OXFORD
INTERNATIONAL
AQA EXAMINATIONS

STEP UP TO OXFORDAQA INTERNATIONAL GCSE COMBINED SCIENCES

Mapping of Activate from Oxford University Press to OxfordAQA International GCSE Combined Sciences Double Award (9204)

THE BRIDGE TO INTERNATIONAL GCSE COMBINED SCIENCES (9204)

In this document, we show how Activate from Oxford University Press prepares your Lower Secondary age 11–14 students for the step up to OxfordAQA International GCSE Combined Sciences (9204), whether they are taking the course over two or three years.

The following mapping grid shows which areas of Activate provide the prior knowledge and skills for each topic in the OxfordAQA International GCSE Combined Sciences (9204) specification. Any content that does not require prior learning before students start their International GCSE study is clearly indicated.

Mapping of Activate to OxfordAQA International GCSE Combined Sciences (9204)

OxfordAQA International GCSE Combined Sciences Double Award (9204)		Mapping of content from Activate		
Topic area	**Subtopic area**	**Activate 1 (ages 11–12) chapters and sections**	**Activate 2 (ages 12–13) chapters and sections**	**Activate 3 (ages 13–14) chapters and sections**
BIOLOGY				
ORGANISATION	Cell structure	**Cells** 1.1 Observing cells 1.2 Plant and animal cells 1.3 Specialised cells 1.4 Movement of substances 1.5 Unicellular organisms		
	Principles of organisation	**Cells** 1.5 Unicellular organisms Structure and function of body systems 2.1 Levels of organisation		
	Animal tissues, organs and organ systems	**Structure and function of body systems** 2.1 Levels of organisation	**Health and lifestyle** 1.4 Digestive system	
	Plant tissues, organs and systems	**Cells** 1.2 Plant and animal cells	**Ecosystem processes** 2.2 Leaves	
	Transport in cells	**Cells** 1.4 Movement of substances 1.5 Unicellular organisms		
BIOENERGETICS	Photosynthesis		**Ecosystem processes** 2.1 Photosynthesis	
	Circulation in humans			**Detection** 3.4 Blood typing
	Digestion		**Health and lifestyle** 1.1 Nutrients 1.2 Food tests 1.4 Digestive system 1.5 Bacteria and enzymes in digestion	**New technology** 1.8 Enzymes in industry
	Breathing	**Structure and function of body systems** 2.3 Breathing		
	Respiration	**Structure and function of body systems** 2.6 Movement: muscles	**Ecosystem processes** 2.5 Aerobic respiration 2.6 Anaerobic respiration	
ECOLOGY	Energy transferred in ecosystems		**Ecosystem processes** 2.7 Food chains and webs	
	Adaptations, interdependence and competition		**Ecosystem processes** 2.9 Ecosystems **Adaptation and inheritance** 3.1 Competition and adaptation 3.2 Adapting to change	
	Decay and the carbon cycle		**The Earth** 4.5 The carbon cycle	**Detection** 3.5 Time of death

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BIOLOGY				
ORGANISMS' INTERACTION WITH THE ENVIRONMENT	The human nervous system	**Cells** 1.3 Specialised cells		
	Homeostasis	No prior teaching needed before OxfordAQA International GCSE study.		
	Temperature control	No prior teaching needed before OxfordAQA International GCSE study.		
	Control of blood glucose	No prior teaching needed before OxfordAQA International GCSE study.		
	Behaviour	No prior teaching needed before OxfordAQA International GCSE study.		
	Infection and response			**Turning points in biology** 2.1 Vaccines 1 2.2 Vaccines 2 2.3 Antiobiotics 1 2.4 Antibiotics 2
INHERITANCE	Reproduction	**Reproduction** 3.1 Adolescence 3.2 Reproductive systems 3.3 Fertilisation and implantation 3.4 Development of a fetus 3.5 The menstrual cycle 3.6 Flowers and pollination 3.7 Fertilisation and germination 3.8 Seed dispersal		
	Cell division			**New technology** 1.1 Genetics 1.5 Cloning
	Genetic variation		**Adaptation and inheritance** 3.3 Variation 3.4 Continuous and discontinuous 3.5 Inheritance	**New technology** 1.1 Genetics
	Genetic disorders			**New technology** 1.2 Inherited disorders
	Genetic manipulation			**New technology** 1.4 Genetic engineering 1.5 Cloning
VARIATION AND EVOLUTION	Variation		**Adaptation and inheritance** 3.1 Competition and adaptation 3.2 Adapting to change 3.3 Variation 3.4 Continuous and discontinuous 3.5 Inheritance	
	Natural selection		**Adaptation and inheritance** 3.6 Natural selection 3.7 Extinction	**Turning points in biology** 2.6 Charles Darwin 2.7 Preventing extinction

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CHEMISTRY				
ATOMIC STRUCTURE AND THE PERIODIC TABLE	Solid, liquids and gases	No prior teaching needed before OxfordAQA International GCSE study.		
	A simple model of the atom	**Elements, atoms, and compounds** 2.1 Elements 2.2 Atoms 2.1 Elements 2.2 Atoms		
	The periodic table	**Elements, atoms, and compounds** 2.1 Elements	**The Periodic Table** 1.1 Metals and non-metals 1.2 Groups and periods 1.3 The elements of Group 1 1.4 The elements of Group 7 1.5 The elements of Group 0	**Turning points in chemistry** 2.3 Discovering the periodic table
STRUCTURE, BONDING AND THE PROPERTIES OF MATTER	Chemical bonds: ionic, covalent and metallic	**Elements, atoms, and compounds** 2.3 Compounds 2.4 Chemical formulae 2.3 Compounds 2.4 Chemical formulae		
	How bonding and structure are related to the properties of substances	No prior teaching needed before OxfordAQA International GCSE study.		
	Structure and bonding of carbon	No prior teaching needed before OxfordAQA International GCSE study.		
CHEMICAL CHANGES	Metals		**The Periodic Table** 1.1 Metals and non-metals	
	The reactivity series		**Metals and acids** 3.1 Acids and metals 3.2 Metals and oxygen 3.3 Metals and water 3.4 Metal displacement reactions 3.5 Extracting metals	
	Metal carbonates	**Reactions** 3.4 Thermal decomposition		
	Electrolysis	No prior teaching needed before OxfordAQA International GCSE study.		
CHEMICAL ANALYSIS	Purity and chromatography		**Separation techniques** 2.1 Mixtures 2.2 Solutions 2.3 Solubility 2.4 Filtration 2.5 Evaporation and distillation 2.6 Chromatography	
	Identification of ions	No prior teaching needed before OxfordAQA International GCSE study.		
ACIDS, BASES AND SALTS	The properties of acids and bases	**Acids and alkalis** 4.1 Acids and alkalis 4.2 Indicators and pH 4.3 Neutralisation		
	Preparation of salts	**Acids and alkalis** 4.4 Making salts	**Metals and acids** 3.1 Acids and metals	

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CHEMISTRY				
QUANTITATIVE CHEMISTRY	Conservation of mass including the quantitative interpretation of chemical equations	**Elements, atoms, and compounds** 2.4 Chemical formulae		
		Reactions 3.1 Chemical reactions 3.2 Word equations 3.5 Conservation of mass		
	Use of amount of substance in relation to masses of pure substances		**Separation techniques** 2.1 Mixtures	
	The mole concept	No prior teaching needed before OxfordAQA International GCSE study.		
	Using molar concentrations of solutions and amount of substance in relation to volumes of gases	No prior teaching needed before OxfordAQA International GCSE study.		
TRENDS WITHIN THE PERIODIC TABLE	Group properties		**The Periodic Table** 1.3 The elements of Group 1 1.4 The elements of Group 7	
THE RATE OF CHEMICAL CHANGE	Rate of reaction	**Particles and their behaviour** 1.6 Diffusion 1.7 Gas pressure		
ENERGY CHANGES	Exothermic and endothermic reactions	**Reactions** 3.6 Exothermic and endothermic		
	Calculating and explaining energy change	No prior teaching needed before OxfordAQA International GCSE study.		
ORGANIC CHEMISTRY	Crude oil	**Reactions** 3.3 Burning fuels		
	Hydrocarbons	**Reactions** 3.3 Burning fuels		
	Obtaining useful substances from crude oil	No prior teaching needed before OxfordAQA International GCSE study.		
	Synthetic and naturally occurring polymers	No prior teaching needed before OxfordAQA International GCSE study.		
	Organic compounds – their structure and reactions	No prior teaching needed before OxfordAQA International GCSE study.		

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PHYSICS				
FORCES AND THEIR EFFECTS	Forces and their interactions	**Forces** 1.1 Introduction to forces 1.2 Squashing and stretching 1.3 Drag forces and friction 1.4 Forces at a distance		
	Motion		**Motion and pressure** 3.1 Speed 3.2 Motion graphs	
	Resultant forces	**Forces** 1.5 Balanced and unbalanced	**Motion and pressure** 3.2 Motion graphs	
	Safety in public transport			**New technology** 1.5 Your sports
ENERGY	Forces and energy	**Forces** 1.1 Introduction to forces 1.2 Squashing and stretching 1.3 Drag forces and friction 1.4 Forces at a distance	**Energy** 2.7 Energy and power 2.8 Work, energy, and machines	
	Energy transfers, conservation and dissipation of energy		**Energy** 2.2 Energy adds up	
	Energy resources		**Energy** 2.1 Food and fuels 2.6 Energy resources	**New technology** 1.6 Your planet
WAVES	General properties of waves	**Sound** 2.1 Waves		**Detection** 3.4 Detecting messages
	The electromagnetic spectrum			**Turning points in physics** 2.6 Radioactivity 1 2.7 Radioactivity 2
	Sound and ultrasound	**Sound** 2.2 Vibrations and energy transfer 2.3 Loudness and pitch 2.4 Detecting sound 2.5 Echoes and ultrasound		
	Reflection	**Light** 3.2 Reflection		
PARTICLE MODEL OF MATTER	Kinetic theory	**Particles and their behaviour (C1)** 1.1 The particle model 1.2 States of matter 1.3 Melting and freezing 1.4 Boiling 1.5 More changes of state	**Energy** 2.3 Energy and temperature	
	Energy transfers and particle motion	**Particles and their behaviour (C1)** 1.2 States of matter 1.3 Melting and freezing 1.4 Boiling 1.5 More changes of state	**Energy** 2.4 Energy transfer: particles 2.5 Energy transfer: radiation	

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PHYSICS				
ELECTRICITY AND MAGNETISM	Electrical circuits		**Electricity and magnetism** 1.1 Charging up 1.2 Circuits and current 1.3 Potential difference 1.4 Series and parallel 1.5 Resistance	
	Magnetism and electromagnetism		**Electricity and magnetism** 1.6 Magnets and magnetic fields 1.7 Electromagnets 1.8 Using electromagnets	**Turning points in physics** 2.8 Electromagnetism 1 2.9 Electromagnetism 2
GENERATING AND DISTRIBUTING ELECTRICITY AND HOUSEHOLD USE	Using electricity in the home	No prior teaching needed before OxfordAQA International GCSE study.		
	The motor effect		**Electricity and magnetism** 1.8 Using electromagnets	
	Transferring electrical energy		**Energy** 2.7 Energy and power	
NUCLEAR PHYSICS	Atomic structure			**Turning points in chemistry (C3)** 2.2 Looking into atoms
	Ionizing radiation from the nucleus			**Turning points in physics** Radioactivity 1 Radioactivity 2
	Nuclear fission			**New technology** 1.6 Your planet
SPACE PHYSICS	Life cycle of a star	No prior teaching needed before OxfordAQA International GCSE study.		
	Solar system and orbital motion	**Space** 4.1 The night sky 4.2 The Solar System 4.3 The Earth 4.4 The Moon		

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Activate

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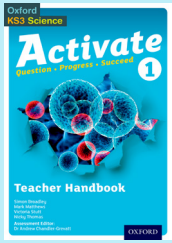
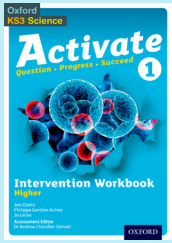
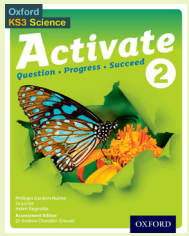
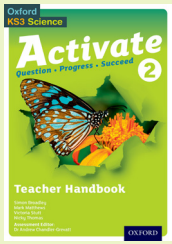
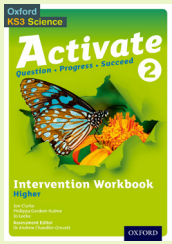
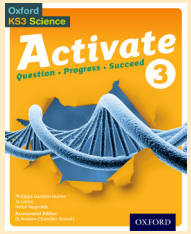
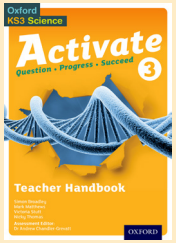
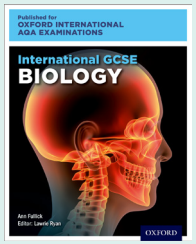
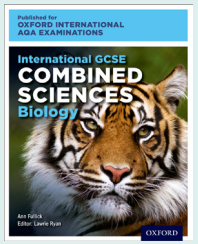
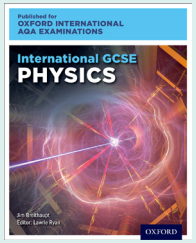
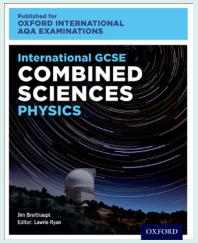
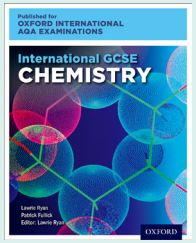
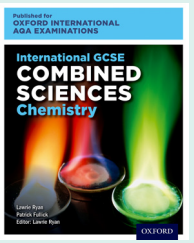
Three Year	Two Year	 978 019 839256 9	 978 019 839259 0	 Foundation 978 019 842380 5 Higher 978 019 842379 9
		 978 019 839257 6	 978 019 839260 6	 Foundation 978 019 842382 9 Higher 978 019 842381 2
		 978 019 839258 3	 978 019 839261 3	

OxfordAQA International GCSE Science

	Separate Sciences	Combined Sciences
Biology	 Print Textbook 978 019 837588 3 Online Textbook 978 019 841143 7 Print & Online Textbook Pack 978 019 841142 0	 Print Textbook 978 019 840793 5 Online Textbook 978 019 841158 1 Print & Online Textbook Pack 978 019 841157 4
Physics	 Print Textbook 978 019 837590 6 Online Textbook 978 019 841153 6 Print & Online Textbook Pack 978 019 841152 9	 Print Textbook 978 019 840795 9 Online Textbook 978 019 841168 0 Print & Online Textbook Pack 978 019 841167 3
Chemistry	 Print Textbook 978 019 837589 0 Online Textbook 978 019 841148 2 Print & Online Textbook Pack 978 019 841147 5	 Print Textbook 978 019 842308 9 Online Textbook 978 019 841163 5 Print & Online Textbook Pack 978 019 842307 2

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