Separate Science Class</i></p> <p>Structure: Theory lessons and practical based lessons</p> <p>Prep: 1 prep per week (2 for separate science) with 1 assessed homework per chapter</p>
<p>QUALIFICATION <i>Exam Board, aim and objectives</i></p>	<p>AQA GCSE (9-1) in Combined Science (8464), GCSE (9-1) in Chemistry (8461)</p> <p>Qualification aims and objectives:</p> <p>GCSE specifications in combined award science should enable students to:</p> <ul style="list-style-type: none"> ● 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
<p>ASSESSMENT <i>Internal monitoring and final assessment</i></p>	<p>Internal Assessment: End of Topic Tests for each chapter, Year 10 Exam, Yr 11 Mock Exam</p> <p>Final assessment: GCSE Exams: 2 exams - 1 hour 15 mins each 2 exams - 1 hour 45 mins each (separate science)</p>
<p>BREADTH <i>Opportunities, trips, wider reading, cultural capital</i></p>	<p>Amgen - Biotechnology activities Science Borders Homework Club</p> <p>In addition several Biology topics can be used to encourage discussions on ethical and social impacts as well personal choices regarding health and lifestyle.</p>

	SUBJECT KNOWLEDGE <i>Overview of topics</i>	SKILLS & STRATEGIES <i>Procedural knowledge</i>
Autumn Y10	B3 Organisation and the digestive system RP4 Food tests RP5 Enzymes B4 Organising plants and animals	<ul style="list-style-type: none"> ● 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 Y10	B5 Communicable diseases B6 Treating and preventing diseases <i>RP2 Microbiology (separate science)</i> B7 Non-communicable disease	<ul style="list-style-type: none"> ● 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	B8 Photosynthesis RP6 Photosynthesis B9 Respiration <i>B17&18 Additional Ecology topics (separate science)</i> <i>RP10 Decay</i>	<ul style="list-style-type: none"> ● 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	B10 Human Nervous system RP7 Reaction time B11 Hormonal control <i>RP9 Plant responses (separate science)</i> <i>B12 Homeostasis in action (separate science)</i>	<ul style="list-style-type: none"> ● 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	B12 Reproduction <i>(B13 for separate science)</i> B13 Variation and evolution <i>(B14 for separate science)</i> B14 Genetics and evolution <i>(B15 for separate science)</i>	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● 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