

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	Movement Particle model Earth structure Speed	Current Energy transfer Human reproduction Metals & non-metals	Separating mixtures Plant reproduction Light Cells	Variation Sound Acids & Alkalis Voltage and resistance	Universe Interdependence	Gravity Energy costs
8 - Throughout practical skills, numeracy skills and application will be developed	Light Metals Respiratory and Skeletal Forces	Metals Forces Periodic table Health and disease	Careers Electricity and magnetism Diet and digestion	Electricity and magnetism Diet and digestion Earth and atmosphere	Renewables project Earth and atmosphere	Revision and exam preparation Year 8 cross trust project Practical's
9 Throughout practical	Biology – Biodiversity Chemistry –	Biology – Adaptation and interdependence	Biology – Adaptation and interdependence	Biology – cells Chemistry – Bonding and	Biology – cells and organ systems Chemistry –	Biology – organ systems Chemistry –

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skills, numeracy skills and application will be developed	atomic structure Physics – Particle model of matter	Chemistry atomic structure and periodic table Physics – Atomic structure	and cells Chemistry – Periodic table Physics – Electric circuits	structure Physics – Electric circuits	Bonding and structure Physics – Electric circuits	Chemical changes Physics Electricity in the home
10 Throughout practical skills, numeracy skills and application will be developed	Biology – organ systems Chemistry – electrolysis and quantitative chemistry Physics - Energy	Biology – photosynthesis and communicable disease Chemistry – quantitative chemistry and energy changes Physics – Force in Balance	Biology – communicable disease and non-communicable disease Chemistry – Rate of change Physics – Motion, Forces & Motion.	Biology – Respiration and homeostasis Chemistry – Rate of change and organic chemistry Physics – Forces & Motion , Waves	Biology – homeostasis and reproduction Chemistry – Analysis and earth's resources, chemistry and the atmosphere Physics - Electromagnetic Waves.	Biology – variation , evolution and exam preparation Chemistry – using resources and exam preparation Physics– Electromagnetism and exam preparation
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 membranes, cell	Biology – Nucleic acids, enzymes, gas exchange Chemistry – Atoms	Biology – Cell division, transport in plants, transport in animals	Biology – Communicable disease, biodiversity,	Biology – communicable disease, biodiversity,	Biology – Populations and sustainability, ecosystems,

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	<p>membranes Chemistry – Atoms and reactions, electrons bonding and structure, basic organic chem 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</p>	<p>and reactions, electrons bonding and structure, basic organic chem Physics – Electricity, motion, materials Applied Science - working with waves, cells structure and function, structure and bonding unit 2 practical's</p>	<p>Chemistry – Physical chemistry, periodic table, alcohols and halogenoalkanes Physics – Electricity, motion, materials Applied Science – waves in communication, Cell specialisation, production and uses of substances, unit 2 practical's</p>	<p>classification Chemistry – Physical chemistry, periodic table, alcohols and halogenoalkanes Physics – Waves, Forces, Newton's laws of motion Applied Science - waves in communication, Cell specialisation, production and uses of substances, unit 2 practical's</p>	<p>classification Chemistry – Physical chemistry, periodic table, 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</p>	<p>Evolution Chemistry – Rates, Nitrogen compounds and polymers Physics – Quantum, thermal physics Applied Science – Exam preparation, unit 2 practical's</p>
13	<p>Biology – Homeostasis and communication, Endocrine control, nervous system, animal responses Chemistry – Equilibrium and pH completion, aromatic compounds, carbonyls and carboxylic acids, transition metals Physics – Circular motion,</p>	<p>Biology – Excretion, plant responses, respiration, photosynthesis Chemistry – Equilibrium and pH completion, aromatic compounds, carbonyls and carboxylic acids, transition metals Physics – Electric fields, electromagnetism,</p>	<p>Biology – cellular control, manipulating genomes Chemistry – Energy, analysis, organic synthesis Physics – Astro physics and cosmology, nuclear particle physics Applied Science - optional unit and unit 3 practical's</p>	<p>Biology – patterns of inheritance, cloning and biotechnology Chemistry – Energy, analysis Physics – Astro physics and cosmology, medical imaging Applied Science - optional unit and unit 3 practical's</p>	<p>Biology – Exam preparation Chemistry – Exam preparation Physics – Exam preparation Applied Science – Exam preparation</p>	

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