Springwood High School Science Curriculum Plan

Our Vision:

To ensure that we provide an excellent quality of Science provision for all students in the local area, enabling them to access higher level Science based careers.

Exam boards: GCSE AQA trilogy and separate sciences, Year 12/13 OCR Biology A, Chemistry A and Physics A, Applied Science BTec

Brief overview of topics, themes, skills or key questions for each term:

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7 – Throughout practical skills, numeracy skills and application will be developed	Cells Matter	Cells Matter Chemical reactions Forces Spaced practice	Chemical reactions Forces Spaced practice	Space Ecology Spaced practice	Space Ecology Spaced practice	Spaced practice Energy Solutions
8 - Throughout practical skills, numeracy skills and application will be developed	Energy Solutions	Energy Solutions Spaced practice Organ systems Electricity	Organ systems Electricity Spaced practice	Reactions Disease and evolution Spaced practice	Reactions Disease and Evolution Spaced practice	Spaced practice Crest project
9 Throughout practical	Biology – Cells	Biology – Cells, organ systems	Biology – Organ systems	Biology – Organ systems	Biology – communicable disease	Biology – Communicable disease

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skills, numeracy skills and application will be developed	Chemistry – Atoms and the periodic table Physics – Molecules of matter	Chemistry – Atoms and the periodic table Physics – Radioactivity	Chemistry – Bonding Physics – Electric circuits	Chemistry – Bonding Physics – Electric circuits	Chemistry – Bonding and quantitative Chemistry Physics – Electricity in the home	Chemistry – Quantitative chemistry Physics - Electricity in the home
10 Throughout practical skills, numeracy skills and application will be developed	Biology – Communicable disease Chemistry – Rates of reaction Physics – Conservation and dissipation of energy	Biology – Communicable and non-communicable disease Chemistry – Rates of reaction Physics – Conservation and dissipation of energy and energy transfer by heating	Biology – Photosynthesis Chemistry – Organic Chemistry Physics – Energy resources	Biology – Respiration Chemistry – Spaced practice Physics – Forces in balance	Biology – homeostasis Chemistry – Organic Chemistry Physics - Motion	Biology – Homeostasis Chemistry – Spaced practice Physics– Spaced practice
11 Recap of content and exam preparation all year, key skills, practical's and math's	Triple: paper 1 content Combined: paper 1 recap of content exam preparation	Triple: paper 2 content Combined: paper 2 recap of content and exam preparation	Triple: booster and exam's Combined: Working through full papers and exam's	Triple: Revision pack A Combined: Revision pack A	Triple: Revision pack B Combined: revision pack B	
12	Biology – Cells and microscopes, Biological	Biology – Nucleic acids, enzymes, gas exchange	Biology – Cell division, transport in plants, transport in animals	Biology – Communicable disease,	Biology – communicable disease,	Biology – Populations and sustainability,

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	membranes, cell membranes Chemistry – FOUNDATION chemistry, Atoms and reactions (I), electrons bonding and structure (I), basic organic chemistry and hydrocarbons (I). Physics – Electricity, foundations of physics, work energy and power Applied Science – working with waves, cells structure and function, structure and bonding unit 2 practical's	Chemistry – Atoms and reactions (II), electrons bonding and structure (II), basic organic chemistry and hydrocarbons (II). Physics – Electricity, motion, materials Applied Science - working with waves, cells structure and function, structure and bonding unit 2 practical's	Chemistry – Atoms and reactions (III), electrons bonding and structure (III), basic organic chemistry and hydrocarbons (III). Physics – Electricity, motion, materials Applied Science – waves in communication, Cell specialisation, production and uses of substances, unit 2 practical's	biodiversity, classification Chemistry – Physical chemistry (I), periodic table (I), alcohols & haloalkanes (I) Physics – Waves, Forces, Newton's laws of motion Applied Science - waves in communication, Cell specialisation, production and uses of substances, unit 2 practical's	biodiversity, classification Chemistry – Physical chemistry (I), periodic table (II), haloalkanes (II) and analysis Physics – Waves, Thermal physics Applied Science – Uses of electromagnetic waves in communication, Tissue structure and function, production and uses of substances, unit 2 practical's	ecosystems, Evolution Chemistry (Yr13) – Rates and aromatic compounds Physics – Quantum, thermal physics Applied Science – Exam preparation, unit 2 practical's
13	Biology – Homeostasis and communication, Endocrine control, nervous system, animal responses Chemistry – Equilibrium & pH (I), carbonyls & carboxylic acids, Physics – Circular motion,	Biology – Excretion, plant responses, respiration, photosynthesis Chemistry – Equilibrium & pH (II), organic nitrogen compounds Physics – Electric fields,	Biology – cellular control, manipulating genomes Chemistry – Energy (I), organic synthesis and polymers Physics – Astro physics and cosmology, nuclear particle physics	Biology – patterns of inheritance, cloning and biotechnology Chemistry – Energy (II), transition metals and organic analysis Physics – Astro physics and cosmology, medical imaging	Biology – Exam preparation Chemistry – Exam preparation Physics – Exam preparation Applied Science – Exam preparation	

	oscillations, capacitors Applied Science – optional unit and unit 3 practical's	electromagnetism, gravitational fields Applied Science - optional unit and unit 3 practical's	Applied Science - optional unit and unit 3 practical's	Applied Science - optional unit and unit 3 practical's		

Enrichment Activities:

Super Learning Days: Year 8 space centre, year 7 zoo trip, year 12 Nuclear power station

Competitions: WNAT trust year 8 Science competition End of June beg July

Trips: Holkham beach trip year 12 Biology compulsory PAG

Clubs & Support: After school and lunchtime revision, Youth STEMM award, KS3 STEMM club, year 7 smoothies SLD, Kerboodle KS4