



**St George's School**  
**Biology**  
**KS4 Curriculum**

<p><b>PRIOR KNOWLEDGE</b>  <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"> <li>● Knowledge of key facts</li> <li>● Describing concepts using models</li> <li>● Scientific method - linking experiment to hypothesis</li> <li>● Describing, explaining and sequencing steps in a process</li> <li>● Linking causes to effects</li> <li>● Practical skills (required practical)</li> <li>● Interpretation of data in tables and graphs</li> <li>● Numerical and logic skills</li> <li>● Research skills</li> </ul>
<p><b>COURSE DELIVERY &amp; STRUCTURE</b>  <i>How the curriculum is delivered</i></p>	<p><b>Lessons:</b> 1.5 hours a week / <b>2.5 hours a week</b></p> <p><b>Grouping:</b> Setting based on previous year results and teacher assessment / <i>Separate Science Class</i></p> <p><b>Structure:</b> Theory lessons and practical based lessons</p> <p><b>Prep:</b> 1 prep per week (<b>2 for separate science</b>) with 1 assessed homework per chapter</p>
<p><b>QUALIFICATION</b>  <i>Exam Board, aim and objectives</i></p>	<p><b>AQA GCSE (9-1) in Combined Science (8464), GCSE (9-1) in Chemistry (8461)</b></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"> <li>● develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics</li> <li>● 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</li> <li>● 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</li> <li>● develop their ability to evaluate claims based on science through critical analysis of the methodology, evidence and conclusions, both qualitatively and quantitatively</li> </ul>
<p><b>ASSESSMENT</b>  <i>Internal monitoring and final assessment</i></p>	<p><b>Internal Assessment:</b> End of Topic Tests for each chapter, Year 10 Exam, Yr 11 Mock Exam</p> <p><b>Final assessment:</b> GCSE Exams: 2 exams - 1 hour 15 mins each  <b>2 exams - 1 hour 45 mins each (separate science)</b></p>
<p><b>BREADTH</b>  <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>

	<b>SUBJECT KNOWLEDGE</b> <i>Overview of topics</i>	<b>SKILLS &amp; STRATEGIES</b> <i>Procedural knowledge</i>
<b>Autumn Y10</b>	B3 Organisation and the digestive system RP4 Food tests RP5 Enzymes  B4 Organising plants and animals	<ul style="list-style-type: none"> <li>● Knowledge of key facts</li> <li>● Describing concepts using models</li> <li>● Scientific method - linking experiment to hypothesis</li> <li>● Describing, explaining and sequencing steps in a process</li> <li>● Linking causes to effects</li> <li>● Practical skills (required practical)</li> <li>● Interpretation of data in tables and graphs</li> <li>● Numerical and logic skills</li> </ul>
<b>Spring Y10</b>	B5 Communicable diseases  B6 Treating and preventing diseases <i>RP2 Microbiology (separate science)</i>  B7 Non-communicable disease	<ul style="list-style-type: none"> <li>● Knowledge of key facts</li> <li>● Describing concepts using models</li> <li>● Scientific method - linking experiment to hypothesis</li> <li>● Describing, explaining and sequencing steps in a process</li> <li>● Linking causes to effects</li> <li>● Practical skills (required practical)</li> <li>● Interpretation of data in tables and graphs</li> <li>● Numerical and logic skills</li> </ul>
<b>Summer Y10</b>	B8 Photosynthesis RP6 Photosynthesis  B9 Respiration <i>B17&amp;18 Additional Ecology topics (separate science)</i> <i>RP10 Decay</i>	<ul style="list-style-type: none"> <li>● Knowledge of key facts</li> <li>● Describing concepts using models</li> <li>● Scientific method - linking experiment to hypothesis</li> <li>● Describing, explaining and sequencing steps in a process</li> <li>● Linking causes to effects</li> <li>● Practical skills (required practical)</li> <li>● Interpretation of data in tables and graphs</li> <li>● Numerical and logic skills</li> </ul>
<b>Autumn Y11</b>	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"> <li>● Knowledge of key facts</li> <li>● Describing concepts using models</li> <li>● Scientific method - linking experiment to hypothesis</li> <li>● Describing, explaining and sequencing steps in a process</li> <li>● Linking causes to effects</li> <li>● Practical skills (required practical)</li> <li>● Interpretation of data in tables and graphs</li> <li>● Numerical and logic skills</li> </ul>
<b>Spring Y11</b>	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"> <li>● Knowledge of key facts</li> <li>● Describing concepts using models</li> <li>● Scientific method - linking experiment to hypothesis</li> <li>● Describing, explaining and sequencing steps in a process</li> <li>● Linking causes to effects</li> <li>● Practical skills (required practical)</li> <li>● Interpretation of data in tables and graphs</li> <li>● Numerical and logic skills</li> </ul>
<b>Summer Y11</b>	Revision  Study Leave and GCSE exams	<ul style="list-style-type: none"> <li>● Knowledge of key facts</li> <li>● Describing concepts using models</li> <li>● Scientific method - linking experiment to hypothesis</li> <li>● Describing, explaining and sequencing steps in a process</li> <li>● Linking causes to effects</li> <li>● Practical skills (required practical)</li> <li>● Interpretation of data in tables and graphs</li> <li>● Numerical and logic skills</li> </ul>