

Biology

Curriculum Map

	<div>Year 7</div> <div>B 1.1 Cells B 1.3 a) Animal reproduction B 1.2 Body systems B 2.1 Health and lifestyle</div>	<div>Year 8</div> <div>B 2.2 a) Ecosystem process (Human) B 2.2 b) Ecosystem process (plant) and B1.3 b) Plant reproduction B 2.3 Adaptation and Inheritance</div>	
Accelerated group	<div>Year 9</div> <div>4.1 Cell biology 4.2 Organisation (start)</div>	<div>Year 10</div> <div>4.2 Organisation (finish) 4.3 Infection and response</div>	<div>Year 11</div> <div>4.4 Bioenergetics 4.5 Homeostasis and response 4.6 Inheritance, variation and evolution 4.7 Ecology</div>
	<div>Year 9</div> <div>4.1 Cell biology 4.2 Organisation 4.3 Infection and response 4.4 Bioenergetics</div>	<div>Year 10</div> <div>4.5 Homeostasis and response 4.6 Inheritance, variation and evolution Revisit 4.1—4.4</div>	<div>Year 11</div> <div>4.7 Ecology</div>
Options group			
Combined group	<div>Year 9</div> <div>4.1 Cell biology 4.2 Organisation (start)</div>	<div>Year 10</div> <div>4.2 Organisation (finish) 4.3 Infection and response 4.4 Bioenergetics</div>	<div>Year 11</div> <div>4.5 Homeostasis and 1esponse 4.6 Inheritance, variation and evolution</div>
	<div>Year 12</div> <div>Biological molecules Cells, viruses and reproduction Classification and biodiversity Exchange and transport (in mammals, fish and invertebrates)</div>	<div>Year 13</div> <div>Energy for biological processes Microbiology and pathogens Modern genetics Origins of genetic variation Control systems Ecosystems</div>	



Chemistry

Curriculum Map — KS3/4

Year 7	Year 8
C 1.2 Elements, atoms and compounds C 1.3 a) An introduction to reactions C 2.1 The Periodic Table C 1.1 The Particle Model C 2.2 a) Solutions C 2.2 b) Separation techniques	C 1.3 b) More about reactions C 1.4 Acids and alkalis C 2.3 Metals and acids C 2.4 The Earth & C 1,3 b) Combustion

Accelerated group	Year 9	Year 10	Year 11
	Chemistry fundamentals 4.9 Chemistry of the atmosphere 4.10 Using resources 4.8 a Chemical analysis 4.1 Atomic structure and the Periodic Table	4.2 Bonding structure and properties of matter 4.3 Quantitative chemistry 4.4 Chemical changes 4.5 Energy changes	4.6 Rates of reaction 4.7 Organic chemistry 4.8 b) Ion tests

Options group	Year 9	Year 10	Year 11
	Chemistry fundamentals 4.9 Chemistry of the atmosphere 4.10 Using resources 4.8 Chemical analysis 4.1 Atomic structure and the Periodic Table	4.2 Bonding structure and properties of matter 4.3 Quantitative chemistry 4.4 Chemical changes 4.5 Energy changes	4.6 Rates of reaction 4.7 Organic chemistry 4.8 b) Ion tests

Combined group	Year 9	Year 10	Year 11
	Chemistry fundamentals 5.9 Chemistry of the atmosphere 5.10 Using resources 5.8 a Chemical analysis 5.1 Atomic structure and the Periodic Table	5.2 Bonding structure and Properties of matter 5.3 Quantitative chemistry 5.4 Chemical changes 5.5 Energy changes 5.6 Rates of reaction	5.7 Organic chemistry



Chemistry

Curriculum Map — KS5

Year 12	Year 13
<u>Physical</u> Atomic structure Amount of substance Bonding Energetics Oxidation, reduction and redox equations Kinetics Chemical equilibria, Le Chatelier's principle and K _c Acids and bases	<u>Physical</u> Thermodynamics Rate equations Equilibrium constant K _p for homogeneous systems Electrode potentials and electrochemical cells
<u>Organic</u> Introduction to organic chemistry Alkanes Halogenoalkanes Alkenes Alcohols Organic analysis	<u>Organic</u> Optical isomerism Aldehydes and ketones Carboxylic acids and derivatives Aromatic chemistry Amines Polymers Amino acids, proteins and DNA Organic synthesis Nuclear magnetic resonance spectroscopy Chromatography
<u>Inorganic</u> Periodicity Group 2, the alkaline earth metals Group 7(17), the halogens	<u>Inorganic</u> Properties of Period 3 elements and their oxides Transition metals Reactions of ions in aqueous solution



Physics

Curriculum Map

	<div>Year 7</div> <div>P 1.3 Light P 1.4 Space P 1.2 Sound P1.1 Forces</div>	<div>Year 8</div> <div>P 2.3 a) Motion P 2.3 b) Pressure P 2.2 Energy P2.1 Electricity and magnetism</div>	
Accelerated group	<div>Year 9</div> <div>4.1 Energy 4.3 Particle model of matter 4.4 Atomic structure 4.2 Electricity 4.6 Waves (start)</div>	<div>Year 10</div> <div>4.6 Waves (finish) 4.5 Forces 4.7 Magnetism and electromagnetism</div>	<div>Year 11</div> <div>4.8 Space</div>
	<div>Year 9</div> <div>4.1 Energy 4.3 Particle model of matter 4.4 Atomic structure 4.2 Electricity</div>	<div>Year 10</div> <div>4.6 Waves 4.5 Forces</div>	<div>Year 11</div> <div>4.7 Magnetism and electromagnetism 4.8 Space</div>
Options group	<div>Year 9</div> <div>6.1 Energy 6.3 Particle model of matter 6.4 Atomic structure 6.2 Electricity</div>	<div>Year 10</div> <div>6.6 Waves (finish) 6.5 Forces (start)</div>	<div>Year 11</div> <div>6.5 Forces (finish) 6.7 Magnetism and electromagnetism</div>
	<div>Year 9</div> <div>6.1 Energy 6.3 Particle model of matter 6.4 Atomic structure 6.2 Electricity</div>	<div>Year 10</div> <div>6.6 Waves (finish) 6.5 Forces (start)</div>	<div>Year 11</div> <div>6.5 Forces (finish) 6.7 Magnetism and electromagnetism</div>
Combined group	<div>Year 12</div> <div>3.1 Measurements and their errors 3.2 Particles and radiation 3.3 Waves 3.4 Mechanics and materials 3.5 Electricity</div>	<div>Year 13</div> <div>3.5 Electricity 3.6 Further mechanics and thermal physics 3.7 Fields and their consequences 3.8 Nuclear physics 3.11 Engineering physics</div>	
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Applied Science Curriculum Map

Year 12

Unit 1 – Principles and applications of Science

The electronic structure of atoms
 Ionic bonding
 Covalent bonding
 Metallic bonding
 Intermolecular forces
 Quantities used in chemical reactions
 The periodic table
 Physical properties of elements
 Chemical properties of elements
 Cell theory
 Microscopy
 Ultrastructure and function of organelles in cells
 Cell specialisation: structure and function
 Tissue structure and function; epithelial, endothelial, muscle, nervous
 Oscillations, periods and amplitude
 Wave motion
 Wave speed
 Graphical representation of wave features
 Types of wave motion: transverse and longitudinal
 Diffraction gratings
 Stationary waves resonance
 The principles of fibre optics
 Optical fibres
 Applications of fibre optics in medicine and communication
 Speed of electromagnetic waves and inverse square law for intensity of a wave
 Regions of the electromagnetic spectrum

Unit 2 – Practical scientific procedures and techniques

Laboratory equipment and calibration
 Standardisation of solutions using titration
 Titration
 Colorimetry
 Thermometers
 Cooling curves
 Determination of melting point
 Chromatographic techniques
 Applications of chromatography
 Other types of chromatography
 Theory and principles behind chromatography
 Personal responsibility
 Interpersonal skills
 Professional practice

Year 13

Unit 3 – Science investigation skills

Writing a hypothesis for an investigation
 Selection of appropriate equipment, techniques and standard procedures
 Health and safety issues
 Variables in an investigation
 Method for data collection and analysis
 Collection of qualitative and quantitative data
 Processing data
 Interpretation and analysis of data
 Evaluation
 Enzymes in action
 Diffusion of molecules
 Plants and their environment
 Energy content of fuels
 Electrical circuits

Unit 8 – Physiology of human body systems

Structure of the musculoskeletal system
 Functions of the musculoskeletal system
 Disorders of the musculoskeletal system
 Health matters and treatments related to the musculoskeletal system
 Structure of the lymphatic system
 Functions of the lymphatic system
 Disorders of the lymphatic system
 Health matters and treatments related to the lymphatic system
 Structure of the digestive system
 Functions of the digestive system
 Disorders of the digestive system
 Health matters and treatments related to the digestive system and diet



Health & Social Care Curriculum Map

Year 12

Unit 1 – Human lifespan development

Physical development across life stages
Intellectual development across life stages
Emotional development across life stages
Social development across life stages
The nature/nurture debate
Genetic factors that affect development
Environmental factors that affect development
Social factors that affect development
Economic factors that affect development
Major life events that affect development
The physical effects of ageing
The psychological effects of ageing
The societal effects of ageing

Unit 14 – Physiological disorders and their care

Types of physiological disorder and the effects on body systems and functions
Impact of disorders on service users' physical, mental, social and emotional health
Causes of physiological disorders
Signs and symptoms of physiological disorders
Investigative procedures for physiological disorders
Diagnostic procedures for physiological disorders
Provision of treatment and support
Types of carers and care settings
Care methods and strategies
Treatment plan processes

Year 13

Unit 2 – Working in health and social care

Roles of people who work in health and social care settings
Responsibilities of people who work in health and social care settings
Multi-disciplinary working in the health and social care sector
Monitoring the work of people in health and care settings
Roles of organisations in providing health and care services
Issues that affect access to services
Ways organisations represent the interests of service users
Roles of organisations that regulate and inspect health and social care services
Responsibilities of organisations towards people who work in health and social care settings
People with specific needs
Working practices

Unit 5 – Meeting individual care and support needs

Promoting equality, diversity and preventing discrimination
Skills and personal attributes required for developing relationships with individuals
Empathy and establishing trust with individuals
Ethical issues and approaches
Legislation and guidance on conflict of interest, balancing resources and minimising risk
Enabling individuals to overcome challenges
Promoting personalisation
Communication techniques
How agencies work together to meet individual care and support needs
Roles and responsibilities of key professionals on multi-disciplinary teams
Maintaining confidentiality
Managing information



Science

Assessment Guidance

Years 7 to 11

These guidelines outline the expectations with regards to **teacher marking and feedback**, along with what should be present in student written work.

All students across KS3 and 4 will have a science exercise book to be used in the majority of lessons and KS4 students will have a folder in addition to this for core practical work.

Some lessons will also use printed booklets to support learning.

Embedded throughout the guidelines are clear links to the **academy expectations** of student work:

Pride in work; **Subject knowledge** and practise of **skills**; Regular **review**; Actions following **responsive feedback** and **Progress**.

Marking

Staff will formally mark the following:

Summative assessments

Each assessment will be completed on paper and then stuck into the exercise book. Feedback and reflection for the test will be clearly evidenced through the use of 'assessment feedback' stickers.

Core practical work

Each core practical will be completed on paper with the appropriate cover sheet. Staff should mark the work and indicate student success on the cover sheet.

Closing the gap activities

Students are to complete an activity once getting test feedback; this activity targets an area on the topic which they found most challenging.

Standards audit

Once a module a class set of books will be marked using a whole class feedback sheet. This is focusing only on 'standards' of the presentation and quality of the work presented in the book, as well as whether or not the student is completing all tasks set in class and at home.

'Formal' marking means the teacher will take in work and write comments either on the work directly, or on a whole class feedback sheet. Students will then be provided with time in lessons to reflect on and respond to feedback from these marking sessions.

In addition to this formal marking, we will expect to see the following evidence of **effective feedback** in lessons and books:

Peer/students marking

This is when students mark each other's or their own work. This must be done in a different colour to that which the test was completed in.

Oral feedback

This can be from the teacher or a peer to a student to support their progress. This will not necessarily be evident in the book, but will be noted in observations.

Assessment frequency

Students in Y7-10 will have three formal assessments points throughout the year which will feed directly into their attainment grades given in module grades. These assessments are structured to have ten multiple choice questions from any topic the student has studied across the key stage, and then 40 marks of examination style questions based on the topics they have done since the last assessment. The topics being covered in the assessment will be clearly publicised to students in good time before the examination to facilitate effective revision.

Students in Y11 will have 2 two formal assessment periods in which they will complete a mock Paper 1 in the first session, and a Paper 2 in the second session, from each Biology, Chemistry and Physics. This will be used as a significant tool to inform whether a student should be entered for foundation or higher tier in the summer examinations.

