

## Science: Year 10 Combined Science Curriculum Map

**Intent:**

Students will build on knowledge gathered from KS3 and expand their understanding through discrete topics of Biology, Chemistry and Physics. They will access all the skills developed at KS3 to access the further content of GCSE in able to achieve successful outcomes by the end of year 11.

	Term 1	Term 2	Term 3
Topics	Cell biology Atomic Structure Energy Organisation	Organisation Bonding Mock exams	Electricity Infection & Response Quantitative chemistry Particle model of matter Bioenergetics
Assessment	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>End of term summative test (Data drop 1). At the beginning of term 1b, there will be a summative assessment which will assess the knowledge and understanding from the first two main topics.</b></p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings. Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>End of term summative test/ Mock exams take a large chunk of the half term. (Data drop 2).</b></p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings. Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>For example, for the Quantitative chemistry unit: There is a formative assessment on titrations which develops mathematical skills such as recognising concordant results, calculating averages and calculating concentrations. The skills assessed will also include evaluating the accuracy and reliability of the data collected</b></p> <p><b>End of term summative test (Data drop 3).</b></p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings. Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>

## Science: Year 11 Combined Science Curriculum Map

**Intent:**

Students will develop a deeper understanding of a range of scientific ideas in the subject disciplines of Biology, Chemistry and Physics. Pupils should become aware of some of the big ideas underpinning scientific knowledge and understanding.

	Term 1	Term 2	Term 3
Content/topics	The rate & extent of chemical change Organic Chemistry Mock exams paper 1 Forces Inheritance, variation & evolution	Inheritance, variation & evolution Chemical analysis Chemistry of the atmosphere Mock exams paper 2 & Therapy Waves Using resources Magnetism & electromagnetism	Ecology Revision and Consolidation program  External exams
Assessment	Mock exams paper 1 October  Maths in Science baseline and end of topic assessments  Formative assessments  Homework – Seneca quizzes and practice exam questions on Edulink	Mock exams paper 2 January  Maths in Science baseline and end of topic assessments  Formative assessments  Homework – Seneca quizzes and practice exam questions.	In class testing throughout March and April  Revision schedule  Formative assessments  Homework – Seneca quizzes and practice exam questions.

## Science: Year 10 Triple Biology Curriculum Map

**Intent:**

Students will build on knowledge gathered from KS3 and expand their understanding through discrete topics of Biology. They will access all the skills developed at KS3 to access the further content of GCSE in able to achieve successful outcomes by the end of year 11.

	Term 1	Term 2	Term 3
Topics	Cell Biology Organisation	Infection & Response	Bioenergetics Homeostasis & Response
Assessment	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>For example: B1 formative assessment is on Osmosis and how potatoes react to different concentrations of salt solution.</b></p> <p>End of term summative test (Data drop 1). At the beginning of term, there will be a summative assessment which will assess the knowledge and understanding from 'infection &amp; response' and cell Biology.</p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings. Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>For example: Infection &amp; Response topic: There is a formative assessment on Malaria following the teaching and learning of 'protist diseases' which develops some essential skills such as data interpretation, application of knowledge to an unknown situation etc.</b></p> <p>End of term summative test/practice mocks (Data drop 2).</p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings. Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>For example: Homeostasis &amp; Response topic: There is a formative assessment on reaction times in humans. This assesses pupil's data, graphing &amp; analytical skills.</b></p> <p>End of term summative test (Data drop 3).</p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings. Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>

## Science: Year 11 Triple Biology Curriculum Map

**Intent:**

Students will develop a deeper understanding of a range of scientific ideas in the subject discipline of Biology. Pupils should become aware of some of the big ideas underpinning scientific knowledge and understanding.

	Term 1	Term 2	Term 3
Content/topics	Inheritance, variation & evolution Ecology Mock exams Paper 1	Ecology (cont) Mock exams Paper 2 Mocks Therapy	Revision and consolidation External exams
Assessment	Mock paper 1 – October  Maths in Science baseline and end of topic assessments  Formative assessments  Homework – Seneca quizzes and practice exam questions on Edulink	Mocks paper 2 – January In class therapy of weaker areas  Maths in Science baseline and end of topic assessments  Formative assessments  Homework – Seneca quizzes and practice exam questions.	Revision program and consolidation of misconceptions  Maths in Science baseline and end of topic assessments  Formative assessments  Homework – Seneca quizzes and practice exam questions

## Science: Year 10 Triple Chemistry Curriculum Map

**Intent:**

Students will build on knowledge gathered from KS3 and expand their understanding through discrete topics of Chemistry. They will access all the skills developed at KS3 to access the further content of GCSE in able to achieve successful outcomes by the end of year 11.

	Term 1	Term 2	Term 3
Topics	Atomic structure Bonding	Bonding (cont) Quantitative Chemistry	Chemical Change
Assessment	<p>Formative assessments within each unit focussing on skill development within a particular area.</p> <p><b>End of term summative test (Data drop 1). At the beginning of term, there will be a summative assessment which will assess the knowledge and understanding from the first two Chemistry topics.</b></p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings.</p> <p>Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>End of term summative test/Practice mocks (Data drop 2). This will include testing on the units covered so far this year.</b></p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings.</p> <p>Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>End of term summative test (Data drop 3). This will assess all the material taught throughout the year.</b></p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings.</p> <p>Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) that will then switch to 10 quick retrieval questions for the final half term.</p>

## Science: Year 11 Triple Chemistry Curriculum Map

**Intent:**

Students will develop a deeper understanding of a range of scientific ideas in the subject discipline of Chemistry. Pupils should become aware of some of the big ideas underpinning scientific knowledge and understanding.

	Term 1	Term 2	Term 3
Content/topics	Organic chemistry Chemical analysis Mock exams Paper 1 Chemistry of the atmosphere	Using resources Mock exams paper 2 Therapy from mocks Consolidation	Revision and consolidation External exams
Assessment	Mock paper 1 – October  Maths in Science baseline and end of topic assessments  Formative assessments  Homework – Seneca quizzes and practice exam questions Edulink	Mock paper 2 – January  Maths in Science baseline and end of topic assessments  Formative assessments  Homework – Seneca quizzes and practice exam question	In class testing throughout March and April  Revision schedule  Formative assessments  Homework – Seneca quizzes and practice exam question

## Science: Year 10 Triple Physics Curriculum Map

**Intent:**

Students will build on knowledge gathered from KS3 and expand their understanding through discrete topics of Physics. They will access all the skills developed at KS3 to access the further content of GCSE in able to achieve successful outcomes by the end of year 11.

	Term 1	Term 2	Term 3
Topics	Energy Electricity	Particle model of matter Atomic structure	Forces
Assessment	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>For example:</b> <b>Formative assessment point</b> There is a formative assessment on Circuits &amp; electricity focusing on risk assessments &amp; accuracy of experimental methods,</p> <p><b>Summative assessment point</b> In term 2b, there will be a summative assessment which will assess the knowledge and understanding from this unit in terms 1b and 2a.</p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings.</p> <p>Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>For example: Formative assessment point</b> There is a formative assessment on atomic structure &amp; half-life of radioactive elements, focusing on exam-based questions.</p> <p><b>Summative assessment point</b> In term 1b of Year 11, there will be a summative assessment which will assess the knowledge and understanding from this unit.</p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings.</p> <p>Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) which will assess prior knowledge to consolidate learning.</p>	<p>Formative assessments within each unit focussing on skill development.</p> <p><b>End of term summative test/practice mocks</b> (Data drop 3). This will assess all the material taught throughout the year.</p> <p>DTT-Therapy questions/re-test based upon misconceptions from summative findings.</p> <p>Maths in Science baseline test at the start and end of each unit.</p> <p>Homework – Seneca learning and literacy/spelling homework.</p> <p><b>Quizzes / Prior understanding</b> Most lessons will begin with a starter of 5 a day (or quiz) that will then switch to 10 quick retrieval questions for the final half term.</p>

## Science: Year 11 Triple Physics Curriculum Map

**Intent:**

Students will develop a deeper understanding of a range of scientific ideas in Physics. Pupils should become aware of some of the big ideas underpinning scientific knowledge and understanding.

	Term 1	Term 2	Term 3
Content/topics	Waves Mock exams paper 1 Electricity & magnetism	Space Physics Mock exams paper 2 Therapy lessons Revision and consolidation	Revision and consolidation External exams
Assessment	Mock paper 1 – October  Maths in Science baseline and end of topic assessments  Formative assessments  Homework – Seneca quizzes and practice exam question on edulink	Mock paper 2 – January  Maths in Science baseline and end of topic assessments  Formative assessments  Homework – Seneca quizzes and practice exam questions	In class testing throughout March and April  Revision schedule  Formative assessments  Homework – Seneca quizzes and practice exam questions