

Subject: Science**Introduction:****Insert here:**

At Yateley School in science we aim to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

Setting arrangements

Year 7 is taught in mixed ability sets.

Year 8-11 classes are set by attainment within Extension/Achievement or halves of the year

Year 12-13 classes are taught in mixed ability sets

Number of periods taught per week at each KS

- Year 7: 3 lessons per week (1 per subject)
- Year 8: 4 lessons per week (1 per subject + General science)
- Years 9, 10 & 11: 6 lessons per week (2 per subject)
- Year 12: 6 lessons per week
- Year 13: 5 lessons per week

Contact details

Science@yateley.hants.sch.uk

Subject

Science - Biology

Course content:

What is covered in this named year group? Bullet points only!

Year 7	<ul style="list-style-type: none"> ● Movement ● Cells ● Interdependence ● Plant reproduction ● Variation ● Human reproduction
Year 8	<ul style="list-style-type: none"> ● Health ● Lifestyle ● Ecosystems ● Metabolism ● Adaptation ● inheritance
Year 9	<ul style="list-style-type: none"> ● B1 - Cells ● B2 - Cell division ● B3 - Organisation and the digestive system ● B4 - Organising animals and plants ● B5 - Communicable diseases ● B6 - Preventing and treating disease ● B7 Non-communicable diseases

	<ul style="list-style-type: none"> ● B15 - Adaptations, interdependence and competition ● B17 - Biodiversity and ecosystems
Year 10	<ul style="list-style-type: none"> ● B8 - Photosynthesis ● B9 - Respiration ● B10 - The human nervous system ● B11 - Hormonal co-ordination ● B12 - reproduction ● B13 - Variation and evolution ● B16 - organising an ecosystem
Year 11	<ul style="list-style-type: none"> ● B1.6-10 - diffusion, osmosis and active transport ● B3.5 - Factors affecting enzymic reactions ● B8.4 - Factors affecting the rate of photosynthesis
Year 12	<ul style="list-style-type: none"> ● Biological molecules ● Nucleic acids ● Cell structure ● Transport across cell membranes ● Cell recognition and the immune system ● Organisms exchanging substances with their environment ● Mass transport ● DNA genes and protein synthesis ● Genetic diversity ● Biodiversity
Year 13	<ul style="list-style-type: none"> ● Photosynthesis ● respiration ● Energy and ecosystems ● Response to stimuli ● Nervous coordination and muscles ● Homeostasis ● Inherited change ● Populations and evolution ● Populations and ecosystems ● Gene expression ● Recombinant DNA technology

Assessment:

How do you assess progress of students? Tests, coursework, frequency?

KS3	KS4	KS5
<ul style="list-style-type: none"> ● Students take termly exams ● Students are graded between 1-9 ● Students take an end-of-year assessment that forms their final grade for the year 	<ul style="list-style-type: none"> ● Students take tests after each module ● Students are graded between 1-9 ● Students take an end-of-year exam in Years 9 and 10 that forms their final grade for the year 	<ul style="list-style-type: none"> ● Students take tests after each module. ● Year 12 Students are graded between A and E. ● At the end of Year 12 Students take an AS exam. This does not count towards their final A-level. ● Year 13 Students are graded between A* and E

Assessment criteria

Please email your progress grid separately to be inserted here.

Subject	Science - Chemistry
Course content:	
<i>What is covered in this named year group? Bullet points only!</i>	
Year 7	<p>AQA Activate Course</p> <ul style="list-style-type: none"> 5.1 Particle model 5.2 Separating Mixtures 6.2 Metals and Non-metals 6.1 Acids and Alkalis
Year 8	<p>Activate Course</p> <ul style="list-style-type: none"> C2.1 The Periodic Table C2.2 Separating Techniques C2.3 Metals and Acids C2.4 The Earth
Year 9	<p>AQA 9-1 GCSE Combined Science</p> <ul style="list-style-type: none"> - Atomic Structure - Periodic Table - Structure and Bonding - Chemical Changes - Electrolysis - Chemical Calculations
Year 10	<p>AQA 9-1 GCSE Combined Science</p> <p>Extension Band:</p> <ul style="list-style-type: none"> - Energy Changes - Rate of Reaction - Crude Oil and Fuels - Chemical Analysis - The Earth's Atmosphere - The Earth's Resources <p>Achievement Band:</p> <ul style="list-style-type: none"> - Energy Changes - Rate of Reaction - Crude Oil and Fuels - Chemical Analysis - Chemical Calculations
Year 11	<p>AQA 9-1 GCSE</p> <p>Triple Science:</p> <ul style="list-style-type: none"> - The Earth's Atmosphere - The Earth's Resources - Organic Reactions - Polymers - Using Our Resources - Triple content of Periodic Table topic <ul style="list-style-type: none"> -The Transition Elements - Triple content of Structure and Bonding topic <ul style="list-style-type: none"> - Nanoparticles and applications - Triple content of Chemical Calculations topic <ul style="list-style-type: none"> - Yields, Atom economy, Titrations, Titration Calculations and Volume of Gases - Triple content of Energy Changes <ul style="list-style-type: none"> - Chemical cells and batteries, Fuel cells <p>Extension Band Double Award:</p> <ul style="list-style-type: none"> - The Earth's Atmosphere - The Earth's Resources - Second run through of Required Practicals

	<ul style="list-style-type: none"> - Structured Revision Achievement Band Double Award: <ul style="list-style-type: none"> - Rate of Reaction - Crude Oil and Fuels - Chemical Analysis - The Earth's Atmosphere - The Earth's Resources 	
Year 12	OCR AS Chemistry <ul style="list-style-type: none"> - Foundations in Chemistry - Periodic Table and Energy - Core Organic Chemistry 	
Year 13	OCR A2 Chemistry <ul style="list-style-type: none"> - Physical Chemistry and Transition Elements - Organic Chemistry and Analysis 	
Assessment:		
<i>How do you assess progress of students? Tests, coursework, frequency?</i>		
KS3 (Yr 7+8)	KS4 (Yr 9,10,11)	KS5
<ul style="list-style-type: none"> ● Students take termly exams ● Students are graded between 1-9 ● Students take an end-of-year assessment that forms their final grade for the year 	<ul style="list-style-type: none"> ● Students take tests after each module ● Students are graded between 1-9 ● Students take an end-of-year exam in Years 9 and 10 that forms their final grade for the year 	<ul style="list-style-type: none"> ● Students take tests after each module. ● Year 12 Students are graded between A and E. ● At the end of Year 12 Students take an AS exam. This does not count towards their final A-level. ● Year 13 Students are graded between A* and E
Assessment criteria		
<i>Please email your progress grid separately to be inserted here.</i>		

Subject	Science - Physics
Introduction:	
Course content:	
<i>What is covered in this named year group? Bullet points only!</i>	
Year 7	AQA Activate Course 1. Forces 2. Electromagnets 3. Energy 4. Waves
Year 8	Activate Course P2.1 Electricity and magnetism P2.2 Energy P2.3 Motion and pressure
Year 9	AQA 9-1 GCSE Combined Science - Forces in Balance - Motion - Conservation and dissipation of energy - Energy transfers by heating - Electric circuits
Year 10	AQA 9-1 GCSE Combined Science Extension Band: - Forces and motion - Waves - Electromagnetic waves - Electromagnetism Achievement Band: - Electricity in the home - Molecules and matter - Radioactivity - Forces and motion - Waves - Electromagnetic waves - Electromagnetism
Year 11	AQA 9-1 GCSE Triple Science: - Electromagnetism(Triple content) - Light (Triple content) - Space (Triple content) - Energy transfers by heating (Triple content) - Radioactivity (Triple content) - Molecules and matter (Triple content) - Forces in balance (Triple content) - Forces in motion (Triple content) - Electric circuits (Triple content) - Forces and pressure (Triple content) - Waves (Triple content) Extension Band Double Award: - Waves - Electromagnetism - Revision and review of required practicals Achievement Band Double Award: - Waves - Electromagnetism - Electromagnetic waves

	<ul style="list-style-type: none"> - Radioactivity - Forces and motion - Revision and review of required practicals 	
Year 12	AQA AS Physics <ul style="list-style-type: none"> - Measurements and their errors - Particles and Radiation - Quantum Phenomena - Mechanics and Materials - Waves - Electricity 	
Year 13	AQA A2 Physics <ul style="list-style-type: none"> - Further mechanics and Thermal physics - Gravitational, Electric and Magnetic fields - Capacitors - Nuclear Physics 	
Assessment:		
<i>How do you assess progress of students? Tests, coursework, frequency?</i>		
KS3	KS4	KS5
<ul style="list-style-type: none"> ● Students take termly exams ● Students are graded between 1-9 ● Students take an end-of-year assessment that forms their final grade for the year 	<ul style="list-style-type: none"> ● Students take tests after each module ● Students are graded between 1-9 ● Students take an end-of-year exam in Years 9 and 10 that forms their final grade for the year 	<ul style="list-style-type: none"> ● Students take tests after each module. ● Year 12 Students are graded between A and E. ● At the end of Year 12 Students take an AS exam. This does not count towards their final A-level. ● Year 13 Students are graded between A* and E
Assessment criteria		
<i>Please email your progress grid separately to be inserted here.</i>		