

Area	Topic	1	2	3	4	5
Physics	Forces	<u>Speed</u> Balanced and unbalanced forces Calculating speed Distance time graphs <u>Gravity</u> Gravitational forces on Earth and in space.	<u>Contact forces</u> Friction Turning forces <u>Pressure</u> Solids, liquids and gases Calculating pressure		<u>P8 Forces in balance</u> Vectors and scalars Moments at work <u>P9 Motion</u> Velocity and acceleration Velocity time graphs <u>P10 Force and motion</u> Momentum Forces and braking Terminal velocity	<u>P11 Force and pressure</u> Pressure in liquids Atmospheric pressure
	Electromagnets	<u>Potential difference and resistance</u> Measure potential difference in a circuit Measure resistance in a circuit. <u>Current</u> Measuring current in a circuit Static charges	<u>Magnetism</u> Magnetic fields of a bar magnet Earth's magnetic field <u>Electromagnets</u> Making electromagnets Using electromagnets	<u>P4 Electric circuits</u> Series and parallel circuits Calculate potential difference, current and resistance <u>P5 Electricity in the home</u> The national grid Plugs and fuses		<u>P15 Electromagnetism</u> Magnetic fields of electrical circuits Motor effect Transformers
	Energy	<u>Energy cost</u> Energy in food and fuels Energy resources Energy and power <u>Energy transfer</u> Energy stores Changes of energy	<u>Work</u> Calculating work done Conservation of energy <u>Heating and cooling</u> Energy and temperature Conduction, convection and radiation Insulation	<u>P1 Conservation and dissipation of energy.</u> Energy stores and transfers <u>P2 Energy transfer by heating.</u> Energy transfers Reducing energy loss <u>P3 Energy resources</u> renewable and non-renewable energy	<u>P6 Molecules and matter</u> Density Internal energy Specific latent heat <u>P7 Radioactivity</u> Atoms and radiation Alpha beta and gamma Half life Nuclear fission and fusion	
	Waves	<u>Sound</u> Frequency and pitch Amplitude and loudness The ear and hearing <u>Light</u> Reflection and refraction Colour The eye and vision	<u>Wave effects</u> Sound and light waves <u>Wave properties</u> Transverse and longitudinal waves			<u>P12 Wave properties</u> Nature of waves Uses of waves Seismic waves <u>P13 Electromagnetic waves</u> Electromagnetic spectrum Uses of EM spectrum <u>P14 Light</u> Lenses <u>P16 Space</u> History of the solar system Life cycle of a star

Chemistry	Matter	<u>Particle model</u> States of matter Changes of state <u>Separating mixtures</u> Solutions Solubility Filtration, evaporation and distillation	<u>Elements</u> Atoms, elements and compounds Chemical formulae <u>Periodic table</u> Simple structure Reactions of group 1 and 7	<u>C1 Atomic structure</u> Structure of the atom History of the atom Fractional distillation Chromatography <u>C2 The periodic table</u> History of the periodic table Properties and trends of group 1, 7 and 0 <u>C3 Structure and bonding</u> Chemical bonding Properties of different chemical compounds Nanoparticles	<u>C11 Polymers</u> Addition polymers Condensation polymers Natural polymers DNA <u>C12 Chemical analysis</u> Testing for gases Chromatography Testing for ions Flame emission spectroscopy	
	Reactions	<u>Acids and alkalis</u> Chemical reactions Indicators Making salts <u>Metals and non-metals</u> Chemical reactions of metals and non-metals Displacement reactions	<u>Types of reaction</u> Conservation of mass Combustion Thermal decomposition <u>Chemical energy</u> Observing exothermic and endothermic reactions Simple bond energies	<u>C5 Chemical changes</u> Using the reactivity series Salts from metals and insoluble bases Neutralisation	<u>C4 Chemical calculations</u> Relative atomic masses Moles Calculations with reactions <u>C7 Energy changes</u> Analysing reactions Energy level diagrams Bond energy calculations <u>C8 Rates and equilibrium</u> Rates of reaction Reversible reactions Altering equilibrium <u>C9 Crude oil and fuels</u> Fractional distillation Alkanes Cracking <u>C10 Organic reaction</u> Alkenes, alcohols, carboxylic acids, esters	
	Earth	<u>Earth Structure</u> Structure of the Earth Rock cycle <u>Universe</u> Night sky Solar system The moon	<u>Climate</u> Global warming Climate change <u>Earth resources</u> Extracting metals with carbon Recycling	<u>C6 Electrolysis</u> Electrolysis of molten compounds Electrolysis of aqueous solutions Extracting aluminium		<u>C13 The Earth's atmosphere</u> History of the atmosphere Evolving atmosphere <u>C14 The Earth's resources</u> Drinking water Extracting metals <u>C15 Using our resources</u> Rusting and alloys

						Haber process and fertilisers
Biology	Organisms	<u>Movement</u> Levels of organisation Muscles Joints <u>Cells</u> Observing cells Animal and plant cells Specialised cells Diffusion	<u>Breathing</u> Respiratory system Gas exchange Effects of drugs on health <u>Digestion</u> Nutrients Food tests Digestive system Bacteria and role of enzymes	<u>B1 Cell structure and transport</u> Eukaryotic and prokaryotic Function of organelles Specialisation Transport in cells <u>B2 Cell division</u> Cell division Stem cells <u>B3 Organisation and the digestive system</u> Adaptations of the digestive system Factors affecting enzymes <u>B4 Organising animals and plants</u> Blood and heart Gas exchange Plant organs and transport <u>B5 Communicable diseases</u> Pathogens Diseases Defence responses <u>B6 Preventing and treating disease</u> Vaccinations Antibiotics and painkillers Developing drugs	<u>B7 Non-communicable diseases</u> Cancer Effects of smoking Effects of alcohol <u>B10 The human nervous system</u> Homeostasis Human nervous system Reflex arcs <u>B11 Hormonal coordination</u> Control of blood sugar Diabetes Menstrual cycle and hormones Fertility and infertility Plant hormones <u>B12 Homeostasis in action</u> Controlling body temperature The kidney	
	Ecosystems	<u>Interdependence</u> Food chains and food webs Competition <u>Plant reproduction</u> Pollination Seed dispersal	<u>Respiration</u> Aerobic respiration Effect of exercise on respiration Anaerobic respiration <u>Photosynthesis</u> Structure of leaves Photosynthesis basics Plant minerals		<u>B8 Photosynthesis</u> Rate of photosynthesis Uses of glucose <u>B9 Respiration</u> Aerobic/anaerobic respiration comparison	<u>B16 Adaptations, interdependence, and competition</u> Communities Competition in action Adapting to survive <u>B17 Organising and ecosystem</u> Feeding relationships Cycling materials
	Genes	<u>Variation</u> Inherited and environmental variation Adaptations <u>Human reproduction</u>	<u>Evolution</u> Natural selection Extinction Endangered species <u>Inheritance</u>		<u>B13 Reproduction</u> Types of reproduction Meiosis DNA	<u>B18 Biodiversity and ecosystems</u> Human population Pollution of land/water/air Biodiversity

		Puberty Reproductive organs Menstrual cycle	Basic genes Genetic inheritance		<u>B14 Variation and evolution</u> Selective breeding Genetic engineering <u>B15 Genetics and evolution</u> Theories of evolution Classification	Food production
--	--	---	------------------------------------	--	---	-----------------