After Key Stage 3 students either choose to study the Separate Sciences or complete the Trilogy course. We endeavour to provide subject specialists wherever possible across the Sciences. The Key Stage 4 and 5 curriculum is based on the examination board specifications. Students can either follow the Advanced Level pathway or the BTEC pathway at KS5.

Curriculum Map:

Year 7:

Term	Lesson Content	Assessment Content
1	**Scientific Skills 1** **1.** Safety **2.** Naming equipment **3.** Variables **4.** Writing a method **5.** Collecting data **6.** Presenting data **7.** Revision **8.** Test **9.** Reteach **Cells 1** 1. Observing cells using microscopes 2. Plant and animal cells 3. Specialised cells 4. Movement of substances 5. Uni-cellular organisms 6. Levels of organisation 7. The skeleton 8. Movement: Joints 9. Movement: Muscles 10. Test	End of topic assessments contain a knowledge recall section and an application section. All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge. Knowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation question on the size of objects, a practical application question on setting up a microscope slide, as well as an extended writing question

	11. Re-teach	
2	**Particles 1** **1.** The particle model **2.** States of matter **3.** Melting and Freezing **4.** Boiling **5.** More changes of state **6.** Diffusion **7.** Gas Pressure **8.** Inside particles **9.** Pure substances and mixtures **10.** Solutions **11.** Solubility **12.** Filtration **13.** Evaporation and distillation **14.** Chromatography **15.** Revision **16.** Test **17.** Reteach	End of topic assessments contain a knowledge recall section and an application section. All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge. Knowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation question on the rate diffusion, a practical application question on changes of state as well as an extended writing question

3	**Energy 1** 1. **Food and Fuels** 2. **Energy resources** 3. **Energy and power** 4. **Energy calculations** 5. **Energy dissipation** 6. **Revision** 7. **Mid Topic assessment** 8. **Re-teach** 9. **Work, energy and machines** 10. **Energy and temperature** 11. **Energy transfer:particles** 12. **Energy transfer: radiation and insulation** 13. **Revision** 14. **Test** 15. **Re-teach**	**End of topic assessments contain a knowledge recall section and an application section.** **All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge.** **Knowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation question on energy, a practical application question on energy transfers as well as an extended writing question**

4	**Acids and Alkalis and Chemical Reactions 1** **1. Chemical reactions** **2. Acids and Alkalis** **3. Indicators and pH** **4. Acid strength** **5. Neutralisation** **6. Making Salts** 7. **More about elements** 8. **Chemical reactions of metals and non-metals** 9. **Metals and acids** 10. **Metals and Oxygen** 11. **Metals and water** 12. **Metal displacement reactions** 13. **Revision** 14. **Test** 15. **Re-teach**	**End of topic assessments contain a knowledge recall section and an application section.** **All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge.** **Kmowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation question on balancing equations in neutralisations, a practical application question on safety around using acids and alkalis in the lab, as well as an extended writing question**
5	**Forces and Space 1** **1.** Introduction to forces **2.** Balanced and Unbalanced forces **3.** Speed **4.** Distance-time graphs **5.** Gravity **6.** The night sky **7.** The solar system **8.** Space **9.** Revision **10.** Test **11.** Re-teach	End of topic assessments contain a knowledge recall section and an application section. All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge. Knowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation question on distance time graphs, a practical application question on measureing speed and units, as well as an extended writing question

6	**Plants and Ecosystems 1** 1. **Food chains and webs** 2. **Disruption to food chains and webs** 3. **Ecosystems** 4. **Competition** 5. **Flowers and Pollination** 6. **Fertilisation and Germination** 7. **Seed dispersal** 8. **Mid topic Test** 1. **Aerobic respiration** 2. **Anaerobic respiration** 3. **Biotechnology** 4. **Photosynthesis** 5. **Leaves** 6. **Investigating photosynthesis** 7. **Plant minerals** 8. **Revision** 9. **Test** 10. **Re-teach**	**End of topic assessments contain a knowledge recall section and an application section.** **All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge.** **Knowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation question on energy transfers in food chains, a practical application question on being respectful when using organisms in biology, as well as an extended writing question**

Year 8:

Year Group	Term	Lesson Content	Assessment Content
8	1	**Scientific Skills 2 Enquiry processes** **1.** Safety **2.** Variables **3.** Collecting data **4.** Presenting data **5.** Revision **6.** Test **7.** Reteach **Chemical Reactions** 1. Atoms in chemical reactions 2. Combustion 3. Thermal decomposition 4. Conservation of mass 5. Calculating conservation of mass 6. Exothermic and Endothermic 7. Energy level diagrams 8. Bond energies 9. Oxidation 10. Revision 11. Test 12. Re-teach	End of topic assessments contain a knowledge recall section and an application section. All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge. Knowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation on conservation of mass, a practical application question on an exothermic/endothermic reaction, as well as an extended writing question

	2	**Organs and Organ Systems** 1. **Gas exchange** 2. **Breathing** 3. **Drugs** 4. **Alcohol** 5. **Smoking** 6. **Nutrients** 7. **Food tests** 8. **Unhealthy diet** 9. **Digestive system** 10. **Bacteria and enzymes in the digestive system** 11. **Revision** 12. **Test** 13. **Re-teach**	**End of topic assessments contain a knowledge recall section and an application section.** **All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge.** **Knowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation on gas exchange, a practical application question on food tests, as well as an extended writing question**

	3	**Waves** 1. Sound waves and speed 2. Loudness and Amplitude 3. Frequency and Pitch 4. The ear and hearing 5. Light 6. Reflection 7. Refraction 8. The eye and vision 9. Colour 10. Water waves and energy 11. Radiation and energy 12. Modelling waves 13. Revision 14. Test 15. Re-teach	End of topic assessments contain a knowledge recall section and an application section. All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge. Kmowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation on speed of waves, a practical application question on measuring the speed of waves, as well as an extended writing question

	4	**Earth and the Atmosphere** 1. **The structure of the earth** 2. **Sedimentary rocks** 3. **Igneous and Metamorphic rocks** 4. **The rock cycle** 5. **Ceramics** 6. **The night sky** 7. **The solar system** 8. **The earth** 9. **The moon and changing ideas** 10. **Global warming** 11. **The Carbon cycle** 12. **Climate change** 13. **Extracting metals** 14. **Recycling** 15. **Revision** 16. **Test** 17. **Re-teach**	**End of topic assessments contain a knowledge recall section and an application section.** **All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge.** **Kmowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation on climate change, a practical application question on recycling, as well as an extended writing question**

	5	Reproduction and Genetics 1. Variation 2. Continuous and Discontinuous 3. Adapting to change 4. Adolescence 5. Reproductive systems 6. Fertilisation and implantation 7. Development of fetus 8. The menstrual cycle 9. Natural selection 10. Charles Darwin 11. Extinction 12. Preserving biodiversity 13. Inheritance 14. DNA 15. Genetics 16. Genetic modification 17. Re-teach	End of topic assessments contain a knowledge recall section and an application section. All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge. Knowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a calculation, a practical application question, as well as an extended writing question
	6	**Electricity and Magnetism** **1.** Potential difference **2.** Resistance **3.** Series and Parallel circuits **4.** Current **5.** Charging up **6.** Magnets and magnetic fields **7.** Electromagnets **8.** Using electromagnets **9.** Revision	End of topic assessments contain a knowledge recall section and an application section. All end of topic assessments to be out of 40-45 marks; 50% marks for knowledge recall, 50% for application of knowledge. Knowledge organisers will contain all the knowledge needed for the assessment recall section and will be based on in-class lessons. Application questions to include a

		10. Test **11.** Re-teach	calculation on application of formula to a problem, a practical application question on use of electromagnets, as well as an extended writing question

Year 9:

Year Group	Term	Lesson Content – classes will have 2 teachers who will each teach different subject content	Assessment Content
	1	Teacher 1 Cells • Cells (including differentiation and specialisation) • Microscopy • Chromosomes and mitosis • Micro-organisms and bacteria • Exchanging substances • Diffusion, osmosis and active transport	Standard Mid-point assessments with whole class feedback followed by end-of unit tests that test acquisition of knowledge and application. DTT applied.
	2	Teacher 2 Atomic Structure • Atoms, elements, isotopes • Compounds • Formulas and equations • Mixtures • Separating techniques • Electronic structure • Periodic table • Metals and non-metals	Standard Mid-point assessments with whole class feedback followed by end-of unit tests that test acquisition of knowledge and application. DTT applied.
	3	Teacher 1 States of Matter • Particle model • Density • Internal energy and changes of state • Specific latent heat • Particle motion	Standard Mid-point assessments with whole class feedback followed by end-of unit tests that test acquisition of knowledge and application. DTT applied.

	4	Teacher 2 Energy • Energy stores • Work done • Kinetic and potential energy stores • Conservation of energy and power • Conduction and convection • Energy transfers and efficiency • Energy resources – renewable and non-renewable	Standard Mid-point assessments with whole class feedback followed by end-of unit tests that test acquisition of knowledge and application. DTT applied.
	5	Teacher 1 Organisation • Enzymes • Food tests • The circulatory system • Cardio-vascular disease • Health and disease • Plant cell organisation	Standard Mid-point assessments with whole class feedback followed by end-of unit tests that test acquisition of knowledge and application. DTT applied.
	6	Teacher 2 Bonding • Ions and ionic compounds • Covalent compounds • Polymers • Giant covalent structures • Allotropes of carbon • Metallic bonding • States of matter • Nanoparticles	Standard Mid-point assessments with whole class feedback followed by end-of unit tests that test acquisition of knowledge and application. DTT applied.