

Switching Guide

International GCSE

Combined Science (9204)

Switching from Pearson Edexcel or Cambridge International to OxfordAQA International Qualifications



At OxfordAQA
we put fairness first



Switching to OxfordAQA International GCSE Combined Science (9204)

The OxfordAQA International GCSE Combined Science specification is a double award International GCSE that provides students with a good grounding in the principles of all three science disciplines: Biology, Chemistry and Physics.

Key features:

- Students take three equally weighted papers and receive two identical GCSE grades based on their composite achievement.
- Students develop a range of practical skills along with data analysis and critical thinking skills that they can use in their everyday lives and further studies.
- Students are assessed fairly, with papers carefully designed to avoid cultural or linguistic bias.

The international exam board that puts fairness first



Topic by topic comparison

OxfordAQA GCSE Combined Science Double Award specification (9204) v5.2	Pearson Edexcel GCSE Science Double Award specification (4SD0)	Cambridge International IGCSE Combined Science (0653)
Overall structure		
Split into 24 topics:	Split into 17 topics:	Split into 30 topics:
Biology 3.1 Organisation 3.2 Bioenergetics 3.3 Ecology 3.4 Organisms' interaction with the environment 3.5 Inheritance 3.6 Variation and evolution	Biology 1 The nature and variety of living organisms 2 Structure and functions in living organisms 3 Reproduction and inheritance 4 Ecology and the environment 5 Use of biological resources	Biology B1 Characteristics of living organisms B2 Cells B3 Biological molecules B4 Enzymes B5 Plant nutrition B6 Animal nutrition B7 Transport B8 Gas exchange and respiration B9 Coordination and response B10 Reproduction B11 Organisms and their environment B12 Human influences on ecosystems

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Chemistry 3.7 Atomic structure and the periodic table 3.8 Structure, bonding and the properties of matter 3.9 Chemical changes 3.10 Chemical analysis 3.11 Acids, bases and salts 3.12 Quantitative chemistry 3.13 Trends within the periodic table 3.14 The rate of chemical change 3.15 Energy changes 3.16 Organic chemistry	Chemistry 1 Principles of chemistry 2 Inorganic chemistry 3 Physical chemistry 4 Organic chemistry	Chemistry C1 The particulate nature of matter C2 Experimental techniques C3 Atoms, elements and compounds C4 Stoichiometry C5 Electricity and chemistry C6 Energy changes in chemical reactions C7 Chemical reactions C8 Acids, bases and salts C9 The Periodic Table C10 Metals C11 Air and water C12 Sulfur C13 Carbonates C14 Organic chemistry
Physics 3.17 Forces and their effects 3.18 Energy 3.19 Waves 3.20 Particle model of matter 3.21 Electricity and magnetism 3.22 Electricity and household use 3.23 Nuclear physics 3.24 Space physics	Physics 1 Forces and motion 2 Electricity 3 Waves 4 Energy resources and energy transfers 5 Solids, liquids and gases 6 Magnetism and electromagnetism 7 Radioactivity and particles 8 Astrophysics	Physics P1 Motion P2 Work, energy and power P3 Thermal Physics P4 Properties of waves, including light and sound P5 Electricity and magnetism P6 Electrical circuits P7 Electromagnetic effects P8 Atomic physics
There are nine required practical activities (three for each subject), which are contained within the body of the specification, but also given in an appendix.	There are 25 practicals contained within the specification content.	There are 13 practical investigations described in the specification.

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Practical is assessed throughout all exams. There is no separate practical exam.	Practical is assessed throughout all exams. There is no separate practical exam.	Practical work is assessed either in the Practical Test or the Alternative to Practical paper.
There are three exams, each 105 minutes/100 marks in length, which are equally weighted. Paper 1 is on the Biology content, Paper 2 on the Chemistry content and Paper 3 on the Physics content. Question papers are tiered (Core and Extension). Some content is Extension tier only and this is denoted in bold in the subject content. The exams target Assessment Objectives 1–4.	There are three exams (one biology, one chemistry and one physics), each 120 minutes/110 marks in length, which are equally weighted. The exams are untiered.	There are two compulsory papers (one multiple choice – 45 minutes and one written paper – 120 minutes). These exams focus on AO1 and AO2. The paper are tiered with core students taking papers 1 and 3, and extend students taking papers 2 and 4. All students must take either the Practical Test (120 minutes) or the Alternative to Practical paper (90 minutes). These papers targets AO3 and are untiered.
The course is graded from 9–9 to 1–1, where 9–9 is the highest and 1–1 the lowest. There are two grades as the course is a GCSE Double Award. Core candidates can access grades 5–5 to 1–1. Extension candidates can access grades 9–9 to 4–4.	The course is graded from 99 (highest) to 11 (lowest).	The course is graded from 9–9 to 1–1, where 9–9 is the highest and 1–1 the lowest. There are two grades as the course is a GCSE Double Award. Core candidates can access grades 5–5 to 1–1. Extension candidates can access grades 9–9 to 1–1.

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BIOLOGY			
3.1 Organisation			
Cell structure	Normal range of organelles including ribosomes. Bacterial cells and general cell specialisation.	Generally the same but fungi, bacteria and proctists dealt with in detail.	Generally the same.
Principles of organisation	Tissues, organs, systems.	Generally the same.	Not included as a specific section.

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Animal tissues, organs and systems	Muscular, glandular and epithelial tissue related to structures/organs and function.	OxfordAQA covers this in greater detail, including functions. Some detail in Edexcel but interspersed through spec.	Not included as a specific section.
Plant tissues, organs and systems	Normal range including reference to leaves and xylem/phloem.	Covered but specific examples included in Edexcel eg maize, peas regarding carbohydrate storage.	Not included as a specific section. Xylem and phloem clearly in spec, however. Investigation: water route through a plant. Investigation: factors affecting transpiration.
Transport in cells	Diffusion, osmosis and active transport, isotonic, hypertonic, turgor and plasmolysis.	Covered but technical terms eg isotonic, turgor etc not required, unlike in OxfordAQA. Required practical in Edexcel.	Active transport not included. Diffusion and osmosis are covered in detail. Isotonic / hypertonic not included. Investigation: osmosis. Investigation: diffusion H tier only.
3.2 Bioenergene	etics		
Photosynthesis	Including limiting factors. Uses of glucose. Required practical.	Generally the same. Edexcel does not specifically mention limiting factors. Required practical in Edexcel.	Generally the same but no mention of limiting factors but includes nitrate and magnesium deficiencies. Investigation: photosynthesis.
Circulation in humans	Heart. Blood components and their functions including blood clotting. Names of heart valves not required and associated knowledge of heart blood vessels is limited.	Generally the same. No mention of blood clotting.	Generally the same.

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Digestion	Detailed knowledge including bile.	Generally the same but also includes the different food groups and food tests. Required practical: enzyme activity. Required practical: food tests.	Generally the same but the different food groups and tests are included as well as the consequences of malnutrition. Also includes structure and functions of teeth in physical digestion. Much of the detail of digestion is higher tier only. Investigation: enzyme activity.
Breathing	Inhalation and exhalation associated with air pressure changes. Alveoli structure v function.	Generally the same. Required practical.	Mechanism of ventilation not included but causes of respiratory problems are included. Test for carbon dioxide is included.
Respiration	Aerobic and anaerobic. Oxygen debt. Required practical.	Similar but no mention of oxygen debt in Edexcel. However, Edexcel does mention ATP and OxfordAQA does not. Required practical in Edexcel is release of 'heat' during respiration as well as the required practical in the OxfordAQA specification.	Generally the same though much of the detail is H tier only. Investigation: as OxfordAQA. Investigation: breathing rate.
3.3 Ecology			,
Energy transferred in ecosystems	Related to biomass. No interpretation or drawings required regarding pyramids of energy.	Similar, but Edexcel includes food chains, food webs and pyramid of number. Edexcel also includes pyramids of energy and energy transfer (not in OxfordAQA). Required practical (fieldwork).	Food chains and webs need to be known. Energy is the key feature but biomass, the key aspect of UK GCSE specification, is not mentioned. 'Pyramids' is not a term stated in the spec.
Adaptations, interdependence and competition	Animals and plants. Extemophiles.	Not covered.	Not covered.
Decay and the carbon cycle	Standard cycle required.	Generally the same.	Generally the same.

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3.4 Organisms i	nteraction with the environment		
The human nervous system	Standard reflex arc.	Generally the same. Structure and function of eye also required including accommodation.	Generally the same. Structure and function of eye also required including functions of eye structures.
Homeostasis	Temperature, water content, ion content and blood glucose.	Similar but Edexcel only includes water content and body temperature. Edexcel also includes plant response in terms of hormones (2.83 to 2.85).	Temperature and blood glucose covered. Adrenaline is included. Also includes plant response in terms of hormones (9.6). Investigation: auxins.
Temperature control	Mechanisms but detail H tier only.	Generally the same.	Generally the same though some aspects H tier only.
Control of blood glucagon.	Glucagon higher tier only.	Blood sugar not specifically referred to but insulin is mentioned. Glucagon not mentioned.	Mechanisms in higher tier only.
Behaviour	Virus structure not required. Required practical.	Similar but less detail to enable clear comparison. Viruses implicitly included.	HIV/AIDS and STIs need to be known. The role of white blood cells needs to be known. Nothing on immunology.

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3.5 Inheritance			
Reproduction	Sexual and asexual.	Generally similar.	As Edexcel: Male and female systems
		Required practical on seed germination.	adaptations. Female hormones and testosterone also required.
		Male and female systems adaptations. Female hormones and testosterone also required.	Menstrual cycle and development in the womb including the placenta/amniotic fluid included.
		Menstrual cycle and development in the womb including the placenta/amniotic fluid included.	Plant reproduction systems also need to be known.
		Plant reproduction systems/structures also need to be known.	Investigation: conditions for germination.
Cell division	Mitosis and meiosis. Differentiation including stem cells. Therapeutic cloning. Social/ethical issues.	Does not include stem cell technology and therapeutic cloning.	Mitosis and meiosis included but higher tier only.
			Selective breeding included but nothing on stem cells/therapeutic cloning.
Genetic variation	Including interpretation of genetic diagrams but construction is higher tier only. Detailed structure of DNA not required.	Generally the same.	Generally the same.
Genetic disorders	Polydactyly, cystic fibrosis and sickle cell anaemia.	Not included.	Not included.
Genetic manipulation	Tissue culture, embryo transplants, adult cell cloning.	Only genetic engineering included.	Not included.
	Techniques of genetic engineering higher tier only.		

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3.6 Variation and	evolution		
Variation	Genetic and environmental.	Generally the same.	Environment not specifically included.
Natural selection	Including Lamarck, evolution and speciation.	No mention of Lamarck or speciation.	No mention of Lamarck or speciation.
			No mention of Darwin's being the generally accepted theory (although it is included).
		A whole section on the production of food is included (5a) in Edexcel which is not in OxfordAQA.	A specific section on the seven characteristics of living organisms (B1) is included.
			A whole section on human influences on ecosystems is included in B13 including deforestation and water pollution (eutrophication).
CHEMISTRY			
3.7 Atomic struct	ture and the periodic table		
Solids, liquids and gases	The 3 states.	Generally the same.	Generally the same.
A simple model of the atom	Structure including the first 20 elements.	Generally the same.	Generally the same.
The periodic table	Including the work of Mendeleev.	Does not include the work of Mendeleev.	Generally the same but with transition elements included. Mendeleev not included.
3.8 Structure, bo	nding and the properties of mat	ter	
Chemical bonds: ionic, covalent and metallic	Details of metallic bonding higher tier only.	Does not include metallic bonding.	Generally the same.
How bonding and structure are related to the properties of substance	Intermolecular forces and conduction of heat/ electricity higher tier only.	Generally the same.	Generally the same with some at higher tier.

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Structure and bonding of carbon	Graphite (conduction of heat/electricity) and fullerenes (higher tier only).	Generally the same.	Generally the same but fullerenes not included.
3.9 Chemical cha	anges		
Metals	General knowledge of transition metals.	Bioleaching and phytomining not included.	Generally the same.
	Reactivity series. Extraction including	Transition metals not included.	Alloys included.
	bioleaching and phytomining. Metal carbonates.	Rusting and prevention of rusting required.	Bioleaching and phytomining not included.
	Carbonales.	Practical: acid + metal.	Transition metals are included as a separate section.
Electrolysis	Includes half equations. Extraction of aluminium.	Not included in specification content but is as a suggested practical investigation.	Generally as OxfordAQA.
3.10 Chemical ar	nalysis		
Purity and chromatography	Included in specification.	Generally the same. Practical: chromatography.	Generally the same.
Identification of ions by	Wide range of tests.	Generally the same.	Generally the same.
chemical means	Required practical.		
3.11 Acids, bases	and salts		
The properties of acids and bases	Generally the same.	Generally the same.	Generally the same.
The preparation of salts	Soluble and insoluble.	Generally the same. Practical: salt preparation.	Generally the same.
3.12 Quantitative	chemistry		
Conservation of mass	Symbol equations (and balancing), state symbols, concept of conservation of mass.	Generally the same, although conservation of mass not explicitly mentioned.	Symbol equations and balancing included, conservation of mass not included.

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Use of amount of substance in relation to masses of pure substances	Relative formula mass, Percentages by mass, empirical and molecular formulae.	Generally the same although also includes percentage yield calculations.	Relative formula mass included, Percentage by mass and empirical formula not included.
The mole concept	Definition of the mole, Avogadro's constant.	The mole is defined, but Avogadro's constant is not included.	Generally the same.
Molar concentrations	Reacting volumes, Required practical: (titration).	Reacting masses referred to, volumes not explicitly stated.	Generally the same.
3.13 Trends with	in the periodic table		
Group properties	Groups 1 and 7.	Generally the same.	Generally the same.
3.14 The rate and	d extent of chemical change		
Rate of reaction	Required practical.	Generally the same. Practical: general rate of reaction factors. Practical: catalysed reactions.	Generally the same.
3.15 Energy char	nges		
Exothermic and endothermic reactions	Knowledge of delta H and enthalpy changes not required.	Calculations of delta H and enthalpy changes are included.	Generally the same as OxfordAQA.
		Practical: temperature changes.	
Calculating and explaining energy changes	Includes energy level diagrams.	Not included.	Energy level diagrams included but no calculations needed.
3.16 Organic che	emistry		
Carbon compounds and fuels	Hydrocarbons, substances from crude oil.	Generally the same.	Generally the same.

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Synthetic and naturally	Explanation of thermo softening polymers	No mention of thermo-setting or	No mention of thermo-setting or
occurring polymers	higher tier only.	-softening polymers in specification.	-softening polymers in specification.
		No general uses of polymers mentioned.	No general uses of polymers mentioned.
			Not in the specification.
Organic compounds - their structure and reactions	Alcohols and carboxylic acids	Not included.	Not included.
		This specification also includes:	This specification also includes:
		Relative formula mass, molar and	Molar calculations required (C4.2).
		percentage yield calculations are included in this specification (1e).	Air and water included (C11.1) including rust and sacrificial protection.
		Practical: determination of formula of a	Greenhouse gases included (C11.3).
		metal oxide.	Nitrogen and fertilisers included (C11.4).
		Gases in the atmosphere and greenhouse effect are also in this specification.	Contact process and sulfur included (C12).
		Practical: composition of air.	
PHYSICS			
3.17 Forces and	their effects		
Forces and their	Required practical.	Generally the same.	Objects behaving elastically higher tier only.
interactions		Practical: extension v applied force.	
Motion	Standard content.	Standard content.	Generally the same.
		Practical: motion of toy cars/tennis balls.	
Resultant forces	Acceleration and distance travelled from velocity-time graphs higher tier only.	Generally the same.	Generally the same.
Safety and public transport	Factors affecting stopping, thinking and braking distances.	Generally the same.	Not covered in the specification.

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3.18 Energy			
Forces and energy	Elastic potential energy stored in a spring higher tier only.	Generally the same.	Generally the same.
Energy transfers, conservation and dissipation of energy	Includes efficiency.	Specification includes: conduction, convection and radiation. Practical: thermal energy transfer.	As Edexcel specification, includes conduction, convection and radiation.
Energy resources	Includes advantages and disadvantages of different fuels.	Renewable energy sources not included.	Generally similar to OxfordAQA.
3.19 Waves			
General properties of waves	Required practical.	Generally the same.	Generally the same but includes refraction by a thin, converging lens and the drawing of ray diagrams.
The electromagnetic spectrum	Includes applications and dangers. Details of X rays higher tier only.	Generally the same (X rays in core).	Generally the same but less detail.
Sound	Ear structure not required.	Generally the same.	Generally the same as OxfordAQA.
		Practical: refraction.	
		Practical: finding refractive index.	
Reflection	Ray diagrams expected.	Generally the same.	Generally the same.
3.20 The particle	e model of matter		
Kinetic theory	Specific latent heat of vapourisation and specific latent heat of fusion higher tier only.	Some similar content on solids liquids and gasses, but specific heat capacity or latent heat not covered.	Similar content but issues detailed in OxfordAQA not covered in specification as Edexcel.
		Density and pressure included.	Density is included.
		Required practical: finding density.	Pressure included (quantitative at higher tier).
		Pressure included – calculations necessary.	

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Energy transfers and particle motion	Explanation of evaporation and cooling higher tier only.	Not covered in specification	Generally the same as OxfordAQA.
3.21 Electricity a	and magnetism		
Electrical circuits	Symbols, components in parallel and series. Relationship between PD, energy transferred and charge/explanation of resistors heating higher tier only.	Generally the same.	Generally the same.
Magnetism and electromagnetism	Required practical.	Practical: magnetic field pattern (OxfordAQA: electromagnet strength).	DC motors are included in the specification EM induction included.
		Specification indicates DC motors and loudspeakers – with 'typical' uses asked for, as in OxfordAQA.	
		Transformers included.	
3.22 Electricity	and household use		
Using electricity in the home	Safety. Fuses and circuit breakers.	Generally the same.	Circuit breakers not included.
The motor effect	Higher tier only.	DC motors in 'electromagnetism' (6.12) section.	Generally the same.
Transferring electrical energy	Relationship between energy transferred, PD and charge higher tier only.	Generally the same.	AC generator and transformers included.
3.23 Nuclear phy	ysics		•
Atomic structure	Scattering of alpha particles by thin metal foil higher tier only.	Practical: powers of radiation. Alpha scattering not included.	Alpha scattering not included.
lonising radiation from the nucleus	Includes background radiation. Balanced nuclear equations higher tier only.	Balanced nuclear equations higher tier only.	Ionising radiation included but not balancing nuclear equations.

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Nuclear fission	How nuclear fission is higher tier only.	Nuclear fission included but also fusion.	Nuclear fission included in energy section – but no detail required.
3.24 Space physi	cs		
Life cycle of a star	Radiation pressure not required.	Life cycle included and not radiation pressure.	Not included.
motion tier only. unlike OxfordAQA, include the following topics, in previously, are include lideal gasses. (5c)		Orbital speed included (as OxfordAQA) but unlike OxfordAQA, includes the equation.	Not included.
		The following topics, not mentioned previously, are included:	The following topics, not mentioned previously, are included:
		Ideal gasses. (5c)	Turning effect 1.5.2
		Absolute zero and the kelvin scale	Centre of mass 1.5.3
	(5.16,5.17)	Brownian motion, melting point and boiling point section 3.1 (in part).	
			Matter and thermal properties 3.3 Measurement of temperature 3.4



At OxfordAQAwe put fairness first

Thank you for your interest in OxfordAQA, the international exam board that puts fairness first.

Benchmarked to UK standards, our exams only ever test subject ability, not language skills or cultural knowledge.

This gives every student the best possible chance to show what they can do and get the results they deserve.



Get in touch

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