

Science

Head of Department Name	Mrs J Kerr / J Bardsmith / T Gay
Email Contact	jkerr@newsomehigh.kirklees.sch.uk
Key Stage 3 Science	<p>Key stage 3 Science is based on the AQA Scheme of work which follows the National Curriculum Science Framework.</p> <p>Students are taught in mixed ability groups in Key stage 3. The course has been recently adapted by the science team and covers all three science disciplines (Biology, Chemistry & Physics). It is taught in short modules or units, many of which have a high practical element. This allows pupils to investigate and explore scientific principles in a “hands on way” and then draw conclusions based on their evidence. Throughout the course students will be assessed in a variety of ways including; end of term written exams, in class topic tests and practical investigations.</p>
Year 7 Curriculum Content	<p><u>Topics to be covered in the Autumn Term:</u></p> <p><u>Half term 1:</u> Speed Particle model Movement Interdependence</p> <p><u>Half term 2:</u> Gravity Separating mixtures Cells Plant reproduction</p> <p><u>Topics to be covered in the Spring Term:</u></p> <p><u>Half term 1:</u> Voltage and resistance Energy costs Metals and non-metals</p> <p><u>Half term 2:</u> Current Energy transfer Acids and Alkalis</p> <p><u>Topics to be covered in the Summer Term:</u></p> <p><u>Half term 1:</u> Sound Earth structure Variation</p> <p><u>Half term 2:</u> Light Universe Human Reproduction.</p>
Year 8 Curriculum Content	<p><u>Topics to be covered in the Autumn Term:</u></p> <p><u>Half term 1:</u> Contact forces Periodic table Breathing Respiration</p> <p><u>Half term 2:</u> Pressure Elements Digestion Photosynthesis</p> <p><u>Topics to be covered in the Spring Term:</u></p> <p><u>Half term 1:</u></p>

	<p>Electromagnets Wave effects Chemical energy <u>Half term 2:</u> Magnetism Wave properties Types of reaction <u>Topics to be covered in the Summer Term:</u> <u>Half term 1:</u> Work Inheritance Evolution <u>Half term 2:</u> Heating and cooling Earth's resources. Climate</p>
Key stage 4 Science	<p>Key stage 4 Science begins in year 9 where pupils study the new AQA Combined Science GCSE (worth 2 GCSEs) or opt to take Triple Science (Biology, Chemistry and Physics — 3 GCSEs). There have been changes to the GCSE Sciences from September 2016; these are challenging GCSEs which will incorporate both practical skills and a greater depth of subject knowledge. There is an increased emphasis on applying knowledge, higher mathematical skills and detailed understanding of practical work. After each topic pupils will complete an end of topic assessment and there will be practical assessments covering the required practicals and skills required.</p>
Year 9 Curriculum Content	<p>During year 9 the following topics are covered: <u>Topics to be covered in the Autumn Term:</u> <u>Half term 1 and Half term 2:</u> B1 – Cell Biology C1 – Atomic structure and the Periodic table P1 – Energy B2 – Organisation <u>Topics to be covered in the Spring Term:</u> <u>Half term 1 and Half term 2:</u> P2 – Electricity P3 – Particle model of matter. C2 – Bonding, structure and matter. <u>Topics to be covered in the Summer Term:</u> <u>Half term 1 and Half term 2:</u> B3 – Infection and Response C3 - Quantitative chemistry C4 – Chemical Changes</p>
Year 10 Curriculum Content	<p>During year 10 the following topics are covered for GCSE Combined Science: Trilogy: <u>Topics to be covered in the Autumn Term:</u> <u>Half term 1 and Half term 2:</u> B4 – Bioenergetics B5 – Homeostasis and response C9 – Chemistry of the atmosphere P5 – Forces <u>Topics to be covered in the Spring Term:</u> <u>Half term 1 and Half term 2:</u> P6 – Waves P4 – Atomic structure C7 – Organic chemistry C8 – Chemical analysis <u>Topics to be covered in the Summer Term:</u></p>

	<p><u>Half term 1 and Half term 2:</u> B6 – Inheritance, Variation and Evolution B7 - Ecology P7 - Magnetism and Electromagnetism C10 – Using Resources</p> <p>During year 10 the following topics are covered for GCSE Triple Science: <u>Topics to be covered in the Autumn Term:</u> <u>Half term 1 and Half term 2:</u> Biology: B4 – Bioenergetics B5 – Homeostasis and response Chemistry: C9 – Chemistry of the atmosphere C10 – Using Resources Physics: P5 – Forces P6 – Waves <u>Topics to be covered in the Spring Term:</u> <u>Half term 1 and Half term 2:</u> Biology: B6 - Inheritance, Variation and Evolution B7 - Ecology Chemistry: C7 – Organic chemistry C8 – Chemical analysis Physics P4 – Atomic structure P7 - Magnetism and Electromagnetism <u>Topics to be covered in the Summer Term:</u> <u>Half term 1 and Half term 2:</u> Biology (Higher tier and triple content): B1 – Cell Biology B2 – Organisation B3 – Infection and Response Chemistry (Higher tier and triple content): C1 – Atomic structure and the Periodic table C2 – Bonding, structure and matter. C4 – Chemical Changes Physics (Higher tier and triple content) P1 - Energy P2 - Electricity P3 - Particle model of matter</p>
<p>Year 11 Curriculum Content</p>	<p>During year 11 the following topics are covered for GCSE Combined Science: Trilogy: <u>Topics to be covered in the Autumn Term:</u> <u>Half term 1 and Half term 2:</u> Revision of topics on the paper 1 exams: <u>Biology:</u> B1 – Cell Biology B2 – Organisation B3 – Infection and Response B4 – Bioenergetics <u>Chemistry:</u> C1 – Atomic structure and the Periodic table C2 – Bonding, structure and matter. C3 - Quantitative chemistry</p>

C4 – Chemical Changes

Physics:

P1 - Energy

P2 - Electricity

P3 - Particle model of matter

P4 – Atomic structure

Mock exams in December (Paper 1 and Paper 2).

Topics to be covered in the Spring Term:

Half term 1 and Half term 2:

Revision of topics on the paper 2 exams:

Biology:

B5 - Homeostasis and response

B6 - Inheritance, variation and Evolution

B7 - Ecology

Chemistry:

C5 - The rate and extent of chemical change

C6 - Organic chemistry

C7 - Chemical analysis

C8 - Chemistry of the atmosphere

C9 - Using resources

Physics:

P5 - Forces

P6 - Waves

P7 - Magnetisms and electromagnetism

Mock exams in March (Paper 1 and Paper 2)

Topics to be covered in the Summer Term:

Half term 1 and Half term 2:

Revision of topics on the paper 1 + 2 exams (see Autumn and Summer term)

During year 11 the following topics are covered for GCSE Triple Science:

Topics to be covered in the Autumn Term:

Half term 1 and Half term 2:

Revision of topics on the paper 1 exams:

Biology:

B1 – Cell Biology

B2 – Organisation

B3 – Infection and Response

B4 – Bioenergetics

Chemistry:

C1 – Atomic structure and the Periodic table

C2 – Bonding, structure and matter.

C3 - Quantitative chemistry

C4 – Chemical Changes

Physics:

P1 - Energy

P2 - Electricity

P3 - Particle model of matter

P4 – Atomic structure

Mock exams in December (Paper 1 and Paper 2).

Topics to be covered in the Spring Term:

Half term 1 and Half term 2:

	<p>Revision of topics on the paper 2 exams:</p> <p><u>Biology:</u> B5 - Homeostasis and response B6 - Inheritance, variation and Evolution B7 - Ecology</p> <p><u>Chemistry:</u> C5 - The rate and extent of chemical change C6 - Organic chemistry C7 - Chemical analysis C8 - Chemistry of the atmosphere C9 - Using resources</p> <p><u>Physics:</u> P5 - Forces P6 - Waves P7 - Magnetisms and electromagnetism P8 – Space physics (Triple only)</p> <p>Mock exams in March (Paper 1 and Paper 2)</p> <p><u>Topics to be covered in the Summer Term:</u> <u>Half term 1 and Half term 2:</u> Revision of topics on the paper 1 + 2 exams (see Autumn and Summer term)</p>
<p>Exam board and qualification name studying at KS4</p>	<p>Exam board: AQA AQA Combined Science (Trilogy). AQA Biology, AQA Chemistry, AQA Physics. AQA Entry Level Certificate.</p>