



BRAKENHALE Subjects at a Glance

Science						
	Autumn Term		Spring Term		Summer Term	
Year 7	Cells Particles and their behaviour	Forces Structure and function of body systems	Elements, atoms and compounds Sound Reactions Energy	Light Acids and alkalis	Space	Reproduction Revision
Year 8	Electricity Ecosystems	Separation techniques	The periodic table Adaptations and inheritance	Metals and acids	Motion and pressure The Earth	Health and lifestyle Revision
Year 9	Atomic structure and the periodic table	Infection and response Energy	Cell Bonding, structure and the properties of matter	Forces	Motion Cellular transport	Revision



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Year 10: Combined Science	Cellular organisation Chemical changes	Particle model of matter	Bioenergetics The rate and extent of chemical change	Electricity Homeostasis and response	Atomic structure	Ecology Revision
Year 10: Separate Science	Atomic structure and the periodic table Energy Energy changes Infection and response	Cellular organisation Particle model of matter Atomic structure	Bioenergetics The rate and extent of chemical change Electricity	Waves Homeostasis and response	Organic chemistry Chemical analysis Ecology	Revision
Year 11	Ecology Chemical analysis Chemistry of the atmosphere	Inheritance, variation and evolution Magnetism and electromagnetism	Using resources	Atomic structure and the periodic table (revision) Bonding, structure and the properties of matter (revision)	Revision	Exams



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	Autumn Term		Spring Term		Summer Term	
Year 12 Biology	Separate Science Revision Biological molecules Cell Structure	Nucleotides and nucleic acids Transport in animals Enzymes Biological membranes	Transport in plants Cell division, cell diversity and cellular organisation Exchange surfaces	Neuronal communication Plant and animal responses Communication and homeostasis Excretion as an example of homeostatic control	Photosynthesis Hormonal communication Respiration	Revision
Year 13 Biology	Photosynthesis Respiration Plant and animal responses Biodiversity	Communicable diseases, disease prevention and the immune system Classification and evolution	Cellular control Patterns of inheritance	Manipulating genomes Cloning and biotechnology	Populations and sustainability Ecosystems	Exams



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	Autumn Term		Spring Term		Summer Term	
Year 12 Chemistry	Atoms, ions and compounds Amounts of substance Electrons and Bonding	Acids and Redox Shapes of molecules Intermolecular Forces	The Periodic Table Reactivity trends Alkanes, Alkenes and Alcohols	Core Thermodynamics Haloalkanes and Atmospheric Chemistry	Core Kinetics Aromatics and Carbonyl Chemistry	Advanced Kinetics Organic Synthesis and Analysis
Year 13 Chemistry	Acids, bases and pH Buffers and Neutralisation Amines, Amino Acids	Enthalpy and Entropy Polymers	Redox and Electrode Potentials Chromatography and Advanced Spectroscopy	Transition Elements Organic Synthesis	Content review and examination preparation	Exams



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	Autumn Term		Spring Term		Summer Term	
Year 12 Physics	Chapter 2: Foundation of physics Chapter 3: Motion	Chapter 4: Forces in action Chapter 5: Work, energy and power Chapter 6: Materials	Chapter 7: Laws of motion and momentum Chapter 8: Charge and current Chapter 9: Energy, power and resistance	Chapter 10: Electrical circuits Chapter 11: Waves Chapter 1	12: Waves Chapter 2 Chapter 13: Quantum Physics	Chapter 14: Thermal Physics Chapter 15: Ideal gases Chapter 16: Circular motion
Year 13 Physics	Chapter 17: Oscillations Chapter 18: Gravitational fields Chapter 19: Stars	Chapter 20: Cosmology Chapter 21: Capacitance Chapter 22: Electric fields	Chapter 23: Magnetic fields Chapter 24: Particle Physics Chapter 25: Radioactivity	Chapter 26: Nuclear Physics Chapter 27: Medical Imaging	Content review and examination preparation	Exams