Co-op Academy
Belle Vue

Co-op Belle Vue Science five year overview						
Our high-quality science education develops scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. Throughout these disciplines, our students also develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. They become equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. Biology key concepts: The 5 key concepts interleaved throughout the 5 year biology curriculum are 'how organisms work,' ' growth, development and reproduction,' 'ecosystems,' 'variation and evolution' and 'genetics and inheritance.' Chemistry key concepts: The 5 key concepts interleaved throughout the 5 year chemistry curriculum are 'substances, bonding and structure,' 'elements, compounds and organic chemistry,' 'chemical reactions, 'chemical analysis' and 'the Earth and its resources.Physics key concepts: The 5 key concepts interleaved throughout the 5 year physics curriculum are 'energy,' 'forces and motion,' 'space,' 'waves' and 'electricity and magnetism.' Working scientifically concepts: Through the content of all 3 disciplines, students are taught 'scientific attitudes,' 'experimental skills and investigations', 'analysis' and 'evaluation and measurement.'						
Year 7 Long Term Plan						
Topic 1 (w1-2)	Topic 2 (w3-6)	Topic 3 (7-12)	Topic 4 (12-17)	Topic 5 (w18-21)	Topic 6 (22-26)	Topic 7 (27-32)
Introduction to Science: Safety and equipment	Particles	Forces	Cells and organisation	Separating techniques	Energy	Reproduction
Key concepts	Key concepts	Key concepts	Key concepts	Key concepts	Key concepts	Key concepts
Equipment and Safety (hazard symbols and how to write a risk	Substances, bonding and structure	Forces and motion	How organisms work	Chemical analysis	Energy	Growth, development and reproduction

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assessment)						
	Assessment: Particles and Safety section a Particles section b on Exampro online	Assessment: Forces, Particles and Safety section a Forces section b on Exampro online	Assessment: Achievement Assessment	Assessment: Separating techniques, Cells, Forces, Particles and Safety section a Cells section b on Exampro online	Assessment: Energy, Separating techniques, Cells, Forces, Particles and Safety section a Energy section b on Exampro online	Assessment: Achievement Assessment

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Year 8 Long Term Plan						
Topic 1 (w1-5)	Topic 2 (w6-11)	Topic 3 (w12-17)	Topic 4 (w18-20)	Topic 5 (20-23)	Topic 6 (w24-26)	Topic 7 (w26-30)
The periodic table	Space	Digestion and health	Chemical reactions	Waves	Biological processes	Metals and other materials
Key concepts	Key concepts	Key concepts	Key concepts	Key concepts	Key concepts	Key concepts
Elements, compounds and organic Chemistry	Space	How organisms work	Chemical reactions	Waves	Ecosystems	Chemicals reactions
Assessment: Periodic table section a Periodic table section b on Exampro online	Assessment: Space and Periodic table section a Space section b on Exampro online	Assessment: Achievement Assessment	Assessment: Chemical reactions, Digestion and health, Space and Periodic table section a Chemical reactions section b on Exampro online	Assessment: Waves, Chemical reactions, Digestion and health, Space and Periodic table section a Waves section b on Exampro online	Assessment: Biological processes, Waves, Chemical reactions, DIgestion and health, SPace and Periodic table section a Biological processes section b on Exampro online	Assessment: Achievement Assessment

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Year 9 Long Term Plan							
Topic 1 (w1-4)	Topic 2 (w5-9))	Topic 3 (w10-13)	Topic 4 (w14-17)	Topic 5 (18-21)	Topic 6 (w22-25)	Topic 7 (w26-29)	Topic 8 (w30-33)
Ecosystems and adaptations	Electricity and magnetism	The Earth and its atmosphere	Genetics and evolution	Forces and motion	Atomic structure	Body systems	Matter
Key concepts	Key concepts	Key concepts	Key concepts	Key concepts	Key concepts	Key concepts	Key concepts
Ecosystems	Electricity and magnetism	The Earth and its resources	Genetics and inheritance	Forces and motion	Elements, compounds and organic Chemistry	How organisms work	Substances, bonding and structure & Energy
Assessment: Ecosystems section a Ecosystems section b on Exampro online	Assessment: Electricity and magnetism and Ecosystems section a Electricity and magnetism section b on Exampro online	Assessment: Earth, Electricity and magnetism and Ecosystems section a Earth section b on Exampro online	Assessment: Achievement Assessment	Assessment: Forces and motion, Genetics and evolution, Electricity and magnetism, Ecosystems section a Forces and motion section b on Exampro online	Assessment: Atomic structure, Forces and motion, Genetics and evolution, Electricity and magnetism, Ecosystems section a Atomic structure section b on Exampro online	Assessment: Body systems, Atomic structure, Forces and motion, Genetics and evolution, Electricity and magnetism, Ecosystems section a Body systems section b on Exampro online	Assessment: Achievement Assessment

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Year 10 Biology Long Term Plan					
Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6
Cell biology	Organisation (animals)	Infection and response	Organisation (plants)	Bioenergetics	Ecology
Key concepts	Key concepts	Key concepts	Key concepts	Key concepts	Key concepts
How organisms work	How organisms work	How organisms work	How organisms work	Ecosystems	Ecosystems
Assessment: Cell biology PK assessment	Assessment: Organisation (animals) PK assessment	Assessment: Achievement Assessment	Assessment: Organisation (plants) PK assessment	Assessment: Bioenergetics PK assessment	Assessment: Achievement Assessment

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Year 11 Biology Long Term Plan					
Topic 1		Topic 2		Topic 3	
Ecology		Homeostasis and response		Inheritance, variation and evolution	
Key concepts		Key concepts		Key concepts	
Ecosystems		Growth, development and reproduction		Genetics and variation & Variation and evolution	
Assessment: Ecology 1 PK assessment	Assessment: Ecology 2 PK assessment	Assessment: Achievement Assessment	Assessment: Homeostasis and response PK assessment	Assessment: Inheritance and variation PK assessment	Assessment: Achievement Assessment

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Year 10 Chemistry Long Term Plan				
Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
Atomic structure and the periodic table	Bonding, structure and the properties of matter	Quantitative chemistry	Chemical changes	Energy changes
Key concepts	Key concepts	Key concepts	Key concepts	Key concepts
Elements, compounds and organic Chemistry	Substances, bonding and structure	Chemical analysis	Chemical reactions	Chemical reactions
Assessment: Atomic structure and the periodic table PK assessment	Assessment: Bonding, structure and the properties of matter PK assessment	Assessment: Achievement Assessment	Assessment: Chemical changes PK assessment	Assessment: Achievement Assessment

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Year 11 Chemistry Long Term Plan				
Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
The rate and extent of chemical change	Organic chemistry	Chemical analysis	Chemistry of the atmosphere	Using resources
Key concepts	Key concepts	Key concepts	Key concepts	Key concepts
Chemical reactions	Elements, compounds and organic Chemistry	Chemical analysis	The Earth and its resources	The Earth and its resources
Assessment: The rate and extent of chemical change PK assessment	Assessment: Organic chemistry PK assessment	Assessment: Achievement Assessment	Assessment: Chemistry of the atmosphere PK assessment	Assessment: Achievement Assessment

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Year 10 Physics Long Term Plan					
Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6
Forces	Waves	Energy	Electricity	Particle model of matter	Atomic structure
Key concepts	Key concepts	Key concepts	Key concepts	Key concepts	Key concepts
Forces and motion	Waves	Energy	Electricity and magnetism	Energy	Energy
Assessment: Forces PK assessment	Assessment: Waves PK assessment	Assessment: Achievement Assessment	Assessment: Electricity PK assessment	Assessment: Particle model of mater PK assessment	Assessment: Achievement Assessment

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Year 11 Physics Long Term Plan				
Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
Forces	Waves	Energy	Magnetism and electromagnetism	Space (triple only)
Key concepts	Key concepts	Key concepts	Key concepts	Key concepts
Forces and motion	Waves	Energy	Electricity and magnetism	Space
Assessment: Forces 2 PK assessment	Assessment: Achievement Assessment	Assessment: Energy 2 PK assessment	Assessment: Achievement Assessment	Assessment: Space PK assessment