



THE ARNEWOOD SCHOOL

KEY STAGE 4 SCIENCE – COMBINED

Implementation

Students start with topics that build from basics that they have learnt from KS3. The topics at the start are building blocks for the rest of the combined science courses.

Year 9:

| Half term | Curriculum focus | Landmark assessment |
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| Autumn 1 | Students begin by looking at the building blocks of science with the two topics that are studied which are cell and atomic structures . During this time students will build on basic practical skills in particular looking at the use of a microscope. | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations. Students are also assessed on their long answer questions when working with the required practicals. |
| Autumn 2 | Students continue to build on their knowledge within cells by looking at transport within cells . Students also look at their first physics topic when working through the topic Energy stores . | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations. Students are also assessed on their long answer questions when working with the required practicals. |
| Spring 1 | Students will study two topics this half term specifically looking at Particle model of matter and Bonding . Bonding and the particle model of matter build on their knowledge they have about atoms from Autumn 1. | Students during this time are assessed formatively and are building their revision skills for the year 9 exam after half term. |
| Spring 2 | Students will study two topics this half term specifically looking at Metals and Cell division . Metals is unique at GCSE | Students are given a formal year 9 exam covering subjects that |





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| | and builds upon knowledge gained from KS3 and cell division builds on the knowledge from cells structures and cell transport. | they have covered at GCSE so far. |
| Summer 1 | Students will study complete their study of cell division this half term and study a topic on Acids . Acids is unique to KS4 and builds upon knowledge from KS3. | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations. Students are also assessed on their long answer questions when working with the required practicals. |
| Summer 2 | Students will study two topics this half term specifically looking at Plant biology and Energy resources . Plant biology is unique to students at GCSE and build upon knowledge gained from KS whilst energy resources builds on knowledge from energy stores in autumn 1. Students will finish the term with a series of lessons developing their mathematical skills within science. | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations. Students are also assessed on their long answer questions when working with the required practicals. |

Co-Curricular: Students during the year will get the opportunity to take part in the Biology and Physics national challenge.

Year 10:

| Half term | Curriculum focus | Landmark assessment |
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| Autumn 1 | Students will study three topics this half term specifically looking at Energy changes, Organs and Respiration . Energy changes is a chemistry topic, organs and respiration are biology topics that build on knowledge from KS3. | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations. |
| Autumn 2 | Students will study two topics this half term specifically looking at Quantitative chemistry and Health . Quantitative chemistry builds on the fundamentals of chemistry from year 9, Health builds on students knowledge from both autumn 1 and KS3. | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations |





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| Spring 1 | Students will study two topics this half term specifically looking at the Defence of the human body and the Physics topic Electricity . Defence and electricity build on knowledge from the autumn and KS3. | Students during this time are assessed formatively and are building their revision skills for the year 10 exam after half term. Students during this time are assessed formatively and are building their revision skills for the year 9 exam after half term. |
| Spring 2 | Students will study two topics this half term specifically looking at the second half of Energy and also Chemical Analysis . Energy builds on knowledge from Spring 1 whilst Chemical analysis builds on knowledge from KS3. | given a formal year 10 exam. The year 10 exam is a paper one exam from biology, chemistry and physics. |
| Summer 1 | Students will study two topics this half term specifically looking at Nerves and Atoms and radioactivity. Nerves builds on knowledge of the human body gained in year 10 whilst Atoms and radioactivity is a physic topic that builds on knowledge of atoms from chemistry in year 9. | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations |
| Summer 2 | Students will study two topics this half term specifically looking at Ecology and Organic Chemistry . Ecology will allow them to develop their experimental skills outside. | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations |

Co-Curricular: Students are able to take part in the Med Tech challenges and also the Biology and Physics challenges.

Year 11:

| Half term | Curriculum focus | Landmark assessment |
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| Autumn 1 | Students will study two topics this half term specifically looking at Waves and Rates of Reactions. These are both practical topics that allow students to continue to develop their practical skills. | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations. |
| Autumn 2 | Students will study three topics this half term specifically looking at Magnetism, Genetics and Variation. These topics build on knowledge from KS3. | Assessment during this time will be paper 1 mock exams as students prepare for their summer GCSE. |





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| Spring 1 | Students will study three topics this half term specifically looking at the Earth and Atmosphere in chemistry and the Evidence for evolution and human impact in biology, | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations |
| Spring 2 | Students finish the combined science course looking at using and obtaining resources with chemistry. Pupils will also be engaged in revision and practice in preparation for the GCSE examinations. | Assessment is a formal exam at the end of the ½ term including long answers, short answers, multiple choice and calculations |
| Summer 1 | Pupils will be engaged in revision and practice in preparation for the GCSE examinations. | Students are taking formal exams |
| Summer 2 | Course completed. | Students are taking formal exams |

Co-Curricular: Students will be able to complete research projects within Chemistry and Physics

