

Year 7 Science Curriculum Map

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer
<p>ORGANISMS-BIO Levels of organisation Skeleton, movement of joint Cells Observing cells Plants and animal cells Specialised cells. Unicellular organisms Movement of substance PR: Observing onion cells under microscope.</p> <p>FORCES -PHY Introduction to forces. Balanced and unbalanced. Distance time graphs Squashing and stretching. Drag forces and friction. Forces at a distance-gravity</p>	<p>MATTER-CHEM Particle model States of matter Melting and freezing PR: heating curve Boiling Diffusion. Gas pressure. PR: Pressures in fluids Elements, Atoms & Compounds Chemical formulae</p> <p>Mid-Year Assessment</p>	<p>REACTIONS-CHEM Chemical reactions Word equations Burning fuel Thermal decomposition Conservation of mass Exothermic reactions Acids and Alkali Indicators and pH Acid strength Neutralisation Making salts</p> <p>GENES-BIO Variation Continuous and discontinuous Adapting to change Adolescence Reproductive system Fertilisation and implantation The menstrual cycle Development of foetus</p>	<p>ECOSYSTEM-BIO Food chains and webs Disruption to food chain and webs Ecosystems Competition Flowers and pollination Fertilisation and germination <i>Seed dispersal</i></p> <p>WAVES Sound waves and speed Loudness and amplitude Frequency and pitch Ear and hearing Light Reflection Refraction The eye</p>	<p>EARTH-CHEM <i>Structure of the earth</i> <i>Sedimentary rock</i> <i>Igneous and metamorphic rocks</i> <i>Rock cycle</i> <i>Ceramic</i></p> <p>EARTH-SPACE-PHY The night sky. The solar system The Moon</p>	<p>MATTER Mixtures and pure substance Solutions and solubility PR: Filtration PR: Evaporation and distillation Solubility PR: Chromatography</p>

Year 8 Science Curriculum Map

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>CHEMICAL REACTIONS The Periodic Table The elements of Group 1, 7 and 0</p> <p>CHEMICAL REACTIONS Metals and oxygen Metals and water Metals and acids Metal displacement reactions Extracting metals</p> <p>EARTH The carbon cycle Climate change Recycling Polymers</p>	<p>GENES Biodiversity Variation Continuous and discontinuous Natural selection Evolution Extinction Preserving Inheritance cloning DNA Genetics Genetic engineering</p>	<p>ECOSYSTEMS Photosynthesis Leaves Investigating photosynthesis Plant minerals Aerobic respiration Anaerobic respiration</p> <p>ORGANISM Drugs, Alcohol & Smoking Nutrients and Food tests Unhealthy diets Digestive system & Bacteria and enzymes Research project</p>	<p>ENERGY Energy in food Energy and temperature Energy transfer: particles Energy transfer: radiation and insulation PR- Insulation and heat transfer Energy resources Work, energy and machines</p> <p>ELECTROGMAGNET Charge and current Potential difference Series and parallel PR Magnets and magnetic fields Electromagnets PR</p>	<p>FORCES Turning forces Pressure in gases Pressure in liquids Stress on solids Speed Motion graphs</p> <p>Practical Project Summary Scientific Report write-up</p>	<p>Revision</p> <p>End of Year Assessment</p> <p>Inquiry and presentation: Biotechnology DNA finger printing The universe and the big bang Radioactivity and detection Oxygen debt and fatigue</p>

Year 9 Science Curriculum Map

Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
<p>B1 Cell Structure and Transport cells as the basic structural unit of all organisms adaptations of cells related to their functions the main sub-cellular structures of eukaryotic and prokaryotic cells RP: microscope RPR: Osmosis</p> <p>B2 Cell Division the need for cells to divide stem cells in animals and meristems in plants</p> <p>Research project on influential black scientists</p>	<p>C1 Atomic Structure Separation techniques Atomic structure</p> <p>C2 The Periodic Table Trends in groups of periodic table Layout of periodic table</p> <p>P7 Radiation radioactive decay, changing elements and isotopes. types of ionizing radiation – alpha, beta and gamma.</p> <p style="text-align: center;">MID-YEAR ASSESSMENT</p>	<p>B3 Organisation and the Digestive System the hierarchical organisation of multicellular organisms enzymes and factors affecting rate of reactions</p> <p>B4 Organising Animals and Plants the structure and functions of blood and blood vessels</p>	<p>C3 Structure and Bonding the properties associated with states of matter bonding</p> <p>P1 Energy Conservation and Dissipation of Energy</p> <p>P2 Energy Transfer by Heating</p> <p>P3 Energy Resources</p>	<p>B4 Organising Animals & Plants the structure and functions of the gas exchange system in humans</p> <p>P6 Molecules and Matter</p>	<p>B5 Communicable Disease relationship between health and disease communicable diseases including STI's in humans. body defences against pathogens and the role of the immune system against diseases.</p> <p>B6 Preventing & Treating disease Discovery and development of new medicines Spread of infectious diseases</p>

AQA BIOLOGY GCSE Curriculum Map

YEAR 10 BIOLOGY					
Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
<p>B7 Non-Communicable Diseases non-communicable diseases</p> <p>B8 Photosynthesis process of photosynthesis factors that affect rate of photosynthesis</p> <p>B9 Respiration processes of aerobic and anaerobic respiration (symbol equations)</p>	<p>B10 The Nervous System nervous and hormonal coordination & control in humans structure and function of human nervous system and reflex arc</p>	<p>B11 Hormonal Coordination</p> <p>B12 Reproduction single gene inheritance & crosses with phenotypes</p>	<p>B13 Variation and Evolution genetic variation, natural selection, evolution and selective breeding</p>	<p>B14 Genetics and Evolution what fossils can reveal. mutation in antibiotic resistant bacteria</p>	<p>B14 Genetics and Evolution Evolution</p>
Year 11 Biology					
Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
<p>B15 Adaptations, interdependence and competition relationships between communities and ecosystems using mean, median and mode adaptations of organisms</p>	<p>B16 Organising an ecosystem how the number of predators and prey are related.</p> <p>B17 Biodiversity and ecosystems why loss of biodiversity matters. how global warming affects life on Earth.</p>	<p><i>REVISION</i></p>	<p><i>REVISION</i></p>	<p><i>GCSE EXAMINATIONS</i></p>	<p><i>GCSE EXAMINATIONS</i></p>

AQA Chemistry GCSE Curriculum Map

Year 10 Chemistry					
Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
<p>C4 Quantitative Chemistry</p> <p>RFM Moles and mass Molar gas</p>	<p>C4 Quantitative Chemistry</p> <p>Yield, Atom Economy & Concentration</p> <p>C5 Chemical Changes</p> <p>Acid reactions – acids reacting with different substances.</p> <p>Redox reactions and electron transfer</p>	<p>C5 Chemical Changes</p> <p>pH scale Strong and weak acid</p> <p>C6 Electrolysis</p> <p>Reactivity series and extraction of metals Redox reactions Extraction of Aluminium</p>	<p>C7 Energy Changes</p> <p>Energy profiles: endo- or exothermic Enthalpy change</p> <p>C8 Rates and Equilibrium</p> <p>Calculate rates of reaction Factors affecting rate</p>	<p>C8 Rates and Equilibrium</p> <p>Collision theory Effects on equilibrium</p> <p>C11 The Earth's Atmosphere</p> <p>Main changes of atmosphere over time Greenhouse effect</p>	<p>C11 The Earth's Atmosphere</p> <p>Problems caused by air pollutants</p> <p>End of Year Examinations</p>
Year 11 Chemistry					
Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
<p>C9 Crude Oil and Fuels</p> <p>Fractional distillation Cracking Organic reactions and functional groups Polymers</p>	<p>C10 Chemical Analysis</p> <p>Paper chromatography, Flame tests, identifying ions, identifying pure substances</p>	<p>C12 The Earth's Resources</p> <p>Potable and pure water and how wastewater is purified How to interpret LCA's of products Fertilisers, polymers and alloys</p>	<p>Revision</p>	<p>Revision and GCSE Examinations</p>	<p>GCSE Examinations</p>

AQA Physics GCSE Curriculum Map

Year 10 Physics					
Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
<p style="text-align: center;">Electric circuits</p> <p>PD, Current and charge Parallel and Series Resistance</p>	<p style="text-align: center;">Electricity in the home</p> <p style="text-align: center;">Mid-year assessment</p>	<p style="text-align: center;">Static Electricity</p> <p style="text-align: center;">Forces</p> <p>Scalar & vector Work done</p>	<p style="text-align: center;">Forces</p> <p>Hooke's law Turning Force Pressure in fluids</p>	<p>Forces and motion</p>	<p>Momentum</p>
Year 11 Physics					
Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
<p style="text-align: center;">Waves</p> <p>Transverse and Longitudinal Reflection Refraction</p>	<p style="text-align: center;">Waves</p> <p>Electromagnetic waves and refraction</p> <p style="text-align: center;">Magnetism</p> <p>Induced magnetism</p>	<p style="text-align: center;">Magnetism</p> <p>Motor effect Generator effect and Transformers</p> <p style="text-align: center;">Space</p>	<p style="text-align: center;">Space</p> <p>Red-shift and Big Bang</p> <p style="text-align: center;">Revision</p>	<p>Revision and GCSE Examinations</p>	<p>GCSE Examinations</p>