



# **Science Curriculum Booklet**

**2019-2020**

## **Science Department Teaching Staff**

**Ms E Healy – Head of Department**

**Miss H Ali**

**Dr N Daniels**

**Miss Y Gulseven**

**Mr A Leigh**

**Mr M Ramadan**

**Mrs C Robbins**

**Miss S Schote**

**Mr M Whorms**



## Science Curriculum Structure

In years 7 and 8 students rotate through modules of science that cover all 3 disciplines, they have 8 hours of lessons a fortnight.

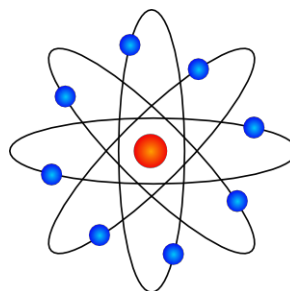
In Year 9 students begin to study the GCSE specifications and the number of teaching hours goes up to 9 hours a fortnight.

All classes are taught by 3 separate teachers, one for each subject; Biology, Chemistry and Physics. For the first year everyone will study the triple science curriculum. At the end of Y9 those students who have demonstrated the potential to gain the highest grades will be invited to continue to study triple science. The majority of the cohort will switch to studying the Combined Science qualification (this still involves all 3 subjects being studied but reduces the amount of content that is covered) and will gain a grade based on their cumulative score in all 6 exam papers (2 per subject). In both triple and combined science students are entered for either Higher tier (Grades 4-9) or Foundation (Grades 1-5). Final decisions on tiers of entry are not made until the spring of Year 11.

# Bishop Stopford's School Curriculum Overview

## Year 7 – Science

	Curriculum Content	Skill Content
Half Term 1	Forces - Speed, Gravity Matter - Particle Model, Separation Techniques Organisms - Movement, Cells	Researching and Planning an experiment
Half Term 2	Reactions - Metals & Non-Metals, Acids & Alkalis	Writing a risk assessment and carrying out experiments safely
Half Term 3	Electromagnets - Voltage & Resistance, Current	Making and recording observations Recording results
Half Term 4	Ecosystems - Interdependence, Plant Reproduction	Drawing graphs
Half Term 5	Earth -Earth Structure, Universe Energy - Energy Costs, Energy Transfer	Interpreting and analysing data to draw conclusions
Half Term 6	Genes - Variation, Human Reproduction Waves - Sound, Light	Critically evaluating experimental methods



Examples of Home Learning Tasks	Creating models of scientific ideas; Writing lab reports before and after an experiment;
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment complete in lessons.
Equipment That Students Need	Pen; Blue or black and green, pencil, ruler, eraser, sharper, calculator. Recommended; highlighter pens, colour pencils, red pen.
Parents / Carers can help their child by:	Helping with research homework's, asking student to explain what they have learnt in subject And by quizzing student when revision is set for end of topic test using BBC bitesize science.
Useful Websites	BBC Bitesize KS3 Science: <a href="http://www.bbc.co.uk/education/subjects/zng4d2p">http://www.bbc.co.uk/education/subjects/zng4d2p</a> KS3 Science Quizzes: <a href="http://www.educationquizzes.com/ks3/science/">http://www.educationquizzes.com/ks3/science/</a>
Extra-curricular Opportunities	Science trips to be confirmed.

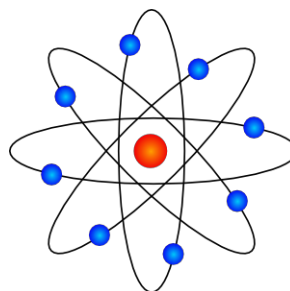


Who do I contact	Miss E Healy – Head of Science	<a href="mailto:ehealy@bishopstopfords.enfield.sch.uk">ehealy@bishopstopfords.enfield.sch.uk</a>
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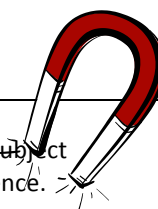
# Bishop Stopford's School Curriculum Overview

## Year 8 – Science

	Curriculum Content	Skill Content
Half Term 1	Forces – Contact Forces, Pressure	Researching and Planning an experiment
Half Term 2	Matter – Elements, The Periodic Table	Writing a risk assessment and carrying out experiments safely
Half Term 3	Organisms – Breathing, Digestion	Making and recording observations
Half Term 4	Reactions – Types of Reaction, Chemical Energy	Recording results
Half Term 5	Electromagnets – Magnetism, Electromagnets	Drawing graphs
Half Term 6	Ecosystems – Respiration, Photosynthesis	Interpreting and analysing data to draw conclusions
	Earth -Climate, Earth Resources	Critically evaluating experimental methods
	Energy – Work, Heating & Cooling	
	Genes – Evolution, Inheritance	
	Waves – Wave effects and properties.	



Examples of Home Learning Tasks	Creating models of scientific ideas; Writing lab reports before and after an experiment;
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment complete in lessons.
Equipment That Students Need	Pen; Blue or black and green, pencil, ruler, eraser, sharper, calculator. Recommended; highlighter pens, colour pencils, red pen.
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Extra-curricular Opportunities	Science trips to be confirmed.

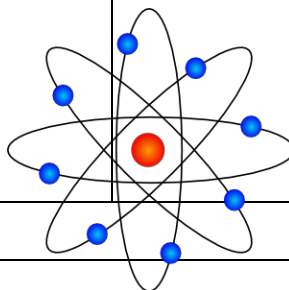



Who do I contact	Miss E Healy – Head of Science	<a href="mailto:ehaley@bishopstopfords.enfield.sch.uk">ehaley@bishopstopfords.enfield.sch.uk</a>
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# Bishop Stopford's School Curriculum Overview

## Year 9 – Science (GCSE)

Subject	Curriculum Content			Skill Content
	Biology	Chemistry	Physics	
Half-Term 1	Cell Biology	Atoms and Periodic Table	Energy	<p>Understand how methods develop over time.</p> <p>Appreciate the power and limitations of Science.</p> <p>Evaluate risks both in practical science and wider societal context.</p> <p>Explain every day and technological applications of Science.</p> <p>Develop hypotheses and plan experiments to explore phenomena.</p>
Half Term 2	Organisation	Bonding and Structure	Electricity	
Half Term 3				
Half Term 4				
Half Term 5	Infection and Response	Chemistry of the Atmosphere	Particle Model	
Half Term 6				



Exam Board & Specification	AQA Combined Science 8464	
Examples of Home Learning Tasks	Kerboodle; Seneca Learning; Google Classroom; Tassomai	
Assessment Tasks, Methods & Frequency	End of topic tests ( 3 to 5 weeks) End of term assessment. Subject assessment complete in lessons.	
Equipment That Students Need	Pen; Blue or black and green, pencil, ruler, eraser, sharper, calculator. Recommended; highlighter pens, colour pencils, red pen.	
Parents / Carers can help their child by:	Helping with research home works, asking student to explain what they have learnt in subject And by quizzing student when revision is set for end of topic test using BBC bitesize science.	
Useful Websites	BBC Bitesize KS3 Science: <a href="http://www.bbc.co.uk/education/subjects/zng4d2p">http://www.bbc.co.uk/education/subjects/zng4d2p</a>	
Extra-curricular Opportunities	Science trips to be confirmed.	
Who do I contact	Miss E Healy – Head of Science	

# Bishop Stopford's School Curriculum Overview

## Year 10 – Combined Science (GCSE)

Subject	Curriculum Content			Skill Content
	Biology	Chemistry	Physics	
Half-Term 1	Bioenergetics	Chemical Changes	Atoms and Radiation	Understand how methods develop over time.
Half Term 2		Energy Changes	Waves	
Half Term 3	Inheritance, Variation and Evolution	Rates of Reaction		Magnets and Electromagnetism
Half Term 4		Chemical Analysis		
Half Term 5	Ecology			Evaluate risks both in practical science and wider societal context.
Half Term 6				
How is Science taught?	Students are grouped into sets based on their performance in Year 9. Decisions on final tiers of entry will not be made until Year 11.			Explain everyday and technological applications of Science.
				Develop hypotheses and plan experiments to explore phenomena.

Exam Board & Specification	AQA Combined Science 8464		
Examples of Home Learning Tasks	Students will be expected to use a variety of online learning platforms to support their home learning these will include; Kerboodle; Seneca Learning; Google Classroom; Tassomai		
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment completed in lessons.		
Equipment That Students Need	Pen; Blue or black and green, pencil, ruler, eraser, sharper, calculator. Recommended; highlighter pens, colour pencils, red pen.		
Parents / Carers can help their child by:	Helping with research home works, asking student to explain what they have learnt in subject And by quizzing student when revision is set for end of topic test using BBC bitesize science.		
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Extra-curricular Opportunities	Science trips to be confirmed.		

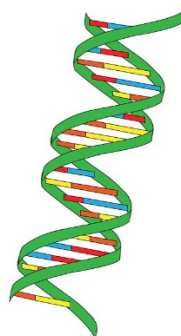


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# Bishop Stopford's School Curriculum Overview

## Year 10 – Biology (GCSE)

	Curriculum Content	Skill Content
Half Term 1	Bioenergetics	Understand how methods develop over time.
Half Term 2	Inheritance, Variation and Evolution	Appreciate the power and limitations of Science.
Half Term 3		Evaluate risks both in practical science and wider societal context.
Half Term 4		Explain everyday and technological applications of Science.
Half Term 5		Develop hypotheses and plan experiments to explore phenomena.
Half Term 6	Ecology	
How is Biology Taught?	All students who excelled in their end of Year 9 examinations are now following the Single Science Pathway (Triple Science).	



Exam Board & Specification	AQA Biology 8461
Examples of Home Learning Tasks	Students will be expected to use a variety of online learning platforms to support their home learning these will include; Kerboodle; Seneca Learning; Google Classroom; Tassomai
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment completed in lessons.
Equipment That Students Need	Pen; Blue or black and green, pencil, ruler, eraser, sharper, calculator. Recommended; highlighter pens, colour pencils, red pen.

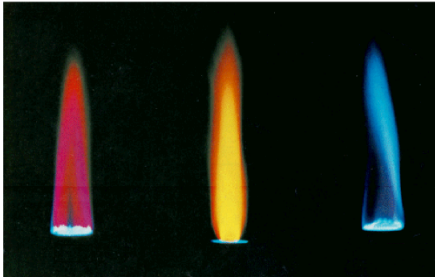
Parents / Carers can help their child by:	Helping with research home works, asking student to explain what they have learnt in each subject and by quizzing student when revision is set for end of topic test using BBC bitesize science.
Useful Websites	BBC Bitesize KS3 Science: <a href="http://www.bbc.co.uk/education/subjects/zng4d2p">http://www.bbc.co.uk/education/subjects/zng4d2p</a>
Extra-curricular Opportunities	Science trips to be confirmed.

Who do I contact	Miss E Healy – Head of Science	<a href="mailto:ehealy@bishopstopfords.enfield.sch.uk">ehealy@bishopstopfords.enfield.sch.uk</a>
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# Bishop Stopford's School Curriculum Overview

## Year 10 – Chemistry (GCSE)


	Curriculum Content	Skill Content	
Half Term 1	Chemical Changes	Understand how methods develop over time.	
Half Term 2		Appreciate the power and limitations of Science.	
Half Term 3		Evaluate risks both in practical science and wider societal context.	
Half Term 4		Rates of Reaction	Explain everyday and technological applications of Science.
Half Term 5		Chemical Analysis <sup>33</sup>	Develop hypotheses and plan experiments to explore phenomena.
Half Term 6			
How is Chemistry Taught?		All students who excelled in their end of Year 9 examinations are now following the Single Science Pathway (Triple Science).	

Exam Board & Specification	AQA Chemistry 8462
Examples of Home Learning Tasks	Students will be expected to use a variety of online learning platforms to support their home learning these will include; Kerboodle; Seneca Learning; Google Classroom; Tassomai;
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment complete in lessons.
Equipment That Students Need	Pen; Blue or black and green, pencil, ruler, eraser, sharper, calculator. Recommended; highlighter pens, colour pencils, red pen.
Parents / Carers can help their child by:	Helping with research home works, asking student to explain what they have learnt in subject And by quizzing student when revision is set for end of topic test using BBC bitesize science.
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Extra-curricular Opportunities	Science trips to be confirmed.

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# Bishop Stopford's School Curriculum Overview

## Year 10 – Physics (GCSE)

	Curriculum Content	Skill Content	
Half Term 1	Atoms and Radiation	Understand how methods develop over time.	
Half Term 2		Appreciate the power and limitations of Science.	
Half Term 3		Waves	Evaluate risks both in practical science and wider societal context.
Half Term 4			
Half Term 5		Magnets and Electromagnetism	Explain everyday and technological applications of Science.
Half Term 6			
How is Physics Taught?		All students who excelled in their end of Year 9 examinations are now following the Single Science Pathway (Triple Science).	Develop hypotheses and plan experiments to explore phenomena.

Exam Board & Specification	AQA Physics 8463
Examples of Home Learning Tasks	Students will be expected to use a variety of online learning platforms to support their home learning these will include; Kerboodle; Seneca Learning; Google Classroom; Tassomai;
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment complete in lessons.
Equipment That Students Need	Pen; Blue or black and green, pencil, ruler, eraser, sharper, calculator. Recommended; highlighter pens, colour pencils, red pen.
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Extra-curricular Opportunities	Science trips to be confirmed.

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# Bishop Stopford's School Curriculum Overview

## Year 11 – Combined Science (GCSE)

Subject	Curriculum Content			Skill Content
	Biology	Chemistry	Physics	
Half-Term 1	Homeostasis	Quantitative Chemistry	Forces and Motion	Understand how methods develop over time.
Half Term 2				Appreciate the power and limitations of Science.
Half Term 3	Paper 1 Recap	Organic Chemistry	Paper 1 Recap	Evaluate risks both in practical science and wider societal context.
Half Term 4				Explain everyday and technological applications of Science.
Half Term 5	Paper 2 Recap	Using Resources	Paper 2 Recap	Develop hypotheses and plan experiments to explore phenomena.

Exam Board & Specification	AQA Combined Science 8464
Examples of Home Learning Tasks	Kerboodle; Seneca Learning; Google Classroom; Tassomai
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment complete in lessons.
Equipment That Students Need	Pen; Blue or black and green, pencil, ruler, eraser, sharper, calculator. Recommended; highlighter pens, colour pencils, red pen.

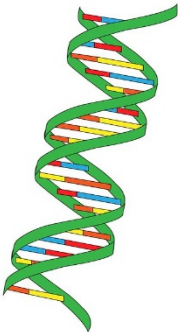


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Extra-curricular Opportunities	Science trips to be confirmed.

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# Bishop Stopford's School Curriculum Overview

## Year 11 – Biology (GCSE)

	Curriculum Content	Skill Content
Half Term 1		Understand how methods develop over time.
Half Term 2		Appreciate the power and limitations of Science.
Half Term 3		Evaluate risks both in practical science and wider societal context.
Half Term 4		
Half Term 5		Explain everyday and technological applications of Science.  Develop hypotheses and plan experiments to explore phenomena.

Exam Board & Specification	AQA Biology 8461
Examples of Home Learning Tasks	Kerboodle; Seneca Learning; Google Classroom; Tassomai
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment complete in lessons.
Equipment That Students Need	Pen; Blue or black and green, pencil, ruler, eraser, sharper, calculator. Recommended; highlighter pens, colour pencils, red pen.

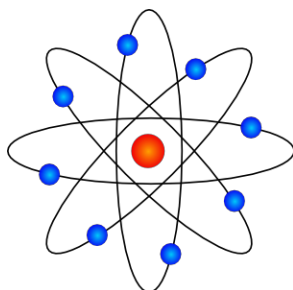
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Extra-curricular Opportunities	Science trips to be confirmed.

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# Bishop Stopford's School Curriculum Overview

## Year 11 – Chemistry (GCSE)

	Curriculum Content	Skill Content
Half Term 1	Quantitative Chemistry	Understand how methods develop over time.
Half Term 2	Organic Chemistry	Appreciate the power and limitations of Science.
Half Term 3	Using Resources	Evaluate risks both in practical science and wider societal context.
Half Term 4		Explain everyday and technological applications of Science.
Half Term 5		Develop hypotheses and plan experiments to explore phenomena.



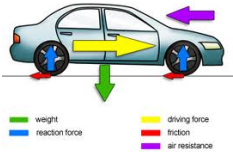
Exam Board & Specification	AQA Chemistry 8462
Examples of Home Learning Tasks	Kerboodle; Seneca Learning; Google Classroom; Tassomai
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment complete in lessons.
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# Bishop Stopford's School Curriculum Overview

## Year 11 – Physics (GCSE)

	Curriculum Content	Skill Content
Half Term 1	Forces and Motion  	Understand how methods develop over time.
Half Term 2		Appreciate the power and limitations of Science.
Half Term 3		Evaluate risks both in practical science and wider societal context.
Half Term 4		Explain everyday and technological applications of Science.
Half Term 5		Develop hypotheses and plan experiments to explore phenomena.

Exam Board & Specification	AQA Physics 8463
Examples of Home Learning Tasks	Kerboodle; Seneca Learning; Google Classroom; Tassomai
Assessment Tasks, Methods & Frequency	End of topic tests (3 to 5 weeks) End of term assessment. Subject assessment complete in lessons.
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