

SCIENCE KEY STAGE 4 CURRICULUM MAP

The Teaching order followed is that we teach the B1, C1 and P1 exam contents in rotation through Year 10 and before the May half-term. With each exam's specified content being split into topics.

i.e. B1a = first half of B1 exam content and B1b being the second half

Then from about week 30 of Year 10 we teach the B2, C2 and P2 content, again in topics – B2a, B2b. Our plan is to complete teaching by week 24 of Year 11 (or earlier) to allow a reasonable period of exam practice and review, revision and re-teaching.

Within each topic we carry out the relevant GCSE required practical tasks, alongside other experiments and practical demonstrations to improve understanding and wider conceptual understanding of the nature, processes and methods of science.

In order to allow smooth movement of groups between topics, and sometimes specialist laboratory spaces, it is advantageous for the topics to be of similar lengths and to achieve this we felt it necessary to extract approximately 8 lessons of P1 content and shift it to within the teaching of P2. The content moved was chosen due to its conceptual fit to the P2 content it is taught within.

B1a - Cell biology – structures and exchange processes Organisation – Human body systems, Health, Plant transport	C1a - Atomic model and periodic table - patterns within elements and compounds. Basic reactions. Bonding and structure – behaviour of materials and reactions linked back to atomic model	P1a - Energy – Stores, systems and interconversions Electricity – circuit theory and domestic use
B1b - Infection and Response – diseases, vaccination, drugs. Bioenergetics – photosynthesis, respiration and metabolism	C1b - Quantitative chemistry – amounts, masses and moles Chemical changes – more detailed work on reactions, reactivity and change. Energy changes – heat released when bonding changes	P1b - Particle model of matter – changes of state and energy transfers Atomic structure – Model of the atom linked to nuclear changes and radiation
B2a - Homeostasis and response, nervous system, control, hormones, fertility Inheritance – genetics, meiosis and inherited disorders	C2a - Rate and extent of reactions – collision theory, rates and reversible reactions Organic chemistry – hydrocarbons from crude oil and their uses	P2a - Forces – contact and non-contact, resultant vectors and links to outcomes Mechanics – speed, velocity, graphing, accelerations
B2b - Variation and evolution – selective breeding. Genetic engineering and classification Ecology – competition, adaptation, interdependence, cycles and environmental problems.	C2b - Chemical analysis – purity, more separation and identifying tests Atmospheric chemistry – evolution of Earth's atmosphere and modern environmental problems Use of resources – LCA, water and Reduce, Reuse, Recycle	P2b - Waves – types, reflection, refraction and diffraction Magnetism and Electromagnetism – permanent and induced to the motor effect

The units for the separate sciences contain significant amounts of subject content which is additional to the Combined Science GCSE course shown above. At all times the CGP revision guides that we lend to students give excellent coverage and explanation of the six sections Biology1 through to Physics2.