



SCIENCE (COMBINED) CURRICULUM MAP

FURTHER STUDY

A level Physics, Chemistry and Biology; Level 3 BTEC Science

CAREER PATHS

University, Researcher, Forensic Scientist, Biochemist, Chemical Engineer, Education and Training

SKILLS

Critical analysis, scientific investigation, evaluation

Assessment: Higher or Foundation Assessment, 40-45 marks for Biology, Chemistry and Physics to cover Y9 and Y10 content

REVISION & EXAMS

REVISION

Assessment: End of year exams - GCSE past paper 1- Biology, Chemistry and Physics

Exchange, Electrolysis and Electricity

- Energy transfer in electric circuits
- Diffusion and osmosis
- Scientific observation and electrolysis
- Ions and the process
- Products of electrolysis
- Current, charge, resistance and electric circuits
- The National Grid

Growth and Reactions, Groups of the Periodic Table, Forces, Matter and Ionising Radiation

- Different groups of elements
- Plant function and cell division
- Radio-activity and the periodic table
- Radiation and its effect on matter
- How forces can deform materials

Assessment: Mock Paper 2- Biology, Chemistry and Physics

Cycles, Rates of Reaction, Forces and Matter

- Cell division
- The water, nitrogen and carbon cycles
- Endo and exothermic reactions
- Rates of reaction
- DT and VT graphs to analyse journey
- History of the structure of the atom

Assessment: Mock Paper 1- Biology, Chemistry and Physics

YEAR 11

Pathogens, metal extraction, equilibria and Radioactive Decay

- Communicable and non-communicable disease
- Metals and ores
- Nucleus and radioactivity
- Background radiation
- Half-life
- Analysing data

Risk factors, equilibria, and EM Spectrum

- Cardiovascular disease, diabetes and new medicines
- Waves and energy transfer
- Reflection and refraction
- Reversible reactions

Survival, Fuels Dynamic Equilibrium

- Risk factors and cardiovascular disease
- Structure and formation of hydrocarbons
- Fractional distillation

Evolution and Electrolysis

- Theory of evolution
- Human evolution
- Inheritance and variation
- Cations and anions and electrodes
- Products of molten compounds

Inheritance, Separating Techniques and Power

- DNA and genes
- Thermoregulation and glucoregulation
- Distillation and fractional distillation
- Chromatography
- Power and heat capacity

Response, Neutralisation and Forces

- Nervous and hormonal systems
- Ecosystems – change and the environment
- Reactions involving acids
- Strong and weak acids
- Momentum – kinetic energy

YEAR 10

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SCIENCE SKILL

Scientific knowledge and conceptual understanding

SCIENCE SKILL

The nature, processes and methods of science

SCIENCE SKILL

Analysis, evaluation and measurement

SCIENCE SKILL

Experimental skills and investigations