Subject: Science

KS3

Year 7	Year 8	Year 9
Chemistry • Particles • Atoms • Chemical changes • Particles and separating techniques Biology • Cells and Organisation • Reproduction • Organisation in plants • Ecology Physics • Energy • Forces and space • Energy and heat transfer	Chemistry • Particles • Atoms • Chemical changes • Particles and separating techniques Biology • Organisation and systems • Health and respiration • Ecology and Ecosystems • Reproduction and inheritance Physics • Sound waves • Forces and motion • Energy and electricity	Chemistry • The Earth and Atmosphere • Atoms, periodic table and materials • Chemical reaction and energy Biology • Reproduction, inheritance, and genes • Organisation systems and transport • Health and disease • Ecology and plants Physics • Energy, electricity, and magnetism • Forces, motion, and pressure • Light waves

KS4 Combined Science

Year 10	Year 11
Biology • Cell Division • Communicable and non-communicable diseases • The human nervous system • Hormonal coordination • Homeostasis • Reproduction • Variation and evolution • Genetics and evolution **Chemistry** • Electrolysis • Energy Changes • Rates and equilibrium • Crude oil and fuels • Organic reactions • Chemical calculations • Chemical analysis **Physics** • Molecules and matter • Radioactivity • Forces in balance • Motion • Forces and motion • Forces and pressure • Wave properties • Electromagnetic waves • Light • Working scientifically	**Biology** • Adaption & interdependence • Ecosystem **Chemistry** • The Earth's atmosphere The Earth's resources Using resources **Physics** • Electromagnetism **Mastery and real-life application through further integration of disciplinary and substantive knowledge:** – Methods that scientists use to answer questions e.g. classification, chemical analysis, correlations versus experiments – Knowledge of apparatus and techniques: specific procedures e.g. double blind trials, sampling using transects and quadrat, accurate measurements and recording – Data analysis: methods of displaying information from a variety of scientific topics – Understanding how science uses evidence to develop explanations such as changing views on the atomic model. **Substantive and disciplinary knowledge mastery via application to current issues and problem-solving tasks in lessons including and in relation to:** – Climate change and new/alternative energy resources – Arising diseases and new ways of treating disease – Modern methods and implications of genetic engineering – Analytical methods

KS4 Separate Science

Year 10	Year 11
Biology • Cell Division • Communicable and non-communicable diseases • Hormonal coordination • Homeostasis • Reproduction **Chemistry** • Electrolysis • Energy Changes • Rates and equilibrium • Crude oil and fuels • Organic reactions • Polymers **Physics** • Molecules and matter • Radioactivity • Forces in balance • Motion • Forces and motion • Forces and pressure • Wave properties • Electromagnetic waves • Light	**Biology** • Genetics and evolution • Adaption & interdependence • Ecosystem **Chemistry** • Chemical analysis • The Earth's atmosphere • The Earth's resources • Using resources **Physics** • Electromagnetism • Space **Mastery and real-life application through further integration of disciplinary and substantive knowledge:** – Methods that scientists use to answer questions e.g. classification, chemical analysis, correlations versus experiments – Knowledge of apparatus and techniques: specific procedures e.g. double blind trials, sampling using transects and quadrat, accurate measurements and recording – Data analysis: methods of displaying information from a variety of scientific topics – Understanding how science uses evidence to develop explanations such as changing views on the atomic model. **Substantive and disciplinary knowledge mastery via application to current issues and problem-solving tasks in lessons including and in relation to:** – Climate change and new/alternative energy resources – Arising diseases and new ways of treating disease – Modern methods and implications of genetic engineering – Analytical methods

KS4 Exam Board Specification (Combined Science): AQA Combined Science Trilogy (8464)
KS4 Exam Board Specification (Biology): AQA Biology (Separate Sciences) (8461)
KS4 Exam Board Specification (Chemistry): AQA Chemistry (Separate Sciences) (8462)
KS4 Exam Board Specification (Physics): AQA Physics (Separate Sciences) (8463)Useful Resources and

Revision Support

- www.kerboodle.com
- https://www.my-gcsescience.com/
- https://www.savemyexams.co.uk/
- https://www.freesciencelessons.co.uk/
- https://www.youtube.com/user/MaChemGuy
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