

# University of Birmingham School Curriculum Outline

---

## Year 9



# Year 9 Curriculum Outline 2017-18

Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
<b>English</b>					
<p><b>Class reader: <i>Of Mice and Men</i>.</b> We read this classic novella by Steinbeck together, exploring context and identifying and analysing the author's literary and narrative techniques, applying them to our own writing.</p>	<p><b><i>Of Mice and Men cont.</i></b> We continue to develop analytical skills and essay writing.</p> <p><b>Reading and writing fiction:</b> Victorian Villains (Extract analysis of a range of Victorian classics and nonfiction extracts)</p>	<p><b>Modern Drama: <i>The Curious Incident of the Dog in the Nighttime</i>.</b> The play of Mark Haddon's modern classic, used to develop skills in writing about modern drama: its context, its dramatic impact and its structure.</p>	<p><b>Poetry:</b> A range of poems from a range of periods and cultures are explored and analysed and their impact compared.</p>	<p>We spend a term analysing and comparing non-fiction text extracts from classic and contemporary sources: ( e.g. Touching the Void, Orwell, Steinbeck, Captain Scott)</p>	<p><b>Shakespeare:</b> We explore and analyse Shakespeare's language and the genre of comedy through study of <i>Much Ado about Nothing</i>, focusing upon performance and dramatic impact through staging choices</p>
<b>Mathematics</b>					
<p><b>Algebra 1</b> - Simultaneous equations <b>Number 1</b> - standard form <b>Shape 1</b> - geometrical reasoning</p>	<p><b>Data 1</b> – representing and analysing bivariate data <b>Shape 2</b> - locus <b>Number 2</b> – recurring decimals <b>Undecided project</b></p>	<p><b>Algebra 2</b> – sequences and nth term rules <b>Using and applying – proof</b> <b>Number 3</b> – laws of indices <b>Undecided project</b></p>	<p><b>Algebra 3</b> – multiplying brackets <b>Shape 3</b> – trigonometry</p>	<p><b>Number 4</b> – rounding, trial and improvement <b>Data 2</b> – averages <b>Shape 4</b> – transformations <b>Transformation project</b></p>	<p><b>Number 5</b> – ratio and proportion <b>Algebra 4</b> – Matrix arithmetic <b>Shape 5</b> – arc lengths and sector areas</p>
<b>Art</b>					
<p><b>Idea sheet:</b> Anatomical art is introduced and studies of Leonardo da Vinci's skull are made. Links to this art work's purpose are made and more contemporary artists are also introduced.</p> <p><b>Observational studies:</b> Students will have guidance on portraiture</p>		<p><b>Artists study:</b> Students will study a 2D and 3D artist, learning from their work and imitating their style. They will create their own 2D, mixed media piece as well as a clay 3D piece, both in response to the artists studied.</p>		<p><b>Final outcomes:</b> Students will select areas of their project that have been most successful and begin to plan their more independent outcome. Success will depend on their links to prior learning over the year, their skill execution and the ideas that they come up with.</p> <p>Their end of year assessment will be their final outcome.</p> <p>If we have any time left! We hope to set students off in groups to create a 'zine'!</p>	

Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
<b>Biology</b>					
<p><b>Organisation:</b> Tissues, organs and organ systems in humans</p> <p>Find out about the structure and function of lungs, heart, blood vessels and blood. Develop your scientific writing skills by using your new knowledge and vocabulary to explain how the lungs are adapted for their function.</p>	<p><b>Health and disease:</b> Risk factors for non-communicable diseases &amp; cardiovascular disease</p> <p>Learn about risk factors associated with non-communicable diseases such as coronary heart disease and find out about the latest advances in modern medicine.</p>	<p><b>Infection and response:</b> Fighting disease</p> <p>Find out about the fascinating world of pathogens &amp; discover what your body does to defend itself from being infected by them</p>	<p><b>Infection and response continued:</b> Drug development.</p> <p>Learn how vaccinations work and discover how new drugs are being developed to fight disease. Develop your analysis skills by Interpreting data on vaccination rates and reported cases of disease such as the MMR vaccine.</p>	<p><b>Cell biology:</b> Cell structure, differentiation, specialisation and microscopy.</p> <p>Find out about prokaryotes and eukaryotes. Then develop your practical skills by staining, viewing and drawing cells down a microscope. Learn about other more powerful microscopes that are available for scientists to use and think about how this has helped biologist understand more about the structure of a cell.</p>	<p><b>Organisation:</b> Human digestive system and enzymes</p> <p>Discover how your body uses enzymes to break down (digest) your food. Then learn how to do laboratory tests to detect fats, carbohydrates and proteins in the food you eat.</p>
<b>Chemistry</b>					
<p><b>Atomic Structure 4.1.1</b> Atomic model, development of atomic model, electronic structure of first 20 elements. (Not 4.1.2 Periodic Table)</p>	<p><b>Bonding 4.2.1 (and relevant sections from 4.2.2)</b> Ionic bonding &amp; properties, covalent bonding &amp; properties, metallic bonding &amp; properties</p>	<p><b>Salt Preparations 4.4.2 (+ Required Practical)</b> Acid + metal, neutralisation of acid, crystallisation of soluble salts</p>	<p><b>Salt preparations 4.4.2</b> Acid + metal, neutralisation of acid, crystallisation of soluble salts</p> <p><b>Ion Tests 4.8.3</b> Flame tests for metal ions, hydroxides, carbonates, halides, sulfates, instrumental methods and flame emission spectroscopy</p>	<p><b>Ion Tests (+ Required Practical)</b> Flame tests for metal ions, hydroxides, carbonates, halides, sulfates, instrumental methods and flame emission spectroscopy</p>	

Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
<b>Computer Science</b>					
<p><b>Sequencing, selection and variables in python.</b> In year 8 students learned about small basic. This unit will take the knowledge gained in year 8 from small basic and translate it into python.</p>	<p><b>ASCII and recapping binary</b> ASCII is how the computer stores letters using binary. Students will get an understanding that everything on a computer is stored using a clever sequence of 1 or 0.</p> <p><b>Introduction to machine learning</b> This is a short unit looking at how AI is changing the way we view computing. Students will explore different AI's and look at some of the basic concepts of machine learning.</p>	<p><b>Iteration in python</b> In programming there are three main elements which make up almost every program. Variables, selection and iteration. In this unit students will learn how to make their code repeat which will allow them to develop more advanced programs and solve harder problems.</p>	<p><b>Protecting your data</b> This unit will explore how data is encrypted online. Students will get a practical look at how messages are hidden, the different ways they can be hidden and ways to break simple encryption.</p> <p><b>Images</b> In this unit students will learn how binary can be used to save something as complex as an image. They will understand how an image is made up of pixels, what image resolution means and how colour is represented by the computer.</p>	<p><b>Legal and ethical aspects of CS</b> Students will find themselves debating some of the big issues of the day. Who owns your data? Is it right for government to be able to read your email? Should end to end encryption be banned?</p>	<p><b>Revision and end of year assessment</b> The end of year assessment will be split over two sessions. The first will explore theory whilst the second will be a practical programming task.</p> <p><b>Project</b> Make your own python app</p>
<b>DT</b>					
<p><b>Rotation between:</b></p> <p><b>1.Portfolio skills &amp; storage unit project</b> - Design and make small flat pack personal storage unit using MDF</p> <p style="text-align: center;"><b>or</b></p> <p><b>2.Portfolio skills</b> - 3D CAD / CAM - Design brief, target market, user needs / wants - Product analysis – ACCESSFM. Sketch up / Solid</p>					
<b>Geography</b>					
<p><b>Energy and Climate Change</b> Students will study a range of fossil fuels and renewable energies and the implication of our consumption on our world.</p>		<p><b>The Water Cycle (Rivers and Coasts)</b> Students study how water changes the land. They will explore the processes that create river and coastal landforms They will understand the impacts of flooding and how to manage these constantly changing landscapes.</p>		<p><b>Globalisation</b> Students study the factors that have led to globalisation rapidly evolving over the last 60 years. They will learn about the movement of capital, goods and people and how their individual decisions can have a global impact</p>	

Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
<b>History</b>					
<p><b>How similar was WW2 to WW1?</b> Pupils will look at the causes, weapons, tactics and consequences of both World Wars to assess their similarities. They will look at the war both at home and on the battlefield in constructing their argument.</p>	<p><b>Why was Hitler able to kill so many Jews?</b> The Holocaust saw the death of millions of Jews, yet Historians cannot agree on the reasons why Hitler was able to kill so many. Pupils will look at the roles played by SS officers, the role played by Jews working in camps, in the role played by foreign governments and in the role played by the German voter to see which they think played the greater part.</p>	<p><b>How far was the post-War Labour government radical?</b> After the Second World War the Attlee Government promised change. They created a free health service, they created the welfare state and aimed to create a fairer society. Yet pupils will assess if this really was as radical as it sounds.</p>	<p><b>How significant was the Cold War?</b> The Cold War saw the world come to the brink of nuclear destruction. Yet the significance of the Cold War is open to debate and students will explore the significance of the war at the time and today to assess how significance they think it is.</p>	<p><b>Did things get better under Tony Blair?</b> In 1997 Tony Blair promised that under his Labour Government that "things can only get better". Students will look at the policies at home (such as the PFI building programme, social policies and peace in Northern Ireland) and abroad (such as the Iraq &amp; Afghanistan Wars) to reach their own judgement.</p>	<p><b>How has Birmingham, Britain and the World changed over the last 1000 years?</b> After studying the big questions over the last three years pupils are going to pull their narrative together to reach conclusions.</p>
<b>Modern Languages</b>					
<p><b><u>Le monde des médias</u></b> <b>Entertainment and advertising</b> Television programmes Musical genres and giving extended opinions on music Film genres and film reviews Reading preferences Understand and use the language of advertising</p>	<p><b><u>Accro à la technologie</u></b> <b>Technology</b> Describe old and new technology How do we use technology for leisure activities? Risks and benefits of social media Pros and cons of new technologies Favourite technology and gadgets</p>	<p><b><u>Rendez-vous</u></b> <b>Parties and festivals</b> <b>Organise a party</b> Suggest activities and make excuses Talk about a festival or event you've been to Use language required in formal situations Talk about traditions and festivals</p>	<p><b><u>Un métier, un rêve!</u></b> <b>Jobs and ambitions</b> Talk about jobs and the qualities needed for different professions Discuss ideal jobs and professions Part-time jobs Discussing success and failure</p>	<p><b><u>French poetry and literature:</u></b> <b>Discovering famous texts and making them your own!</b>  Revision and preparation for end of year exams  End of Year Exams and Reflection</p>	<p><b><u>GCSE Transition Unit</u></b> <b>Preparing for GCSE Languages: What skills will I need to succeed?</b>  An Introduction to GCSE Language skills: Listening, Speaking, Reading, Writing, Grammar and Translation</p>

Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
<b>Music</b>					
Musical Revolutionaries			Playing together: Understanding samba or steel pan	Strange Fruit: Writing music for change	
J.S. Bach	Erik Satie	The Beatles, Beatlemania and the rise of the celebrity			
<b>PE</b>					
<b>Lacrosse</b> or <b>Contact Rugby</b>	<b>Basketball</b> or <b>Hockey</b>	<b>Conditioning</b> or <b>Aesthetics</b>	<b>Athletics</b> or <b>Netball</b>	<b>Softball</b> or <b>Tennis</b>	<b>Making informed choices</b> <b>project</b>
<b>Physics</b>					
<b>Maths for GCSE Physics</b> Develop the calculation, algebra and graphing skills necessary to confidently and successfully tackle GCSE Physics.	<b>Motion</b> Describe motion using precise Physics language. Measure and calculate speed and acceleration in a range of situations, including the use of light gates with dataloggers. Analyse motion graphs.	<b>Newton's laws</b> Apply Newton's famous laws to a range of situations, using your knowledge of forces and motion. Describe the motion of a skydiver and a car doing an emergency stop in more detail.	<b>Circuit electricity</b> Develop a more advanced understanding of electricity, experiment with light and temperature sensors, and find out about the ingenious safety features in our homes.	<b>Circuit electricity (continued)</b>	<b>Introduction to GCSE required practicals</b> You will complete your first real GCSE required practical and write-up, with plenty of support.
<b>Religious Studies</b>					
<b>Ethics</b>  <b>Big question:</b> Does religion provide the best guidance with modern ethical issues?  <b>Content outline:</b> introduction to ethics, equality, life and death	<b>Religion and conflict</b>  <b>Big question:</b> Is it ever ok to end a life?  <b>Content outline:</b> just war, pacifism, aid, Holocaust studies, Israel/Palestine conflict, religion and conflict in the media		<b>Philosophy</b>  <b>Big question:</b> Can we ever prove God exists?  <b>Content outline:</b> problem of evil, arguments for God's existence, faith and proof		<b>Science and Religion</b>  <b>Big question:</b> Does science undermine belief in God?  <b>Content outline:</b> creationism, cyclic world, evolution, Big Bang theory, humanism and atheism