



Subject: Science

Curriculum Intent Statement

The intent of the science curriculum is to deliver the national curriculum and the science specification, outlined by Edexcel. The curriculum is sequenced to ensure that students are able to build knowledge over time, providing a secure foundation in the key concepts required to investigate and understand the world in which we live. Our curriculum is ambitious and aims to inspire, motivate and challenge students through its breadth and depth.

We will help students of all abilities, genders and backgrounds develop a curiosity for the scientific process as well as an understanding of the impact that science has on our day to day lives. Our curriculum provides opportunities to support wider, societal learning such as PSHE and RSHE. The curriculum provides a scaffolding that is then delivered through well resourced, quality teaching supported by strong assessment and accurate data tracking. We aim for our students to be successful in exams as well as having the scientific knowledge to be equipped for life in our rapidly changing world.

KS3

Year 7

Term	Curriculum coverage	Home learning
Autumn term 1	Practical Transition skills	https://www.bbc.co.uk/bitesize/topics/zxkx6g8
Autumn term 2	States of Matter Force and motion	https://www.bbc.co.uk/bitesize/topics/z9r4jxs/articles/zqpv7p3 https://www.bbc.co.uk/bitesize/topics/z9r4jxs/articles/zyhntrd https://www.bbc.co.uk/bitesize/topics/z4brd2p/articles/zw9qwnb https://www.bbc.co.uk/bitesize/topics/z4brd2p/articles/z2b6m39
Spring term 1	Energy Living systems	https://www.bbc.co.uk/bitesize/topics/zc3g87h/articles/zq2sn9q https://www.bbc.co.uk/bitesize/topics/zc3g87h/articles/znw7jsq https://www.bbc.co.uk/bitesize/topics/znyycdm/articles/zkm7wnb https://www.bbc.co.uk/bitesize/topics/znyycdm/articles/zfj3rwx
Spring term 2	Energy Living systems Space	https://www.bbc.co.uk/bitesize/topics/zc3g87h/articles/z7xfsk7 https://www.bbc.co.uk/bitesize/topics/znyycdm/articles/zqbddp3 https://www.bbc.co.uk/bitesize/topics/z8c9g6f/articles/zxyw7yc https://www.bbc.co.uk/bitesize/topics/z8c9g6f/articles/zktckty
Summer term 1	Diet and Health The periodic table	https://www.bbc.co.uk/bitesize/topics/zf339j6/articles/zv8m7yc https://www.bbc.co.uk/bitesize/topics/zf339j6/articles/zmwvqdm https://www.bbc.co.uk/bitesize/topics/zst34j/articles/zc86m39 https://www.bbc.co.uk/bitesize/topics/zv9nhcw/articles/zf4pp4j
Summer term 2	Diet and Health The periodic table Practical Transition skills	https://www.bbc.co.uk/bitesize/topics/zf339j6/articles/zms7xfr https://www.bbc.co.uk/bitesize/topics/zych6g8/articles/zhjptrd https://www.bbc.co.uk/bitesize/topics/zxkx6g8

Key resources:

Core knowledge revision guides
KS3 biology revision guide
KS3 chemistry revision guide
KS3 physics revision guide

Year 8

Term	Curriculum coverage	Home learning
Autumn term 1	Waves Ecosystems	https://www.bbc.co.uk/bitesize/topics/zw982hv/articles/zh28jsq https://www.bbc.co.uk/bitesize/topics/zw982hv/articles/z7rckty https://www.bbc.co.uk/bitesize/topics/zxhhvcw/articles/zjh4r2p



Autumn term 2	Photosynthesis, respiration and circulation Chemical reactions	https://www.bbc.co.uk/bitesize/topics/zxhhvcw/articles/z64ddp3 https://www.bbc.co.uk/bitesize/topics/zvrrd2p/articles/zn4sv9q https://www.bbc.co.uk/bitesize/topics/zvrrd2p/articles/zdqx2v4 https://www.bbc.co.uk/bitesize/topics/zvrrd2p/articles/zkq7wnb https://www.bbc.co.uk/bitesize/topics/zypsgk7/articles/zwxhk2p https://www.bbc.co.uk/bitesize/topics/zypsgk7/articles/zpbqq7h
Spring term 1	Metals and non-metals Reproduction and growth	https://www.bbc.co.uk/bitesize/topics/zv9nhcw/articles/z8qrr2p https://www.bbc.co.uk/bitesize/topics/zv9nhcw/articles/z9rbbqt https://www.bbc.co.uk/bitesize/topics/zybbkqt/articles/zwb6xbk https://www.bbc.co.uk/bitesize/topics/zybbkqt/articles/zmx94xs
Spring term 2	Metals and non-metals Reproduction and growth	https://www.bbc.co.uk/bitesize/topics/z3ksp4j/articles/zwdxtrd https://www.bbc.co.uk/bitesize/topics/zgvbkqt/articles/zphtbcw https://www.bbc.co.uk/bitesize/topics/zybbkqt/articles/zgwb3j6 https://www.bbc.co.uk/bitesize/topics/zybbkqt/articles/z64t6g8
Summer term 1	Pressure and Moments Atmosphere	https://www.bbc.co.uk/bitesize/topics/z4brd2p/articles/zvdpf82 https://www.bbc.co.uk/bitesize/topics/z4brd2p/articles/zk6kw6f https://www.bbc.co.uk/bitesize/topics/z3fv4wx/articles/z6rtp4j https://www.bbc.co.uk/bitesize/topics/z3fv4wx/articles/zsgkdp3
Summer term 2	Pressure and Moments Atmosphere Practical skills	https://www.bbc.co.uk/bitesize/topics/z4brd2p/articles/z96g3j6 https://www.bbc.co.uk/bitesize/topics/z3fv4wx/articles/zkbbbqt https://www.bbc.co.uk/bitesize/topics/z3fv4wx/articles/zpygcmn https://www.bbc.co.uk/bitesize/topics/zxkx6g8

Key resources:

Core knowledge revision guides KS3 biology revision guide KS3 chemistry revision guide KS3 physics revision guide
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Year 9

Term	Curriculum coverage			Home learning
	Bio	Chem	Phys	
Autumn term 1	Genetics and evolution	Energy in reactions	Electricity and magnetism	https://www.bbc.co.uk/bitesize/topics/zpffr82/articles/zc8txbk https://www.bbc.co.uk/bitesize/topics/zpffr82/articles/z46hxbk https://www.bbc.co.uk/bitesize/topics/zypsgk7/articles/zb7wwnb https://www.bbc.co.uk/bitesize/topics/zypsgk7/articles/zhp66g8 https://www.bbc.co.uk/bitesize/topics/zgy39j6/articles/z8mxgdm https://www.bbc.co.uk/bitesize/topics/zrvbkqt/articles/zh766g8
Autumn term 2	Adapted SoW to address gaps in learning and preparation for KS3 assessment/improvement phase.			https://www.bbc.co.uk/bitesize/subjects/z4882hv https://www.bbc.co.uk/bitesize/subjects/znxytyrd https://www.bbc.co.uk/bitesize/subjects/zh2xsbk
Spring term 1	Core concepts	Atomic structure	Energy	https://www.bbc.co.uk/bitesize/topics/zy9ww6f https://www.bbc.co.uk/bitesize/topics/zw6nng8 https://www.bbc.co.uk/bitesize/topics/z39ww6f
Spring term 2	Core concepts	Types of substance	Energy	https://www.bbc.co.uk/bitesize/topics/zy9ww6f https://www.bbc.co.uk/bitesize/topics/zw6nng8 https://www.bbc.co.uk/bitesize/topics/z39ww6f



Summer term 1	Cells and control	Types of substance	Motion	https://www.bbc.co.uk/bitesize/topics/zpg997h https://www.bbc.co.uk/bitesize/topics/zw6nng8 https://www.bbc.co.uk/bitesize/topics/zcw22nb
Summer term 2	Genetics and inheritance	Calculations	Motion and forces	https://www.bbc.co.uk/bitesize/topics/zxyggdm https://www.bbc.co.uk/bitesize/topics/zw6nng8 https://www.bbc.co.uk/bitesize/topics/zcw22nb

Key resources:

<p>Core knowledge revision guides KS3 biology revision guide KS3 chemistry revision guide KS3 physics revision guide GCSE Core knowledge revision guides KS4 biology revision guide KS4 chemistry revision guide KS4 physics revision guide https://mrbarnestc.com/</p>

KS4
Year 10

Term	Curriculum coverage			Home learning
	Bio	Chem	Phys	
Autumn term 1	Genetics and inheritance	States and mixtures	Waves and the electromagnetic spectrum	https://www.bbc.co.uk/bitesize/topics/zxyggdm https://www.bbc.co.uk/bitesize/topics/z9766yc https://www.bbc.co.uk/bitesize/topics/zsb44qt
Autumn term 2	Evolution and genetic modification	Acids and bases	Waves and the electromagnetic spectrum	https://www.bbc.co.uk/bitesize/topics/zqpyy4j https://www.bbc.co.uk/bitesize/topics/zgd77p3 https://www.bbc.co.uk/bitesize/topics/zpvrrwx
Spring term 1	Health and medicine	Acids and bases	Radioactivity	https://www.bbc.co.uk/bitesize/topics/z8xppbk https://www.bbc.co.uk/bitesize/topics/zgd77p3 https://www.bbc.co.uk/bitesize/topics/zxnvv9q
Spring term 2	Health and medicine	Metals, electrons and equilibria	Energy and forces	https://www.bbc.co.uk/bitesize/topics/z8xppbk https://www.bbc.co.uk/bitesize/topics/z3kjjty https://www.bbc.co.uk/bitesize/topics/zq6nng8 https://www.bbc.co.uk/bitesize/topics/z8766yc
Summer term 1	Ecosystems and material cycles	Groups, rates and energy	Particle model	https://www.bbc.co.uk/bitesize/topics/ztvrrwx https://www.bbc.co.uk/bitesize/topics/zsg997h https://www.bbc.co.uk/bitesize/topics/zts33k7
Summer term 2	Ecosystems and material cycles	Groups, rates and energy	Forces and matter	https://www.bbc.co.uk/bitesize/topics/ztvrrwx https://www.bbc.co.uk/bitesize/topics/ztyggdm https://www.bbc.co.uk/bitesize/topics/z2tssrd

Key resources:

<p>GCSE Core knowledge revision guides KS4 biology revision guide</p>
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KS4 chemistry revision guide
KS4 physics revision guide
<https://mrbarnestc.com/>

GCSE Qualification details

We deliver the Edexcel specification
Student will either sit combined science GCSE (2 x GCSE) or separate sciences (3 x GCSE).
Students who sit the separate science route will cover all of the above content plus the content outlined below.

Separate science content (not for students sitting the combined science option).

Term	Curriculum coverage			Home learning
	Bio	Chem	Phys	
Autumn term 1	Key cell biology & control	Materials	Waves	https://www.bbc.co.uk/bitesize/guides/zpkhcj6/revision/1 https://www.bbc.co.uk/bitesize/guides/z2rmrx/revision/1 https://www.bbc.co.uk/bitesize/guides/zwf92nb/revision/1
Autumn term 2	Enzymes and transport	Calculations & titration	The EM spectrum	https://www.bbc.co.uk/bitesize/guides/z88hcj6/revision/1 https://www.bbc.co.uk/bitesize/guides/zg9rxfr/revision/1 https://www.bbc.co.uk/bitesize/guides/zt42srd/revision/1
Spring term 1	Genetics & inheritance	Identifying ions	Radioactivity	https://www.bbc.co.uk/bitesize/guides/zy7vw6f/revision/1 https://www.bbc.co.uk/bitesize/guides/z9nr6yc/revision/1 https://www.bbc.co.uk/bitesize/guides/zyqnrwx/revision/1
Spring term 2	Evolution and genetic material	Identifying ions	Astronomy	https://www.bbc.co.uk/bitesize/guides/zytxjsg/revision/1 https://www.bbc.co.uk/bitesize/guides/z9nr6yc/revision/1 https://www.bbc.co.uk/bitesize/guides/zq638mn/revision/1
Summer term 1	Health and development	Transition metals and corrosion	Astronomy	https://www.bbc.co.uk/bitesize/guides/z83qfcw/revision/3 https://www.bbc.co.uk/bitesize/guides/zqsxrxw/revision/1 https://www.bbc.co.uk/bitesize/guides/zww8xfr/revision/1
Summer term 2	Photosynthesis	Electroplating & alloys	The particle model	https://www.bbc.co.uk/bitesize/guides/zpt4xfr/revision/1 https://www.bbc.co.uk/bitesize/guides/zqsxrxw/revision/1 https://www.bbc.co.uk/bitesize/guides/z9ykmsg/revision/1



Term	Curriculum coverage			Home learning
Autumn term 1	Photosynthesis	Fuels and Earth science	Electromagnets	https://www.bbc.co.uk/bitesize/topics/zcqxfr https://www.bbc.co.uk/bitesize/topics/z2pyy4j https://www.bbc.co.uk/bitesize/topics/z34ddxs
Autumn term 2	Animal coordination, control and hormones	Fuels and Earth science	Circuits	https://www.bbc.co.uk/bitesize/topics/z38qqhv https://www.bbc.co.uk/bitesize/topics/z2pyy4j https://www.bbc.co.uk/bitesize/topics/zcd77p3
Spring term 1	Animal exchange and transport	Fuels and Earth science	Circuits	https://www.bbc.co.uk/bitesize/topics/z38qqhv https://www.bbc.co.uk/bitesize/topics/z2pyy4j https://www.bbc.co.uk/bitesize/topics/zcd77p3
Spring term 2	GCSE revision	GCSE revision	GCSE revision	https://www.bbc.co.uk/bitesize/examspecs/zqkw6f
Summer term 1	GCSE revision	GCSE revision	GCSE revision	https://www.bbc.co.uk/bitesize/examspecs/zqkw6f

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	Bio	Chem	Phys	
Autumn term 1	Ecosystems	The Haber process and cells	Forces	https://www.bbc.co.uk/bitesize/guides/zp2cmsg/revision/1 https://www.bbc.co.uk/bitesize/guides/z3fsdxs/revision/1 https://www.bbc.co.uk/bitesize/guides/zcprjty/revision/1
Autumn term 2	Ecosystems	Alkanes & alkenes	EM induction	https://www.bbc.co.uk/bitesize/guides/zt2cmsg/revision/1 https://www.bbc.co.uk/bitesize/guides/zsf9pbk/revision/1 https://www.bbc.co.uk/bitesize/guides/z9f92nb/revision/1
Spring term 1	Animal control & homeostasis	Alcohols & carboxylic acids	Static electricity	https://www.bbc.co.uk/bitesize/guides/zcdf8mn/revision/1 https://www.bbc.co.uk/bitesize/guides/z2jndx/revision/1



				https://www.bbc.co.uk/bitesize/guides/zx9mfcw/revision/1
Spring term 2	Exchange & transport	Polymers	Static electricity	https://www.bbc.co.uk/bitesize/guides/zyjbqhv/revision/6 https://www.bbc.co.uk/bitesize/guides/ztr7b82/revision/1 https://www.bbc.co.uk/bitesize/guides/zx9mfcw/revision/1
Summer term 1	GCSE prep	GCSE prep	GCSE prep	https://www.bbc.co.uk/bitesize/examspecs/zcq2j6f https://www.bbc.co.uk/bitesize/examspecs/zy984j6 https://www.bbc.co.uk/bitesize/examspecs/zqpshv4