Countesthorpe Leysland Community College

KEY STAGE 3 CURRICULUM
2016 / 2017

Table of Contents

Key Stage 3 Curriculum Overview

The Curriculum is at the heart of the learning experience at CLCC. We want students to leave us equipped to succeed. We ensure there is a clear focus on core subjects alongside ensuring students have quality learning experiences in the Arts, Humanities, Languages and PE. Students' learning is further enhanced through a PSHE and Citizenship programme which builds skills needed as students move onto the next stage in their education.

In Year 7 and 8 students are provided with the foundations that they need to succeed at GCSE. Students at CLCC work towards GCSE courses in Year 9 so that when they make their option choices they are well informed about the skills needed in each subject and what they will be learning.

In Years 10 and 11, we offer a wide choice of GCSE and BTEC courses alongside more vocational courses and the offer can be personalised depending on the skills and aptitude of the individual student. Beyond 16 the College offers AS, A2 Level and BTEC courses alongside a core curriculum.

Please take some time to look at what each subject covers in each year group and if you have any questions then please do not hesitate to contact us.

Art

Year 7 Overview

Colour theory and landscape painting

Year 8 Overview

- Perspective, three dimensional form and tonal recession paintings.
- Observational drawings and still life paintings based on Cubism.
- Observational drawings and still life paintings based on the work of Roy Lichenstein

Year 9 Overview

- Symmetry in Art and self portraits.
- Portraits using Paint.net based on the work of Julian Opie.

Computer Science/ICT

Year 7 Overview

In Year 7, students will develop a knowledge and understanding of ICT and Computer Science. There will be more emphasis on ICT as students will need to familiarise themselves with E-Safety and the new IT infrastructure and use these facilities for the majority of their subjects. The curriculum provided is there to help students develop their practical skills which can be used academically to complete work and assist with ICT related homework. The list below shows an overview of the schedule of the year 7 curriculum.

Autumn Term

7.1 - Using Computers Safely

Spring Term

7.2 – Games Programming in Scratch (Computer Science) 7.3 – Spreadsheet Modelling

Summer Term

7.4 – Database Development 7.5 Control Systems with Flowol

Year 8 Overview

In Year 8, students will learn two Computer Science topics to further consolidate their Computer Science subject knowledge. There is still an emphasis on using ICT as these skills will be utilised further on in student careers. The topics in the Year 8 curriculum encourages students to be more creative and raise awareness of current Computing trends. The list below shows an overview of the schedule of the Year 8 curriculum.

Autumn Term

HTML and website development (Computer Science)

Spring Term

8.2 - Programming with Game Maker
8.3 - Introduction to Python (Computer Science)

Summer Term

8.4 - Computer Crime and Cyber Security 8.5 - Graphics

Year 9 Overview

In Year 9, the emphasis is moved away from ICT and pushed towards Computer Science. This is to distinguish the two main subject areas so students who want to pursue one of the courses on offer in key stage 4, they are able to select a suitable one by clearly knowing the differences between the two. The curriculum provided is to enable students to develop and refine their knowledge and understanding by providing suitable topics necessary in both subject fields. The list below shows an overview of the schedule of the Year 9 curriculum.

Autumn Term

9.1 - Python Next Steps (Computer Science)

Spring Term

9.2 - Introduction to coding through Kodu 9.3 - Sound Manipulation in Audacity

Summer Term

9.4 – Networks (Computer Science) 9.5 - Binary, Denary & Logic Gates (Computer Science)

Design

Year 7 Overview

Projects in Year 7 build upon work covered in the design and technology curriculum at key stage 2, and have the aim of developing a secure foundation of designing and making skills.
The attainment level is an average of all the levels recorded during Design and Technology projects.

All pupils will have completed the following courses by the end of year 7:-

Resistant Materials – Foundation Course
Pupils develop their practical skills, knowledge and understanding of wood, metal and plastics by making a pencil holder, spoon and mini photo-frame.Electronics – System & Control
Pupils learn about basic electronic components and circuits, gaining an understanding of industrial processes by building a fuse tester circuit and making a vacuum formed case to house it.

Food Technology
Pupils learn about hygiene, food safety and healthy eating. They develop their practical skills and creativity by designing, making and evaluating a variety of food products.

Textiles Technology
Pupils develop their knowledge and understanding of textile construction, techniques and processes, including dyeing, pattern making, hand and machine sewing. They use these experiences to design and make a simple product.

Year 8 Overview

Projects in Year 8 build upon work covered in Year 7 and have the aim of preparing pupils for the standard and style of work expected for GCSE's.
All pupils will complete the following courses:-

Resistant Materials
Pupils develop their woodworking skills and knowledge of mechanisms by designing and making an automata.

Textiles Technology 1 - 'Design a souvenir for Twycross Zoo'.
Pupils develop their knowledge and understanding of textile techniques by designing and printing a length of textile inspire by animals.

Textiles Technology 2 'Design a souvenir for Twycross Zoo'.
Pupils develop their knowledge and understanding of textile techniques by designing and making a fabric based product to sell in the Twycross Zoo shop.
Food Technology

Students develop their practical skills and knowledge of kitchen safety and food hygiene by making a range of food products. They develop their knowledge of the nutrients and healthy eating by designing, making and evaluating a 'salad meal in a jar' for a target group of their choice.

Throughout the year pupils are assessed through key pieces of work. The assessment shown on students' reports represent the current working at flightpath that your child is working to.

Year 9 Overview

Projects in Year 9 develop pupils' designing and making skills in order to prepare them for their GCSE work and also give them an understanding of products, manufacturing in the wider world and cultural/stylistic influences.

Product Design

1. Students research The Space Centre and The King Richard III visitor centre and design a keyfob that could be sold in their gift shop. They then cast a prototype keyfob out of Pewter and decorative it using a range of Silversmithing techniques.
2. Students learn industrial CAD techniques to make woodworking joints and then progress to make joints using traditional woodworking methods in the workshop.

Textiles Technology

Students develop their knowledge and understanding of textile techniques and develop their designing and practical skills. Students design and make a fleece hat for a specific target market.

Food Technology

Students develop their practical skills, knowledge of a balanced diet and kitchen safety. They make a range of food products. They research the nutritional requirements of a specific target market and plan, make and evaluate a suitable meal for them.

Drama

Year 7 Overview

Drama is a life skill and a creative art form. It helps pupils develop their ability to use voice, movement, gesture and facial expression, in acting, mime, dance drama and improvisation. They can express and manage their thoughts and feelings – shared and experienced – while working in a safe and controlled environment. The development of these skills encourages self confidence and self awareness. It promotes the development of the individual in a group context: roles and ideas are negotiated, problems solved and decisions made together. Drama often leads to performance for a wider audience.

Autumn Term

The Breakfast Room
Introduction to drama and performance skills. Basic techniques are explored and students perform a devised performance assessment

Skills:

- Still-image
- Thought-track
- Hot-seating
- Working in role
- Teacher in Role
- Improvisation
- Working from picture stimulus

Spring Term

Pantomime
Development of interpretation of text and character. Students create a script based assessment piece.

Skills:

- Performing from a script
- Lighting
- Sound
- Characterisation
- Transition
- Narration
- Multi-role

Summer Term

Mime and Physical Theatre

Development of physical and non verbal communication skills. Students develop a devised assessment performance
Skills:

- Mime
- Physical Theatre
- Body as a Propwhat
- Facial Expression
- Body Language
- Gesture
- Evaluation

Year 8 Overview

In an increasingly competitive world, speech and communication skills are becoming more important. During Year 8 Drama students gain self-confidence and a greater capacity to express their opinions and beliefs. Drama enables pupils to explore, develop and express ideas and concepts which will help them make sense of reality. The three schemes of learning we explore over the year all build on the knowledge and expertise gained in Year 7; encouraging students to take more ownership of the work created.

Autumn Term

Darkwood Manor
Assessing:

- Use of Techniques
- Performing as a Character
- Group Skills

Skills-

- Characterisation
- Teacher in Role
- Hot Seating
- Body Language
- Facial Expression
- Whole Group Improvisation
- Mime
- Narration

Spring Term

Room 13 & Dramatic Tension
Assessing:

- Performing as a Character
- Use of Techniques

Skills:

- Performing from a script
- Lighting
- Sound
- Characterisation
- Transition
- Narration
- Multi-role
- staging
- Ground plans

Summer Term

Silent Movies
Assessing:

- Performing as a Character
- Use of Techniques

Skills:

- Physical Theatre
- Characterisation
- Exaggeration
- Facial Expressions
- Body Language
- Freeze-frame Narration

Year 9 Overview

In order to prepare students for success in KS4 the department are also aligning with the GCSE assessment objectives for the Year 9 assessment scheme.

AO1: Create and develop ideas to communicate meaning for theatrical performance
AO2: Apply theatrical skills to realise artistic intentions in live performance
AO3: Demonstrate knowledge and understanding of how drama and theatre is developed and performed
AO4: Analyse and evaluate their own work and the work of others.

The KS3 curriculum has been designed to follow the same structure of the Eduqas GCSE delivered in KS4 which has 3 components:

1. Devising Drama
2. Performing from a Text
3. Interpreting Theatre

At key stage 3 students will receive one hour of Drama per fortnight. Term 1 scheme of work covers component 1, Term 2: component 2 and Term 3 component 3.

Autumn Term

Todd

Assessing:

- Use of Techniques
- Performing as a Character
- Staying in Role
- Group Skills
- Responding to Ideas and Performances

Skills:

- Symbolism
- Non-naturalistic performance
- Minimalism
- Gesture
- Use of movement
- Using drama to explore issues
- Devising from stimuli
- Lighting
- Tempo-rhythm
- Sound and music
- Tech cue sheets

Spring Term

Macbeth

Assessing:

- Use of Techniques
- Performing as a Character

Skills:

- Still images
- Improvisation
- Artaud's use of sound
- Mime
- Subtext
- Split screens

- Vocal aspects
- Power relationships
- Exploring thematic trends
- Physical theatre

Summer Term

The White Rose

Assessing:

- Staying in Role
- Group Skills

Skills:

- Symbolism
- Non-naturalistic performance
- Minimalism
- Gesture
- Use of movement
- Using drama to explore issues
- Devising from stimuli
- Placards
- Brechtian style

English

Year 7 Overview

During Year 7 students cover a range of work including autobiographical, narrative and letter writing. They also read and write Poetry. They study A Midsummer Night's Dream and read a class novel. They continue to develop their own independent reading with their Reading Record, for which they should be reading at least five books a term. Students have regular spelling tests and focus on Grammar skills throughout the year. In Spoken English they take part in a class debate or make a presentation to the class.

Autumn Term

Autobiographical Writing
A Midsummer Night's Dream
Poetry Writing: Senses
Book Talks

Spring Term

Essay Writing/ Debates: Computer Games
Letter Writing Unit Class Novel: Millions/Skellig

Summer Term

Narrative Writing: Imaginary World (Fantasy genre)
Poetry Unit Literature unit: Prose & Drama

Year 8 Overview

During Year 8 students cover a range of work including persuasive and narrative writing. They also read and write a selection of Mysterious poems. Students complete a unit of work based on Sherlock Holmes and the detective genre. All pupils read at least two class novels. In addition, they research a classic author from our Literary Heritage. They continue to develop their own independent reading with their Reading Record, for which they should be reading at least five books a term. Students have regular spelling tests and focus on Grammar skills throughout the year. In Spoken English they complete a unit of work on Group Discussion skills.

Autumn Term

Autobiographical Writing
Mysterious Poems
Sherlock Holmes: Narrative Writing (Detective genre)
Spoken English: Group Discussion

Spring Term

Class Novel: Private Peaceful
Literary Heritage: Author Research
Media Studies: Advertising

Summer Term

Persuasive Writing Class Novel: Blood Sinister/ Wonder

Year 9 Overview

During Year 9 students follow a combined course in English and English Literature, as an introduction to GCSE.

English Language work involves the development of the following skills:

- Reading: both non-fiction and fiction, for research purposes, for information, for critical analysis and as part of a group activity.
- Writing: to convey information and demonstrate writing skills in a variety of formats: creative and imaginative prose, journal or diary entries, transactional writing such as letters, articles and speeches and essay writing.
- Spoken English: to speak fluently with appropriate vocabulary and expression, to be an active listener and be able to respond to questions, to work effectively in groups, to offer convincing arguments and to present information clearly.

In English Literature students study a range of drama, poetry and fiction texts, ranging from Shakespeare to contemporary literature. They develop analytical skills to enable them to approach texts critically. They will explore key areas such as themes, characters, relationships, narrative structure and context. They will also acquire, understand and apply literary terminology to inform their analysis

Autumn Term

Autobiographical Writing: GCSE Creative Prose
Blood Brothers: Literature text
Gothic Writing: GCSE Creative Prose
Jekyll & Hyde/A Christmas Carol: GCSE Literature text

Spring Term

War Poetry (from Anthology): GCSE Literature text
Introduction to GCSE: Component 2, Section A – 19/ 20th century Non-Fiction texts compared to 21st century texts
Of Mice and Men: Literature text
Introduction to GCSE: Component 1, Section A – Reading 20th Century Literature

Summer Term

Love Poetry (from Anthology): GCSE Literature text Romeo & Juliet: Literature text

French

Year 7 Overview

In Year 7, students learn to talk about themselves and describe others and give information about their school, where they live and where they go on holiday. Through these topics students are able to use present tense verbs and opinions, and begin to use the past tense.

Autumn Term

1. Mon autoportrait – likes/dislikes, describing self and others, physical descriptions and personality.

2. Mon collège – school subjects, opinions and reasons, the school day, food items and a comparison of French and British schools.

Spring Term

3. Mes passetemps – technology, sports and activities, weather, what they like to do at the weekend.

4. Ma zone – describing where they live, places in the town, directions, making plans for the weekend, things you can do in a town.

Summer Term

5. 3… 2… 1 Partez! – holidays, different countries, getting ready, buying things in a café, going to a holiday camp, future plans/dreams.

6. Studio découverte – describing animals, writing a poem, describing a painting.
   Revision of Modules 1-5

Year 8 Overview

In Year 8, students build on their knowledge from Year 7, learning to use past, present and future tenses along with more complex structures and opinions, while developing their translation, comprehension and conversational skills.

Autumn Term

1. T'es branché(e)? – talking about tv shows, films and books, what they do online, what they did last night (perfect tense).

2. Paris, je t'adore! – describing a visit to Paris, regular and irregular verbs, understading information about a tourist attraction, modes of transport, asking questions.

Spring Term

3. Mon identité – describing personality with adjectival agreements, describing relationships, giving opinions on music and clothes.

4. Chez moi, chez toi – describing house and mealtimes, discussing what food to buy, describing a festival or carnival.

Summer Term

5. Quel talent?! – talent and ambition, modal verbs, encouraging or persuading someone, imperatives, superlatives, combining structures and tenses.

6. Studio Découverte – the francophone world, the French Revolution. Revision of Modules 1-5.

Year 9 Overview

Building on knowledge from Years 7 & 8, to build vocabulary, review key tenses and to develop key GCSE skills such as role-play, conversation and translation through GCSE topics in order to continue the course into Years 10 and 11.

Autumn Term

Describing self and family
Relationships
House and home

Spring Term

Food and drink
Shopping for food
Eating habits
Ordering in a restaurant

Summer Term

Shopping for clothes
Festivals and celebrations
Leisure activities Arranging to go out

Geography

Year 7 Overview

In year 7, students largely concentrate on studying human and environmental Geography, and developing their basic map skills. To support this, they study a variety places, mainly at a local and national scale.

Autumn Term

1. Introduction to Geography
2. Map Skills
3. Rivers

Spring Term

1. Population
2. Settlements

Summer Term

1. Local environmental Issues Russia

Year 8 Overview

In year 8 students largely concentrate on physical Geography. It is essential that students learn the importance of accurately explaining the processes that create named landforms. Students also focus on an ability to research, select, interpret and present relevant Geographical information. The students attend a day trip to Dovedale to help them with develop these skills.

Autumn Term

1. Geology
2. Weather and Climate

Spring Term

1. Africa Tectonics

Summer Term

1. Glaciation Tourism

Year 9 Overview

In year 9 students mainly study global geographical issues, with the exception of urban and rural change in the UK. They also study coastal processes as another physical environment. All formal assessed work is given an equivalent GCSE grade. Most units have direct links (highlighted) to the EDUQAS GCSE Geography Spec B and all contain skills and knowledge that is repeated at GCSE

Autumn Term

1. Coasts
2. Newly Industrialised Countries

Spring Term

1. Climate Change Development

Summer Term

1. Urban and rural change in the UK
2. The Middle East

History

Year 7 Overview

The Year 7 History curriculum is designed to give students a solid grounding in skills used by historians in their work whilst studying events, significant individuals and everyday life.

Autumn Term

Anglo-Saxon Life.
The Norman Invasion.
How William I controlled England.

Spring Term

"The Church and Crown" – e.g. Henry II and Thomas Becket, King John and Magna Carta.
Medieval Life including archaeological and historical skills. The Black Death, The Peasants' Revolt, Wars The Roses.
Richard III.

Summer Term

Henry VII.
Henry VIII.
Edward VII.
Mary I.
Elizabeth I.
Much of this term involves the struggles between the Catholic and Protestant Churches in England.

Year 8 Overview

Building on Year 7 skills, in History Year 8 students consolidate and develop historical skills such as source analysis whilst covering the period 1509 – 1945.

Autumn Term

Henry VII.
Henry VIII.
Edward VII.
Mary I.
Elizabeth I.
Much of this term involves the struggles between the Catholic and Protestant Churches in England.

Spring Term

Industrial Britain 1750 – 1900.
Slavery in The Americas Public Protest – e.g. Luddites, Suffragettes.

Summer Term

The First World War – causes, conditions and consequences.
The rise of Hitler.
The Second World War – Causes, the Evacuation of Dunkirk and Key Events.

Year 9 Overview

The Year 9 Curriculum for 2016-17 involved pupils in the study of 20th Century History beginning with The First World War and moving on to study the Rise of Nazism in Germany and the causes of The Second World War and the Evacuation of Dunkirk. In the Spring and Summer term, pupils move onto study Crime and Punishment from 1000 to the present day. This work is at GCSE level and involves the content and skills required for success at the end of KS4

Autumn Term

Causes, conditions, events and consequences of the First World War.
The Treaty of Versailles.
The rise of Nazism in Germany.
Causes of The Second World War. Case study of The Evacuation of Dunkirk

Spring Term

Crime and Punishment in the following periods:-
Anglo-Saxon.
Medieval.
Early Modern.

Summer Term

Pupils continue their study of Crime and Punishment in the following periods:-
Industrial. Modern.

Maths

Year 7 Overview

Stage 7

Autumn Term

- Use the concepts and vocabulary of Highest Common Factor & Lowest Common Multiple.
- Use conventional notation for the priority of operations including brackets, powers, roots and reciprocals.
- Use the four operations applied to integers, positive & negative
- Use/ interpret algebraic notation including brackets.
- Model situations or procedures by translating them into algebraic expressions or formulae.
- Derive and illustrate properties of triangles, quadrilaterals, and other plane figures inc regular polygons.
- Describe sketch & draw using conventional terms & notations: points, lines, parallel, perpendicular lines, right angles, regular polygons, & other polygons that are reflectively and rotationally symmetric.
- Use standard conventions for labelling the sides & angles of triangle ABC.
- Understand & use the relationship between parallel lines & alternate & corresponding angles.
- Describe, Interpret & compare observed distributions of a single variable through appropriate measures of central tendency (mean, median, and mode) and spread (range) including from a table of ungrouped data.Order positive & negative positive and negative integers, decimals & fractions. Use the number line as a model for ordering real numbers. Use the symbols = ≠ < > ≤ ≥

Spring Term

- Round numbers and measures to an appropriate degree of accuracy such as decimal places.
- Derive and apply formulae to calculate and solve problems involving area of trapeziums.
- Use algebraic method to solve linear equations in one variable: 1 step & 2-step including brackets.
- Use the four operations, including formal methods applied to proper & improper fractions (Multiply and divide).
- Identify, describe & construct similar & congruent shapes by considering translation rotation, reflection and enlargement (whole number scale factor).
- Simplify & manipulate algebraic expressions to maintain equivalence by collecting like terms and multiplying a single term over a bracket including proofs.
- Understand & use the concept & vocabulary of expressions, equation and term.
- Substitute numerical values positive & negative into formulae & expressions, including scientific formulae.
- Where appropriate interpret expressions as functions with inputs and outputs.

- Define percentage as 'number of parts out of 100'; Compare two quantities using percentages.
- Express one quantity as fraction/percentage of another. Construct & interpret pie charts.

Summer Term

- Construct and interpret plans & elevations of 3D shapes
- Identify properties (faces, surfaces, edges vertices) of cubes, cuboids, prisms, cylinders, pyramids, cones and spheres.
- Derive and apply formulae to calculate and solve problems involving volume and surface area of cuboids (including cubes).
- Generate terms of a sequence from a term to term rule. Recognise sequences including Fibonacci and geometric.
- Use ratio notation, including reduction to simplest form.
- Understand & use proportion as equality of ratios.
- Divide a given quantity into two parts in a given part: part or part: whole ratio. Express division into two parts as a ratio.
- Recognise, sketch & produce graphs of linear functions (parallel to the axes, y=x and y = -x).
- Use integer powers & associated real roots (square & cube.
- Recognise powers of 2 and 3 and distinguish between exact representations of roots and their decimal approximations.
- Use appropriate language to describe probability, including fairness, randomness, equally and unequally likely outcomes.
- Record & describe the frequency of outcomes on the 0-1 probability scale. Enumerate sets and unions/intersections of sets systematically using Venn diagrams.

Year 8 Overview

Stage 8

Autumn Term

- Use the concepts and vocabulary of prime factorisation including product notation and extend to find HCF & LCM
- Simply & manipulate algebraic expressions by taking out common factors
- Simplify & manipulate algebraic expressions to maintain equivalence by expanding products of two binomials
- Use sum of angles of triangle to deduce the angle sum of any polygon. Derive properties of regular polygons.
- Measure line segments and angles when interpreting maps/ scale drawings/use of bearings
- Estimate the mean and work out the modal/median class interval from a grouped frequency table

- Use the four operations, including formal written methods applied to decimals (Multiply & divide) . Recognise & use relationships between operations including inverses.
- Round numbers and measures to a given number of significant figures. Use approximation through rounding to one significant figure to estimate answers Work interchangeably with terminating decimals and their corresponding fractions

Spring Term

- Calculate circumference & area of circles including composite shapes including in terms of π
- Solve linear equations with the unknown on both sides of the equation, including brackets.
- Know the difference between an equation & an identity
- Plot graphs of linear equations. Find approximate solutions to linear equations using a graph.
- Identify, describe & construct similar shapes by considering enlargement with a fractional scale factor.
- Rearrange simple formulae to change the subject – 1 step & 2-step.
- Substitute positive values into expression/formulae involving powers.
- Solve problems involving percentage change (increase/decrease) – including the use of the multiplier.
- Use compound units such as speed, rates of pay. Change between compound units
- Describe simple mathematical relationships between two variables & illustrate using scatter graphs. Recognise correlation (and know it does not indicate causation). Consider outliers. Draw estimated lines of best fit in scatter graphs and make predictions. Interpolate & extrapolate trends while knowing the dangers of doing so. Know & apply formulae to calculate volume of right prisms(including cylinders)

Summer Term

- Construct & interpret plans and elevations of 3D shapes.
- Generate sequence from position-to-term rule. Recognise arithmetic sequences & find nth term.
- Understand and use proportion as equality of ratios. Apply ratio to real contexts and problems such as conversion, comparison, and scaling, mixing, maps.
- Identify and interpret gradients (rate of change) and intercepts of linear functions graphically and algebraically inc reducing a given equation to form: y=mx+c.
- Recognise, sketch and interpret graphs of simple quadratic functions inc roots & turning point.
- Plot & interpret graphs of functions in real contexts such as simple kinematic problems involving distance /time (5)
- Use integer powers greater than 3 and their real roots.
- Simplify expressions involving sums and products, including the laws of indices.
- Calculate with zero and negative indices
- Understand that the probability of all possible outcomes sum to 1

- Record & analyse the frequency of outcomes using two-way tables & frequency trees (3) Generate theoretical sample spaces for combined events and use to calculate probabilities.

Year 9 Overview

Stage 9

Autumn Term

- Calculate resulting errors expressed using inequality notation.
- Calculate & solve problems involving arc lengths of ¼ / ½ circles, inc multiples of π
- Calculate & solve problems involving areas of sectors of ¼ / ½ circles, inc multiples of π
- Simplify & manipulate algebraic expressions by factorising quadratic expressions.
- Solve quadratic equations algebraically by factorising.
- Use algebraic methods to solve linear equations involving fractions.
- Calculate missing lengths in similar shapes.
- Rearrange more complex formulae to change the subject including reduce a given linear equation in two variables to the standard form y=mx+c.
- Substitute positive and negative integers into linear expressions and expressions involving powers.
- Solve problems involving simple and compound interest in financial mathematics.

Spring Term

- Solve original value problems involving percentage change (interpret percentage change as a decimal).
- Infer properties of a population from a sample, while knowing the limitations of sampling.
- Interpret & construct line graphs for time series data.
- Derive and apply the formula to calculate surface area of cylinder.
- Solve problems involving direct and inverse proportion, including graphical & algebraic representations. Know the difference between direct and inverse proportion.
- Use the form y=mx+c to identify parallel lines.
- Calculate & interpret gradients (as a rate of change) and intercepts of graphs numerically, graphically and algebraically.
- Plot & use quadratics graphs to estimate values of y when for given values of x and vice versa. Find approximate solutions to quadratic equations using a graph.
- Recognise, sketch and interpret graphs of simple cubic functions and the reciprocal function y=1/x where x≠0.
- Understand & use compound measures (density, speed, pressure) including real graphs.

Summer Term

- Understand & use the concept of inequalities to linear inequalities in one variable; represent the solution set to an inequality on a number line.

- Interpret & compare numbers in standard form.
- Use a calculator to calculate results & interpret them appropriately.
- Know the formula for Pythagoras' Theorem and apply it to find lengths in right angles triangles.
- Know the Trigonometric ratios & apply to find lengths & angles in right angles triangles.
- Know the exact values of sinΘ, cosΘ for Θ= 0, 30, 45, 60, 90 & tanΘ for Θ=0, 30, 45, 60.
- Enumerate sets and unions/intersections using Venn diagrams and use to calculate theoretical probabilities.
- Calculate the probabilities of independent combined events including tree diagrams.
- Know & use the criteria for congruence of triangles (SSS, SAS, ASA, AAS, and RHS).
- Derive & use the standard ruler & compass constructions: construct perpendicular bisector of a line segment; construct perpendicular bisector of an angle.
- Derive & use the standard ruler & compass constructions: construct the perpendicular from or to a point on a line segment. Recognise & use the perpendicular distance from a point to a line as the shortest distance to the line.
- Solve two linear simultaneous equations, algebraically & graphically.

Music

Year 7 Overview

In year 7 pupils learn basic musical skills which we build on throughout the year. Pupils learn how to read music notation and rhythms, play the keyboard both alone and in a group and start to learn to play the guitar. Pupils that already are able to play an instrument are able to be pushed with more challenging work relating to the topic.

Autumn Term

Introduction to music

Introduction to the keyboard

Spring Term

Pachelbels Canon

Summer Term

The Blues
Introduction to the Guitar

Year 8 Overview

In year 8 pupils build on the skills that they learnt in year 7. Pupils are able to work on the keyboards using chords and melodies, and look at music from around the world

Autumn Term

Gospel Music

Gamelan Music

Spring Term

Music from the Caribbean

Summer Term

Musicals
The Guitar

Year 9 Overview

In year 9 pupils start to work towards the music GCSE. Pupils learn listening skills in more details and start analysing music in more depth. Pupils start compositions which is a large part of GCSE music. Pupils work on keyboards, guitars, voice and computers for this school year

Autumn Term

Pop music band Project
Minimalism

Spring Term

Rock and Roll

Summer Term

Writing a song Composing a song using music software

P.E.

Year 7 Overview

The Physical Education course aims to help pupils learn about themselves, their capabilities as well as their strengths and weaknesses. It forms the basis of all sports participation. It aims to help pupils learn how to work with and respect others.

In Year 7 the PE programme is an introductory course involving a range of activities. The course also encourages team work, respect and sporting behaviour.

Autumn Term

Football
Netball
Gymnastics
Badminton Minor Sports

Spring Term

Fitness
Rugby
Dance
Table Tennis Basketball

Summer Term

Athletics
Softball
Cricket
Rounders Tennis

Year 8 Overview

The Physical Education course aims to improve skills, fitness and leadership qualities through a wide and varying curriculum, including dance, gymnastics, striking & fielding activities, net games, and invasion games. Pupils also develop fundamental skills such as teamwork, organisation, independent thinking and reflective learning. In Year 8 you will extend your range of skills, developing greater tactical awareness, maintaining or raising levels of fitness and work with others to meet a challenge.

Autumn Term

Football
Netball
Badminton
Minor Sports Basketball

Spring Term

Fitness
Rugby
Dance
Table Tennis
Gymnastics Handball

Summer Term

Athletics
Softball
Cricket
Rounders Tennis

Year 9 Overview

The Physical Education course aims to improve skills, fitness and leadership qualities through a wide and varying curriculum, including dance, gymnastics, striking & fielding activities, net games, and invasion games. Pupils also further develop fundamental skills such as teamwork, organisation, independent thinking and reflective learning. The Year 9 PE course further improves on the skills pupils have learnt in Years 7 & 8, whilst developing pupils' tactical awareness and self-analysis in preparation for Key Stage 4.

Autumn Term

Football
Netball
Badminton
Minor Sports Basketball

Spring Term

Fitness
Rugby
Dance
Table Tennis
Gymnastics Handball

Summer Term

GCSE/BTEC Induction Module
Athletics
Softball
Cricket
Rounders Tennis

R.E.

Year 7 Overview

REP is about learning about and from Religions, Ethics and Philosophy. Year 7 students are encouraged to think about their own beliefs, values and principles whilst learning about others.

Autumn Term

Introductions/Baseline. Questions, facts, opinions and beliefs.

Spring Term

Christianity. Sikhism

Summer Term

Islam. Who does the world belong to?

Year 8 Overview

In year 8 we build on the skills and knowledge acquired in year 7. We look at values, principles and beliefs within a thematic approach. We pose challenging questions whilst encouraging students to argue for and against a point of view. We help students to understand and appreciate the benefits and challenges of living in modern day Britain

Autumn Term

Justice. Rites of Passage

Spring Term

Creation theories, stories and debates. Science v Religion

Summer Term

Diversity. Living in multi-cultural/multi-faith Leicester

Year 9 Overview

In year 9 we expect students to build on their analytical and critical thinking skills. We look to prepare them for GCSE and beyond by discovering what we can learn from religious and non-religious beliefs and ideas. We want students to have a broader understanding of the world we live in today and think deeply about some of the key questions in life

Autumn Term

Humanism.
Buddhism.

Spring Term

War, Conflict and Resolution. Looking Inside.

Summer Term

Moral Questions. Turning Points

Science

Year 7 Overview

Our Year 7 Science course is taught with biology, chemistry and physics units of work split between two teachers. At the start of the year students complete our 'Becoming a Scientist' unit of work to embed crucial practical skills required for KS3 Science. These working scientifically, mathematical and literacy skills are practiced and developed throughout the course. Throughout the year students are assessed through homework tasks, key pieces of work and end of unit tests to enable progress along their flightpath to be monitored

Autumn Term

Becoming A Scientist

Space

- Our Sun as a star, other stars in our galaxy, other galaxies
- the seasons and the Earth's tilt, day length at different times of year, in different hemispheres
- the light year as a unit of astronomical distance.

Spring Term

Energy and Forces I

- fuels and energy resources.
- speed and the quantitative relationship between average speed, distance and time (speed = distance ÷ time)
- forces as pushes or pulls, arising from the interaction between two objects
- using force arrows in diagrams, adding forces in one dimension, balanced and unbalanced forces
- forces: associated with deforming objects; stretching and squashing – springs; with rubbing and friction between surfaces, with pushing things out of the way; resistance to motion of air and water
- non-contact forces: gravity forces acting at a distance on Earth and in space, forces between magnets and forces due to static electricity.
- upthrust effects, floating and sinking
- opposing forces and equilibrium: weight held by stretched spring or supported on a compressed surface.
- forces being needed to cause objects to stop or start moving, or to change their speed or direction of motion (qualitative only)
- change depending on direction of force and its size.
- magnetic poles, attraction and repulsion
- magnetic fields by plotting with compass, representation by field lines
- Earth's magnetism, compass and navigation

- gravity force, weight = mass x gravitational field strength (g), on Earth g=10 N/kg, different on other planets and stars;

Chemistry I

- changes of state in terms of the particle model.
- the concept of a pure substance
- mixtures, including dissolving
- simple techniques for separating mixtures: filtration, evaporation, distillation and chromatography
- the pH scale for measuring acidity/alkalinity; and indicators
- energy changes on changes of state (qualitative)
- the varying physical and chemical properties of different elements
- Periodic Table: periods and groups; metals and non-metals
- the properties of metals and non-metals
- reversibility in melting, freezing, evaporation, sublimation, condensation, dissolving
- similarities and differences, including density differences, between solids, liquids and gases
- the difference between chemical and physical changes.
- changes with temperature in motion and spacing of particles

Summer Term

Biology I

- cells as the fundamental unit of living organisms, including how to observe, interpret and record cell structure using a light microscope
- the functions of the cell wall, cell membrane, cytoplasm, nucleus, vacuole, mitochondria and chloroplasts
- the similarities and differences between plant and animal cells
- the hierarchical organisation of multicellular organisms: from cells to tissues to organs to systems to organisms.
- the structure and functions of the human skeleton, to include support, protection, movement and making blood cells
- the function of muscles and examples of antagonistic muscles.
- the tissues and organs of the human digestive system.
- plants making carbohydrates in their leaves by photosynthesis and gaining mineral nutrients and water from the soil via their roots.
- the reactants in, and products of, photosynthesis, and a word summary for photosynthesis
- the structure and functions of the gas exchange system in humans.
- the mechanism of breathing to move air in and out of the lungs.

- reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal, including quantitative investigation of some dispersal mechanisms.
- the interdependence of organisms in an ecosystem, including food webs and insect pollinated crops
- the importance of plant reproduction through insect pollination in human food security differences between species

Year 8 Overview

Our Year 8 Science course is taught with biology, chemistry and physics units of work split between two teachers. Students practice and develop working scientifically, mathematical and literacy skills throughout the course. Throughout the year students are assessed through homework tasks, key pieces of work and end of unit tests to enable progress along their flightpath to be monitored

Autumn Term

Living Things II

- the structural adaptations of some unicellular organisms
- content of a healthy human diet: carbohydrates, lipids (fats and oils), proteins, vitamins, minerals, dietary fibre and water, and why each is needed
- calculations of energy requirements in a healthy daily diet
- the consequences of imbalances in the diet, including obesity, starvation and deficiency diseases
- the tissues and organs of the human digestive system, including adaptations to function and how the digestive system digests food (enzymes simply as biological catalysts)
- the importance of bacteria in the human digestive system
- the structure and functions of the gas exchange system in humans, including adaptations to function
- the mechanism of breathing to move air in and out of the lungs, using a pressure model to explain the movement of gases, including simple measurements of lung volume
- the impact of exercise, asthma and smoking on the human gas exchange system
- reproduction in humans (as an example of a mammal), including the structure and function of the male and female reproductive systems, menstrual cycle (without details of hormones), gametes, fertilisation, gestation and birth, to include the effect of maternal lifestyle on the foetus through the placenta
- aerobic and anaerobic respiration in living organisms, including the breakdown of organic molecules to enable all the other chemical processes necessary for life
- a word summary for aerobic respiration
- the process of anaerobic respiration in humans and micro-organisms, including a word summary for anaerobic respiration

- the differences between aerobic and anaerobic respiration in terms of the reactants, the products formed and the implications for the organism.

Energy II

- heating and thermal equilibrium: temperature difference between two objects leading to energy transfer from the hotter to the cooler one, through contact (conduction) or radiation; such transfers tending to reduce the temperature difference: use of insulators
- other processes that involve energy transfer: changing motion, dropping an object, completing an electrical circuit, stretching a spring, metabolism of food, burning fuels.
- energy as a quantity that can be quantified and calculated; the total energy has the same value before and after a change
- using physical processes and mechanisms, rather than energy, to explain the intermediate steps that bring about such changes.
- electric current, measured in amperes, in circuits, series and parallel circuits, currents add where branches meet and current as flow of charge
- potential difference, measured in volts, battery and bulb ratings; resistance, measured in ohms, as the ratio of potential difference (p.d.) to current
- differences in resistance between conducting and insulating components (quantitative).
- internal energy stored in materials.
- comparing energy values of different foods (from labels) (kJ)

Spring Term

Chemistry II

- Recap and build upon Y7
- a simple (Dalton) atomic model
- differences between atoms, elements and compounds
- chemical symbols and formulae for elements and compounds
- conservation of mass changes of state and chemical reactions.
- diffusion in terms of the particle model
- the identification of pure substances.
- chemical reactions as the rearrangement of atoms
- representing chemical reactions using formulae and using equations
- the principles underpinning the Mendeleev Periodic Tablethe Periodic Table: periods and groups; metals and non-metals
- how patterns in reactions can be predicted with reference to the Periodic Table
- properties of ceramics, polymers and composites (qualitative).
- Brownian motion in gases
- diffusion in liquids and gases driven by differences in concentration atoms and molecules as particles.

Summer Term

Light and Sound

- waves on water as undulations which travel through water with transverse motion; these waves can be reflected, and add or cancel – superposition.
- waves on water as undulations which travel through water with transverse motion; these waves can be reflected, and add or cancel – superposition.
- frequencies of sound waves, measured in hertz (Hz); echoes, reflection and absorption of sound
- sound needs a medium to travel, the speed of sound in air, in water, in solids
- sound produced by vibrations of objects, in loud speakers, detected by their effects on microphone diaphragm and the ear drum; sound waves are longitudinal
- auditory range of humans and animals.
- pressure waves transferring energy; use for cleaning and physiotherapy by ultra-sound; waves transferring information for conversion to electrical signals by microphone.
- the similarities and differences between light waves and waves in matter
- light waves travelling through a vacuum; speed of light
- the transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface
- use of ray model to explain imaging in mirrors, the pinhole camera, the refraction of light and action of convex lens in focusing (qualitative); the human eye
- light transferring energy from source to absorber leading to chemical and electrical effects; photo-sensitive material in the retina and in cameras
- colours and the different frequencies of light, white light and prisms (qualitative only); differential colour effects in absorption and diffuse reflection.

Year 9 Overview

Our Year 9 AQA trilogy and triple Science course is taught in two halves as Physical and Life Sciences, with the biology, chemistry and physics topics split between two teachers. Students also practice working scientifically, mathematical and literacy skills throughout the course. Throughout the year students are assessed through key pieces of work and end of unit tests to enable progress towards target GCSE grades to be monitored. Scientific concepts and skills covered in Year 9 will be assessed through GCSE exams at the end of Year 11

Autumn Term

Photosynthesis and Variation

- the reactants in, and products of, photosynthesis, and a word summary for photosynthesis

- the dependence of almost all life on Earth on the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules that are an essential energy store and to maintain levels of oxygen and carbon dioxide in the atmosphere
- the adaptations of leaves for photosynthesis.
- the role of leaf stomata in gas exchange in plants.
- heredity as the process by which genetic information is transmitted from one generation to the next
- a simple model of chromosomes, genes and DNA in heredity, including the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model
- differences between species
- the variation between individuals within a species being continuous or discontinuous, to include measurement and graphical representation of variation
- the variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection
- changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction
- the importance of maintaining biodiversity and the use of gene banks to preserve hereditary material.
- Cell Structure

Chemical Reactions

- combustion, thermal decomposition and oxidation reactions
- the chemical properties of metal and non-metal oxides with respect to acidity.
- the composition of the Earth
- the structure of the Earth
- the rock cycle and the formation of igneous, sedimentary and metamorphic rocks
- Earth as a source of limited resources and the efficacy of recycling
- the carbon cycle
- the composition of the atmosphere
- the production of carbon dioxide by human activity and the impact on climate.

Spring Term

GCSE Biology

- Cell Biology: explores how have scientists developed their understanding of cell structure and function, how do we develop into a complex organism from just a fertilized egg cell and how do organisms obtain their energy from food.
- Moving and Changing Materials: explores do all materials move by diffusion, why do some organisms need organ systems, do all organisms move materials in the same way and how do enzymes work

GCSE Chemistry

- Atomic Structure and the Periodic Table: explores what model do we use to represent an atom, how did the model of the atom develop, why can we use carbon dating, why helium is so unreactive and sodium so reactive and what the difference is between metals and non-metals

GCSE Physics

- Energy: Explores the connection between energy transfer and power, the connection between energy changes and temperature change, how we can monitor and control the transfer of energy, and the environmental impact of different energy resources.

Summer Term

GCSE Chemistry

- Structure, Bonding and the Properties of Matter: explores what happens to particles as substances change state, why is so much energy needed to melt some substances, are there different types of chemical bonds, why can metals conduct electricity and why are diamonds so hard and graphite so soft.

GCSE Physics

- Electricity: Explores the key concepts in electricity, the characteristics of some electrical components and how electricity can be used safely I the home.

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