

Sparx Science Topic Codes

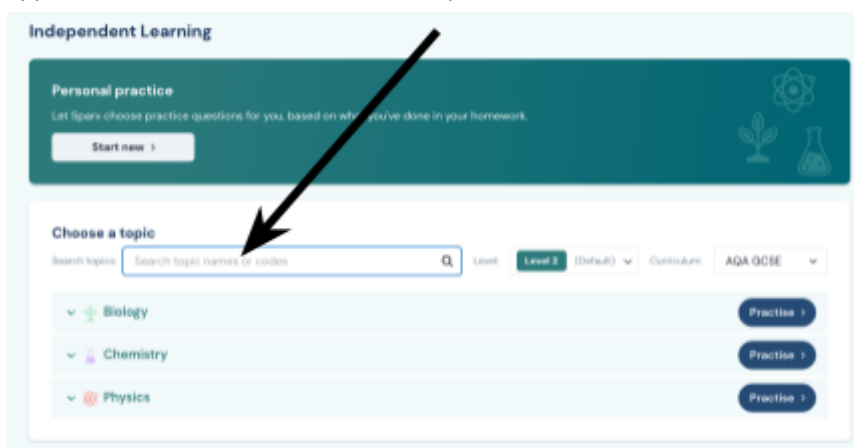
Guide to use

Sparx Codes

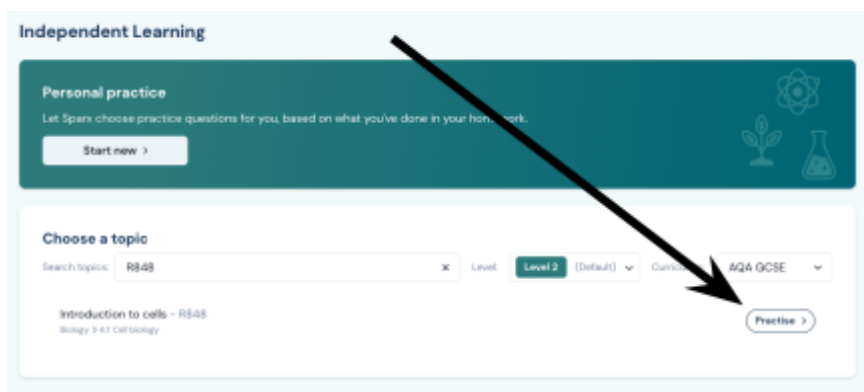
All topics in Sparx have a unique code. These can be used to search independent learning and practice these topics.

To revise a specific topic from a paper:

1. Find the **Sparx Code for that topic** in the list below
2. Log into Sparx Science and click "Independent Learning"
3. Type the code into the *Search Topics* bar:



4. Click practise



Notes on Combined and Separate Sciences

This document shows all the content in Separate and Combined Science. Use the table below to help you know what topics to cover:

Tier	Combined Science	Separate Science
Foundation	All topics without a note	All topics without a note OR marked as separate only
Higher	All topics without a note OR marked as higher only	All topics , including those marked Higher Separate only

Sparx Science Topic Codes

AQA Biology Paper 1

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.1: Cell biology	Introduction to cells	R848	4.1.1.1, 4.1.1.2		☐
	Eukaryotic cells	R489	4.1.1.1		☐
	Prokaryotic cells	R883	4.1.1.1		☐
	Specialisation in animal cells	R220	4.1.1.3		☐
	Specialisation in plant cells	R976	4.1.1.3		☐
	Cell differentiation	R509	4.1.1.4		☐
	Microscopy	R878	4.1.1.5		☐
	Practical: Microscopy	R132	RP1		☐
	Calculating magnification	R585	4.1.1.5		☐
	Culturing microorganisms	R308	4.1.1.6	Separate only	☐
	Aseptic techniques	R426	4.1.1.6	Separate only	☐
	Practical: Microbiology	R611	RP2	Separate only	☐
	Chromosomes	R258	4.1.2.1		☐
	Mitosis	R368	4.1.2.1		☐
	Stem cells and cloning	R478	4.1.2.3		☐
	Diffusion	R264	4.1.3.1		☐
	Factors affecting diffusion	R428	4.1.3.1		☐
	Diffusion in multicellular organisms	R534	4.1.3.1		☐
	Osmosis	R949	4.1.3.2		☐
	Calculations involving osmosis	R685	4.1.3.2		☐
	Practical: Osmosis	R110	RP3		☐
	Active transport	R786	4.1.3.3		☐
	Exchanging materials	R137	4.1.3.3		☐
4.2: Organisation	Principles of organisation	R948	4.2.1		☐
	The human digestive system	R154	4.2.2.1		☐
	Enzymes	R667	4.2.2.1		☐
	Factors affecting enzymes	R800	4.2.2.1		☐
	Rate calculations and enzyme activity	R615	4.2.2.1		☐
	Enzymes and digestion	R244	4.2.2.1		☐
	Practical: Food tests	R647	RP4		☐
	Practical: Enzymes	R642	RP5		☐
	The heart	R806	4.2.2.2		☐
	The structure of blood vessels	R350	4.2.2.2		☐
	The lungs	R652	4.2.2.2		☐
	The composition of blood	R673	4.2.2.3		☐

Sparx Science Topic Codes

AQA Biology Paper 1

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.2: Organisation	Heart disease	R583	4.2.2.2, 4.2.2.4		☐
	Health issues	R902	4.2.2.5		☐
	Non-communicable disease	R505	4.2.2.6		☐
	Cancer	R669	4.2.2.7		☐
	The structure of the leaf	R451	4.2.3.1, 4.2.3.2	Separate only	☐
	Plant tissues and organ systems	R318	4.2.3.1, 4.2.3.2		☐
	The xylem and phloem	R419	4.2.3.1, 4.2.3.2		☐
	Transpiration	R973	4.2.3.2		☐
	Factors affecting transpiration	R600	4.2.3.2		☐
	Translocation	R547	4.2.3.2		☐
4.3: Infection and response	Communicable diseases	R329	4.3.1.1		☐
	Preventing the spread of disease	R417	4.3.1.1		☐
	Viral diseases	R366	4.3.1.2		☐
	Bacterial diseases	R421	4.3.1.3		☐
	Diseases caused by fungi & protists	R875	4.3.1.4, 4.3.1.5		☐
	Human defence system	R566	4.3.1.6		☐
	The immune system	R582	4.3.1.6		☐
	Vaccination	R938	4.3.1.7		☐
	Antibiotics and painkillers	R328	4.3.1.8		☐
	Development of drugs	R781	4.3.1.9		☐
	Producing monoclonal antibodies	R691	4.3.2.1	Higher Separate only	☐
	Uses of monoclonal antibodies	R486	4.3.3.2	Higher Separate only	☐
	Detecting plant diseases	R746	4.3.3.1	Higher Separate only	☐
	Plant diseases	R914	4.3.3.1	Separate only	☐
	Plant defence responses	R632	4.3.3.2	Separate only	☐
4.4: Bioenergetics	Photosynthesis	R827	4.4.1.1		☐
	Factors affecting photosynthesis	R732	4.4.1.2		☐
	Light and photosynthesis	R979	4.4.1.2	Higher only	☐
	Practical: Photosynthesis	R248	RP6		☐
	Uses of glucose	R917	4.4.1.3		☐
	Aerobic respiration	R336	4.4.2.1		☐
	Respiration and exercise	R545	4.4.2.2		☐
	Anaerobic respiration	R268	4.4.2.3		☐
	Metabolism	R434	4.4.2.3		☐

Sparx Science Topic Codes

AQA Biology Paper 2

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.5: Homeostasis	Homeostasis	R904	4.5.1		☐
	The nervous system	R213	4.5.2.1		☐
	The reflex arc	R936	4.5.2.1		☐
	Practical: Reaction time	R683	RP7		☐
	The brain	R838	4.5.2.2	Separate only	☐
	Investigating & treating brain disease	R464	4.5.2.2	Higher Separate Only	☐
	The eye	R850	4.5.2.3	Separate only	☐
	Common eye issues	R864	4.5.2.3	Separate only	☐
	How the eye works	R369	4.5.2.3	Separate only	☐
	Thermoregulation	R160	4.5.2.4	Separate only	☐
	Vasodilation and vasoconstriction	R903	4.5.2.4	Higher Separate Only	☐
	The endocrine system	R832	4.5.3.1		☐
	Controlling blood glucose	R379	4.5.3.2		☐
	Diabetes	R841	4.5.3.2		☐
	Osmoregulation	R445	4.5.3.3	Separate only	☐
	The role of the kidneys	R591	4.5.3.3	Separate only	☐
	ADH	R141	4.5.3.3	Higher Separate Only	☐
	Kidney failure	R570	4.5.3.3	Separate only	☐
	The menstrual cycle	R651	4.5.3.4 – 6		☐
	Hormones and the menstrual cycle	R910	7.5	Higher only	☐
	Contraception	R679	4.5.3.5		☐
	Infertility	R493	4.5.3.6	Higher only	☐
	Negative feedback	R275	4.5.3.7	Higher only	☐
4.6: Inheritance, variation & evolution	Plant hormones	R782	4.5.4.1	Separate only	☐
	Applications of plant hormones	R201	4.5.4.1, 4.5.4.2	Higher Separate Only	☐
	Practical: Germination	R730	RP8	Separate only	☐
	Sexual and asexual reproduction	R320	4.6.1.1		☐
	Meiosis	R969	4.6.1.2		☐
	Comparing types of reproduction	R668	4.6.1.3	Separate only	☐
	DNA and the genome	R810	4.6.1.4		☐
	The structure of DNA	R794	4.6.1.5	Separate only	☐
	Protein synthesis	R295	4.6.1.5	Higher Separate Only	☐
	Gene expression and mutation	R909	4.6.1.5	Higher Separate Only	☐
	Introduction to genetics	R216	4.6.1.6		☐
	Inheritance	R249	4.6.1.6 – 4.6.1.8		☐

Sparx Science Topic Codes

AQA Biology Paper 2

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.6: Inheritance, variation & evolution	Genetic diagrams	R933	4.6.1.6, 4.6.1.8		☐
	Predicting inheritance	R431	4.6.1.6		☐
	Variation	R276	4.6.2.1		☐
	Evolution	R738	4.6.2.2		☐
	Selective breeding	R754	4.6.2.3		☐
	Genetic engineering	R801	4.6.2.4		☐
	The process of genetic engineering	R609	4.6.2.4	Higher only	☐
	Genetic engineering & food demands	R805	4.6.2.4		☐
	Tissue cultures and cloning	R859	4.6.2.5	Separate only	☐
	Development of the theory of evolution	R157	4.6.3.1, 4.6.3.2	Separate only	☐
	Speciation	R733	4.6.3.2	Separate only	☐
	Mendel and genetics	R189	4.6.3.3	Separate only	☐
	Fossil records	R719	4.6.3.4, 4.6.3.5		☐
	Extinction	R294	4.6.3.6		☐
	Resistant bacteria	R175	4.6.3.4, 4.6.3.7		☐
	Classification	R761	4.6.4		☐
4.7: Ecology	Ecosystems	R504	4.7.1.1		☐
	Interdependence	R226	4.7.1.1		☐
	Competition	R750	4.7.1.1		☐
	Adaptations	R453	4.7.1.1, 4.7.1.4		☐
	Abiotic factors	R173	4.7.1.1, 4.7.1.2		☐
	Biotic factors	R656	4.7.1.1, 4.7.1.3		☐
	Feeding relationships	R618	4.7.2.1		☐
	Distribution and abundance	R347	4.7.2.1		☐
	Practical: Field investigations	R355	RP9		☐
	The carbon cycle	R824	4.7.2.2		☐
	The water cycle	R153	4.7.2.2		☐
	Decomposition	R687	4.7.2.3	Separate only	☐
	Practical: Decay	R152	RP10	Separate only	☐
	Calculating rates of decay	R863	4.7.2.3	Separate only	☐
	Factors affecting distribution	R555	4.7.2.4	Higher Separate Only	☐
	Introduction to biodiversity	R748	4.7.3.1		☐
	Waste management and pollution	R604	4.7.3.2		☐
	Land use	R975	4.7.3.3, 4.7.3.4		☐
	Global warming	R325	4.7.3.5		☐

Sparx Science Topic Codes

AQA Biology Paper 2

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.7: Ecology	Maintaining biodiversity	R124	4.7.3.6		☐
	Trophic levels	R438	4.7.4.1	Separate only	☐
	Pyramids of biomass	R305	4.7.4.2	Separate only	☐
	Transfers of biomass	R292	4.7.4.3	Separate only	☐
	Food security	R311	4.7.5.1	Separate only	☐
	Farming techniques	R177	4.7.5.2, 4.7.5.3	Separate only	☐

AQA Chemistry Paper 1

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.1: Atomic structure and the periodic table	Elements and compounds	R447	4.1.1.1		☐
	Word equations	R333	4.1.1.1		☐
	Balancing chemical equations	R994			☐
	Formulae of ions and compounds	R711	4.1.1.1		☐
	Ionic equations	R671	4.1.1.1	Higher only	☐
	Mixtures	R616	4.1.1.2		☐
	Separating mixtures	R550	4.1.1.2		☐
	The development of the atomic model (<i>also in Physics</i>)	R793	4.1.1.3		☐
	Atomic structure	R945	4.1.1.4, 4.1.1.5		☐
	Atomic number and mass number	R646	4.1.1.5		☐
	Isotopes	R365	4.1.1.5, 4.1.1.6		☐
	Calculations involving isotopes	R330	4.1.1.6		☐
	Electron configuration	R293	4.1.1.7		☐
	The Periodic table	R684	4.1.2.1, 4.1.2.3		☐
	The development of the Periodic table	R842	4.1.2.2		☐
	Metals and non-metals	R468	4.1.2.3		☐
	Noble gases	R572	4.1.2.4		☐
	Alkali metals	R925	4.1.2.5		☐
	Reactions of alkali metals	R406	4.1.2.5		☐
	Halogens	R580	4.1.2.6		☐
	Reactions of halogens	R715	4.1.2.6		☐
	Displacement reactions w/ halogens	R640	4.1.2.6		☐
	Transition metals	R843	4.1.3.1, 4.1.3.2	Separate only	☐
4.2: Bonding, structure and the properties of matter	Ionic bonding	R868	4.2.1.1 – 4.2.1.3		☐
	Dot & cross for ionic compounds	R581	4.2.1.2		☐
	Ions	R199	4.2.1.2		☐
	Representing ionic compounds	R557	4.2.1.3		☐
	Covalent bonding	R467	4.2.1.1, 4.2.1.4		☐
	Simple covalent molecules	R283	4.2.1.4		☐
	Large covalent structures	R916	4.2.1.4		☐
	Limitations of ionic & covalent models	R677	4.2.1.3, 4.2.1.4		☐
	Metallic bonding	R928	4.2.1.1, 4.2.1.5		☐
	States of matter	R211	4.2.2.1		☐

AQA Chemistry Paper 1

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.2: Bonding, structure and the properties of matter	Changes of state	R983	4.2.2.1		☐
	Predicting states of matter	R627	4.2.2.1		☐
	State symbols	R272	4.2.2.2		☐
	Properties of ionic compounds	R562	4.2.2.3		☐
	Properties of small covalent molecules	R876	4.2.2.4		☐
	Properties of giant covalent structures	R338	4.2.2.5, 4.2.2.6		☐
	Properties of metals	R444	4.2.2.7, 4.2.2.8		☐
	Metals and alloys	R596	4.2.2.7		☐
	Allotropes of carbon	R901	4.2.3.1, 4.2.3.2		☐
	Graphene and fullerenes	R237	4.2.3.3		☐
	Nanoparticles	R530	4.2.4.1	Separate only	☐
	Uses of nanoparticles	R957	4.2.4.2	Separate only	☐
4.3: Quantitative chemistry	Conservation of mass	R533	4.3.1.1, 4.3.1.3		☐
	Relative formula mass	R195	1.43		☐
	Calculations using percentage composition	R497	4.3.1.2		☐
	Measurements and uncertainty	R155	4.3.1.4		☐
	Calculations with moles	R223	4.3.2.2	Higher only	☐
	Calculating masses from equations using molar calculations	R624	4.3.2.2		☐
	Balancing equations using molar calculations	R143	4.3.2.3	Higher only	☐
	Limiting reactants	R380	4.3.2.4	Higher only	☐
	Concentrations	R807	4.3.2.5		☐
	Percentage yield	R463	4.3.3.1	Separate only	☐
	Atom economy	R474	4.3.3.2	Separate only	☐
	Choosing reaction pathways	R804	4.3.3.2	Higher Separate Only	☐
	Concentrations in mol/dm ³	R262	4.3.4	Higher Separate Only	☐
	Molar volume	R985	4.3.5	Higher Separate Only	☐
	Avogadro's law and gases	R332	4.3.5	Higher Separate Only	☐
4.4: Chemical changes	Reactions of metals	R681	4.4.1.1		☐
	The reactivity series	R981	4.4.1.2		☐
	Extracting metals	R483	4.4.1.3		☐
	Redox reactions	R245	4.4.1.4	Higher only	☐
	Reactions of acids and metals	R828	4.4.2.1		☐

AQA Chemistry Paper 1

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.4: Chemical changes	Reactions of acids and bases	R142	4.4.2.2		☐
	Further reactions of acids	R495	4.4.2.1, 4.4.2.2		☐
	Preparing soluble salts using crystallisation	R885	4.4.2.3		☐
	Practical: Making salts	R412	RP1		☐
	Acids and alkalis	R529	4.4.2.4		☐
	Titrations	R539	4.4.2.5	Separate only	☐
	Practical: Neutralisation	R892	RP2	Separate only	☐
	Titration calculations	R297	4.4.2.5	Higher Separate Only	☐
	Concentrations of acids and alkalis	R309	4.4.2.6	Higher only	☐
	Strong and weak acids	R629	4.4.2.6	Higher only	☐
	Introduction to electrolysis	R298	4.4.3.1		☐
	Electrolysis of molten compounds	R672	4.4.3.2, 4.4.3.3		☐
	Electrolysis of aqueous solutions	R279	4.4.3.4		☐
	Practical: Electrolysis	R866	RP3		☐
	Oxidation and reduction in electrolysis	R792	4.4.3.2, 4.4.3.5	Higher only	☐
4.5: Energy changes	Endothermic & exothermic reactions	R833	4.5.1.1		☐
	Practical: Temperature changes	R466	RP4		☐
	Reaction profiles	R675	4.5.1.2		☐
	Bond energy calculations	R769	4.5.1.3	Higher only	☐
	Cells and batteries	R120	4.5.2.1	Separate only	☐
	Fuel cells	R836	4.5.2.2	Separate only	☐

AQA Chemistry Paper 2

Questions in Paper 2 may draw on **fundamental concepts and principles from units 4.1 to 4.3.**

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.6: The rate and extent of chemical change	Calculating reaction rates	R771	4.6.1.1		☐
	Practical: Rates of reaction	R280	RP5		☐
	Collision theory	R895	4.6.1.3		☐
	Catalysts	R601	4.6.1.4		☐
	Dynamic equilibrium	R768	4.6.2.1 – 4.6.2.3		☐
	Factors affecting the position of dynamic equilibrium	R115	4.6.2.4 – 4.6.2.7	Higher only	☐
4.7: Organic chemistry	Crude oil	R526	4.7.1.1		☐
	Fractional distillation of crude oil	R205	4.7.1.2		☐
	Properties of hydrocarbons	R837	4.7.1.3		☐
	Cracking	R240	4.7.1.4		☐
	Alkenes	R418	4.7.2.1	Separate only	☐
	Reactions of alkenes	R900	4.7.2.2	Separate only	☐
	Alcohols	R613	4.7.2.3	Separate only	☐
	Production of ethanol	R465	4.7.2.3	Separate only	☐
	Carboxylic acids	R508	4.7.2.4	Separate only	☐
	Addition polymers	R371	4.7.3.1	Separate only	☐
	Condensation polymers	R723	4.7.3.2	Higher Separate Only	☐
	Naturally-occurring polymers	R692	4.7.3.3, 4.7.3.4	Higher Separate Only	☐
4.8: Chemical analysis	Pure substances	R281	4.8.1.1		☐
	Formulations	R256	4.8.1.2		☐
	Chromatography	R638	4.8.1.3		☐
	Interpreting chromatograms	R720	4.8.1.3		☐
	Practical: Chromatography	R953	RP6		☐
	Tests for gases	R443	4.8.2.1 – 4.8.2.4		☐
	Tests for positive ions	R172	4.8.3.1, 4.8.3.2	Separate only	☐
	Tests for negative ions	R755	4.8.3.3 – 4.8.3.5	Separate only	☐
	Instrumental methods for analysing ions	R487	4.8.3.6, 4.8.3.7	Separate only	☐
	Practical: Identifying ions	R364	RP7	Separate only	☐

Sparx Science Topic Codes

AQA Chemistry Paper 2

Questions in Paper 2 may draw on **fundamental concepts and principles from units 4.1 to 4.3.**

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.9: Atmospheric chemistry	The development of the atmosphere	R225	4.9.1.1 – 4.9.1.4		☐
	The greenhouse effect	R391	4.9.2.1		☐
	Greenhouse gases and climate change	R728	4.9.2.2, 4.9.2.3		☐
	Reducing emissions	R873	4.9.2.4		☐
	Combustion of fuels and pollution	R221	4.9.3.1, 4.9.3.2		☐
	Pollutants involving sulfur and nitrogen	R119	4.9.3.1, 4.9.3.2		☐
4.10: Using resources	Earth's resources	R912	4.10.1.1		☐
	Creating drinking water	R208	4.10.1.2		☐
	Practical: Water purification	R759	RP8		☐
	Waste water treatment	R898	4.10.1.3		☐
	Biological methods of extracting metals	R403	4.10.1.4	Higher only	☐
	Life-cycle assessments	R826	4.10.2.1		☐
	Reducing and reusing resources	R228	4.10.2.2		☐
	Corrosion	R561	4.10.3.1	Separate only	☐
	Alloys	R907	4.10.3.2	Separate only	☐
	Thermosoftening & thermosetting polymers	R920	4.10.3.3	Separate only	☐
	Glass, ceramics and composites	R287	4.10.3.3	Separate only	☐
	Fertilisers and the Haber process	R511	4.10.4.1	Separate only	☐
	Choosing industrial conditions	R163	4.10.4.1	Higher Separate Only	☐
	Production of NPK fertilisers	R541	4.10.4.2	Separate only	☐

AQA Physics Paper 1

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.1: Energy	Energy stores and transfers	R393	4.1.1		☐
	Calculations involving energy transfers	R180	4.1.1		☐
	Kinetic energy	R704	4.1.2		☐
	Elastic potential energy	R802	4.1.2		☐
	Gravitational potential energy	R751	4.1.2		☐
	Thermal energy	R544	4.1.3		☐
	Practical: Specific heat capacity	R251	RP1		☐
	Power	R602	4.1.4		☐
	Conservation of energy	R606	4.1.2.1		☐
	Wasted energy	R384	4.1.2.1		☐
	Reducing wasted energy	R996	4.1.2.1		☐
	Practical: Thermal insulation	R312	RP2	Separate only	☐
	Efficiency	R666	4.1.2.2		☐
	Improving efficiency	R593	4.1.2.2	Higher only	☐
	Energy demands	R496	4.1.3		☐
	Non-renewable energy resources	R911	4.1.3		☐
	Renewable energy resources	R476	4.1.3		☐
4.2: Electricity	Circuit symbols	R780	4.2.1.1		☐
	Charge and current	R274	4.2.1.2		☐
	Introduction to series and parallel circuits	R955	4.2.1.1		☐
	Ohm's law	R779	4.2.1.2		☐
	Practical: Resistance	R831	RP3		☐
	Resistance in devices	R959	4.2.1.4		☐
	LDRs and thermistors	R658	4.2.1.4		☐
	Testing components	R238	4.2.1.4		☐
	Practical: V-I characteristics	R439	RP4		☐
	Series circuits	R302	4.2.2		☐
	Parallel circuits	R409	4.2.2		☐
	Series and parallel circuits	R752	4.2.2		☐
	AC and DC	R499	4.2.3.1		☐
	Mains electricity	R121	4.2.3.2		☐
	Dangers of mains electricity	R361	4.2.3.2		☐
	Power in circuits	R773	4.2.4.1		☐
	Energy transfers in circuits	R490	4.2.4.2		☐

AQA Physics Paper 1

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.2: Electricity	Power and energy transfer	R815	4.2.4.2		☐
	Power of devices	R145	4.2.4.2		☐
	The National Grid	R507	4.2.4.3		☐
	Static electricity	R147	4.2.5.1	Separate only	☐
	Electric fields	R151	4.2.5.2	Separate only	☐
4.3: Particle model of matter	Density	R136	4.3.1.1		☐
	States of matter	R252	4.3.1.1		☐
	The particle model and density	R161	4.3.1.1		☐
	Practical: Density	R128	RP5		☐
	Changes of state	R791	4.3.1.2		☐
	Internal energy	R621	4.3.2.1		☐
	Specific heat capacity	R527	4.3.2.1		☐
	Specific latent heat	R641	4.3.2.3		☐
	Heating and cooling graphs	R927	4.3.2.3		☐
	Pressure and volume	R951	4.3.3.2	Separate only	☐
	Particle motion in gases	R614	4.3.3.1		☐
	Work and pressure	R989	4.3.3.3	Higher Separate Only	☐
4.4: Atomic structure	The atom	R139	4.4.1.1		☐
	Atomic number and mass number	R548	4.4.1.2		☐
	Ionisation	R767	4.4.1.1, 4.4.1.2		☐
	Isotopes	R889	4.4.1.2		☐
	The development of the atomic model (<i>also in Chemistry</i>)	R617	4.4.1.3		☐
	Types of radiation	R937	4.4.2.1		☐
	Properties of radiation	R694	4.4.2.1		☐
	Nuclear equations	R193	4.4.2.2		☐
	Activity and decay	R549	4.4.2.1		☐
	Half-life	R905	4.4.2.3		☐
	Contamination and irradiation	R661	4.4.2.4		☐
	Background radiation	R690	4.4.3.1	Separate only	☐
	Dangers of radiation	R316	4.4.3.2, 4.4.3.3	Separate only	☐
	Radiation and medicine	R388	4.4.3.3	Separate only	☐
	Nuclear fission	R345	4.4.4.1	Separate only	☐
	Nuclear reactors	R370	4.4.4.1	Separate only	☐
	Nuclear fusion	R851	4.4.4.2	Separate only	☐

Sparx Science Topic Codes

AQA Physics Paper 2

Questions in paper 2 may draw on an understanding of **energy changes and transfers due to heating, mechanical and electrical work and the concept of energy conservation** from Energy and Electricity .

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.5: Forces	Scalar and vector quantities	R197	4.5.1.1		☐
	Contact and non-contact forces	R853	4.5.1.2		☐
	Weight	R590	4.5.1.3		☐
	Resultant forces	R744	4.5.1.4	Higher only	☐
	Resolving forces	R589	4.5.1.4	Higher only	☐
	Work and energy	R307	4.5.2		☐
	Deformation	R337	4.5.3		☐
	Hooke's law	R598	4.5.3		☐
	Elastic potential energy	R494	4.5.3		☐
	Practical: Force and extension	R353	RP6		☐
	Moments	R563	4.5.4	Separate only	☐
	The principle of moments	R324	4.5.4	Separate only	☐
	Levers and gears	R473	4.5.4	Separate only	☐
	Pressure and forces	R564	4.5.5.1.1	Separate only	☐
	Pressure in liquids	R129	4.5.5.1.2	Separate only	☐
	Upthrust	R817	4.5.5.1.2	Higher Separate Only	☐
	Atmospheric pressure	R480	4.5.5.2	Separate only	☐
	Distance and displacement	R314	4.5.6.1.1		☐
	Speed	R374	4.5.6.1.2		☐
	Velocity and circular motion	R639	4.5.6.1.3		☐
	Distance-time graphs	R908	4.5.6.1.4		☐
	Acceleration	R760	4.5.6.1.5		☐
	Calculating uniform acceleration	R799	4.5.6.1.5		☐
	Terminal velocity	R112	4.5.6.1.5		☐
	Velocity-time graphs and displacement	R176	4.5.6.1.5	Higher only	☐
	Velocity-time graphs and acceleration	R663	4.5.6.1.5		☐
	Newton's first law	R893	4.5.6.2.1		☐
	Newton's second law	R138	4.5.6.2.2		☐
	Mass and inertia	R597	4.5.6.2.2	Higher only	☐
	Practical: Acceleration	R149	RP7		☐
	Newton's third law	R519	4.5.6.2.3		☐
	Stopping distance	R823	4.5.6.3.1		☐

Sparx Science Topic Codes

AQA Physics Paper 2

Questions in paper 2 may draw on an understanding of **energy changes and transfers due to heating, mechanical and electrical work and the concept of energy conservation** from Energy and Electricity .

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.5: Forces	Thinking distance and reaction times	R134	4.5.6.3.2		☐
	Braking distance	R107	4.5.6.3.3, 4.5.6.3.4		☐
	Momentum	R980	4.5.7.1	Higher only	☐
	Conservation of momentum	R695	4.5.7.2	Higher only	☐
	Force and momentum	R554	4.5.7.3	Higher Separate Only	☐
	Momentum and safety	R870	4.5.7.3	Higher Separate Only	☐
4.6: Waves	Transverse and longitudinal waves	R186	4.6.1.1		☐
	Wave properties	R103	4.6.1.2		☐
	The wave equation	R569	4.6.1.2		☐
	Measuring wave speed	R452	4.6.1.2		☐
	Practical: Waves	R625	RP8		☐
	Reflection	R241	4.6.1.3	Separate only	☐
	Practical: Light	R233	RP6	Separate only	☐
	Sound waves	R803	4.6.1.2, 4.6.1.4	Separate only	☐
	Waves for detection and exploration – Ultrasound	R762	4.6.1.5	Higher Separate Only	☐
	Waves for detection and exploration – Seismic waves	R382	4.6.1.5	Higher Separate Only	☐
	The electromagnetic spectrum	R288	4.6.2.1		☐
	Refraction	R992	4.6.2.2		☐
	Practical: Radiation and absorption	R699	RP10		☐
	Radio waves	R556	4.6.2.3	Higher only	☐
	Dangers of electromagnetic radiation	R919	4.6.2.3		☐
	Uses of electromagnetic radiation	R993	4.6.2.4		☐
	Lenses and images	R724	4.6.2.5	Separate only	☐
	Magnification	R648	4.6.2.5	Separate only	☐
	Ray diagrams of lenses	R198	4.6.2.5	Separate only	☐
	Light and surfaces	R488	4.6.2.6	Separate only	☐
	Thermal radiation	R968	4.6.3.1	Separate only	☐
	Thermal radiation and temperature	R553	4.6.3.2	Separate only	☐
	Maintaining Earth's temperature	R709	4.6.3.2	Higher Separate Only	☐

Sparx Science Topic Codes

AQA Physics Paper 2

Questions in paper 2 may draw on an understanding of **energy changes and transfers due to heating, mechanical and electrical work and the concept of energy conservation** from Energy and Electricity .

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
4.7: Magnetism and electromagnetism	Magnetic fields	R847	4.7.1.1, 4.7.1.2		☐
	Permanent and induced magnets	R882	4.7.1.1		☐
	Current and magnetic fields	R342	4.7.2.1		☐
	Electromagnets	R344	4.7.2.1		☐
	Fleming's left-hand rule	R766	4.7.2.2	Higher only	☐
	Calculating magnetic force	R206	4.7.2.2	Higher only	☐
	Electric motors	R931	4.7.2.3	Higher only	☐
	Electromagnetic induction	R717	4.7.3.1	Higher Separate Only	☐
	Alternators and dynamos	R571	4.7.3.2	Higher Separate Only	☐
	Microphones and speakers	R247	4.7.2.3, 4.7.2.4	Higher Separate Only	☐
	Transformers	R224	4.7.3.4	Higher Separate Only	☐
	The transformer equations	R510	4.7.3.4	Higher Separate Only	☐
	The ideal transformer equation	R116	4.7.3.4	Higher Separate Only	☐
4.8: Space physics	The solar system	R935	4.8.1.1	Separate only	☐
	The life cycle of stars	R540	4.8.1.2	Separate only	☐
	Orbits	R872	4.8.1.3	Separate only	☐
	Red-shift	R718	4.8.2	Separate only	☐
	Theories of the Universe	R789	4.8.2	Separate only	☐

Sparx Science Topic Codes

AQA Skills Topics

These will appear throughout all exams.

Unit	Topic	Sparx Code	Spec Code	Notes	Done?
Maths Skills for Science	Rounding	R921	Maths 1a		☐
	Standard form	R778	Maths 1a, b		☐
	Fractions and percentages	R502	Maths 1c		☐
	Percentage change	R100	Maths 1c		☐
	Significant figures	R471	Maths 2a		☐
	Calculating the mean	R414	Maths 2b, 2f		☐
	Tables of data	R235	Maths 2c		☐
	Bar charts	R703	Maths 2c		☐
	Scatter graphs	R148	Maths 2g & 4		☐
	Converting units	R322	Maths 2h		☐
	Rearranging equations	R340	Maths 3b		☐
	Solving equations	R185	Maths 3c, d		☐
	Calculating area	R232	Maths 5c		☐
	Calculating surface area and volume	R359	Maths 5c		☐
Working Scientifically	Hypotheses and predictions	R662	WS 2.1		☐
	Planning experiments	R184	WS 2.2		☐
	Scientific equipment	R787	WS 2.3		☐
	Working safely	R457	WS 2.4		☐
	Measurements and observations	R229	WS 2.6		☐
	Resolution	R397	WS 2.4		☐
	Displaying results	R941	WS 3.1		☐
	Precision and uncertainty	R756	WS 3.4, WS 3.7		☐
	Errors in experiments	R146	WS 3.7		☐
	Accuracy	R880	WS 2.4, WS 3.7		☐
	Evaluating data	R352	WS 3.7		☐
	Validity and improvements	R230	WS 2.7, WS 3.7		☐
	Drawing conclusions	R784	WS 3.8		☐