

#### Subject: Year 9 Spanish- El instituto - School

#### Previously you have learnt



In Year 7 we learnt to give opinions about school life. In Year 9 we have learnt to understand and talk in three time frames in topics.

# In this unit you will learn



How to extend our vocabulary relating to school life and to talk about school in all three time frames. We will revisit subjects and places in the school building and give opinions on these. These all tie into the GCSE specification where we will learn to self-assess our learning.

# **Key Vocabulary and Terminology**

Tier 2: weather expressions: use hacer + weather / preterite tense



Tier 3 : You will learn vocabulary to answer questions such as ¿Dónde fuiste en tus últimas vacaciones? ¿Cómo viajaste?

# **Further Learning**



Please look at our department Padlet

Spanish KS3 (padlet.com)

Open Mindedness	Creativity	Responsibility	Empathy
Courage	Commitment	Team Work	Leadership
<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	<mark>Citizenship</mark>
Aspiration	Achievement	Inspiration	Community
	Open Mindedness Courage Curiosity Aspiration	Open MindednessCreativityCourageCommitmentCuriosityVerbal ConfidenceAspirationAchievement	Open MindednessCreativityResponsibilityCourageCommitmentTeam WorkCuriosityVerbal ConfidenceSocial IntelligenceAspirationAchievementInspiration



#### Subject: PE -BTEC Sport Component 1 Preparing Participants to Take Part in Sport

#### Previously you have learnt



This will be your first Unit of theory based Sport so you may find most if not all of the learning in this Unit quite new

#### In this unit you will learn



In Component one you will look at the types of sport and activities available for different types of participant along with looking at sport providers and barriers which may prevent sport participation. Task two looks at the types of equipment and technology for Sport and Physical Activity, with task three going on to give you the opportunity to lead small group practices and game based situations.

# **Key Vocabulary and Terminology**

Tier 2 sport activities, describe, explain, evaluate, barriers



Tier 3 Characteristics , Cardiorespiratory, Musculoskeletal, adapting, delivering

# **Further Learning**

Specification - Pearson BTEC Level 1/Level 2 Tech Award in Sport 2022 Issue 2

Use the revision books that we have purchased for you

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship

# **Reflection on my learning journey**

What do I remem	ber form last term? (complete at the star	t of the term)	
Date of diary entry (complete	Key things I have learned during this term.	Questions I have for the teacher and their response.	Confidence levels with this
			terms topics.
How have this terr	ns PE sessions built on my knowledge and	l skills from last term (complete at th	ne end of the term)



#### Subject: Statistics: Summarising Data – Box Plots, Skewness and Outliers

# Previously you have learnt



Students should be able to find the mean, median, mode and range at Key Stage three. Students should be able to find quartiles and interquartile range. Students should be able to draw and interpret box plots and cumulative frequency graphs.

# In this unit you will learn



To construct, interpret and use box plots from summary statistics; Construct, interpret and use box plots from cumulative frequency graphs; To calculate outliers using the formulae; To show outliers on box plots and comment with reference to the original data; To determine skewness by inspection and calculation; To make interpretations in context; To use box plots as a method to compare two (or more) sets of data for dispersion, measure of central tendency and skewness; Identify simple properties of the shape of distributions of data including symmetry, positive and negative skew.

# **Key Vocabulary and Terminology**



Mean, mode, median, range, interquartile range, percentile, interpercentile range, modal class interval, interpolate, interdecile range, standard deviation, outliers.

# **Further Learning**



<u>Understanding Skewness in Data and Its Impact on Data Analysis (analyticsvidhya.com)</u> What is an Outlier? Definition and How to Find Outliers in Statistics (freecodecamp.org)

Guidelines for Removing and Handling Outliers in Data - Statistics By Jim

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
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Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Art Year 9 Structures

# Previously you have learnt



You have previously explored a selection of project titles in year 9 including 'Everyday Objects' and 'Identity'. You have used a wide selection of media will have been introduced including 3D, printmaking and various painting and drawing techniques along with a wide and varied set of artist's researched.

# In this unit you will learn



In this unit you will further develop your skills through the theme of 'Structure'. You will explore the title in a personal way highlighting your own ideas and interpretations. 3D, printmaking, papercutting, photography and various artist media will be developed in your project linking to your theme. This is the start of your GCSE Art coursework which over the next year will cumulate to 60% of your final GCSE grade.

# **Key Vocabulary and Terminology**

Tier 2: evaluate, analyse, create, accuracy



Tier 3: composition, embellishment, macro-art/photography, monochromatic

# **Further Learning**



Tate Gallery: <u>Structures</u>

Saatchi Gallery: Structural Artists

Resilience	Open Mindedness	<b>Creativity</b>	<b>Responsibility</b>	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
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Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Art Year 9 Masks and World Cultures

#### Previously you have learnt



Throughout your time in year 7+8 you have worked in a range of media including wet paint, you have had the opportunity to explore some 3D sculptural media (paper and card sculptures). You have explored a wide range of architectural artists (Stephen Whiltshire, Gaudi), pop artists (Hockney, Warhol, Oldenburg) as well as culturally diverse portrait artists (Bruno Del Zou, Bisa Butler, Louie Jover, Escher) are to name a few.

# In this unit you will learn



How to use a wider range of media based on the theme of masks. You will explore a wide range of cultures from around the world through masks, you will explore the meaning, beliefs and rituals that go alongside the masks.

You will then design your own mask based on your own beliefs, heritage and meanings personal to you through a range of mixed media to create your own mask design.

# **Key Vocabulary and Terminology**



Tier 2: media, primary observation, colour, refine, culture,

Tier 3: tonal value, mixed media, sculpture, ritual

# **Further Learning**



Tate modern: Masks and Cultures

BBC Bitesize (GCSE): Art and Design

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Business GCSE Year 9 Recruitment & Motivation

#### Previously you have learnt



About staff within the workplace and sizes of organisations from discussions in lesson. Although the majority of this theory will be new to you, you will have a working knowledge of what a job is, the different types of workers and how a business can motivate staff.

# In this unit you will learn



About the various methods of staff development and monitoring including areas such as appraisals, promotion, disciplinary and dismissal. You will learn about motivation, in particular financial and non-financial motivators and the 4 motivation theories. You will also revise the year's topics to prepare for your end of year assessment.

# **Key Vocabulary and Terminology**



Tier 2: List, research, search, identify, define, describe, analyse,

<u>Tier 3:</u> contracts, seasonal, temporary, full time, appraisal, discipline, dismissal, redundancy, monitor, motivate, financial, non-financial.

# **Further Learning**



Methods of recruitment and selection of employees

Staff development - Training and development

The benefits of a motivated workforce - Motivation

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
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Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Computer Science Year 9 Pi Craft

# Previously you have learnt



You will have learnt all the key programming fundamentals including print, input, if, for loop, while loop, array, string manipulation, functions and file handling. You would have made a number of different programs all designed to solve problems.

In year 8 you learnt about the basic compontents of a computer and how they work.

# In this unit you will learn



In this unit you will learn the Minecraft api know as "picraft" to create python programs that effects elements of their Minecraft world. You will learn how to use the linux operating system through the use of an raspberry pi and will get hands on experience setting up a computer each week.

# **Key Vocabulary and Terminology**



Tier 3: Variables, constants, operators, inputs, outputs, assignment, sequence, selection, iteration, arithmetic operators, Boolean operators, AND, OR, NOT, ==, !=, <, <=, >, >=, +, -, \*, /, MOD, DIV, ^, exponentiation, data types, integer, real, Boolean, character, string, casting, string manipulation, file handling, open, read, write, close, records, SQL, arrays.

# **Further Learning**



GCSE (J277) OCR: 2.2 Programming fundamentals

picraft — Picraft 1.0 documentation

Resilience	Open Mindedness	<b>Creativity</b>	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
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#### Subject: Dance Year 9 – Term 6

# Previously you have learnt



Students focused on developing your knowledge on dance appreciation. Strengthening student's knowledge on the professional dance works Emancipation of Expressionism by Kendrick H2O Sandy and Cry Me a River by Andrew Winghart. These two contrasting pieces of repertoire supported students learning journey through a practical exploration of repertoire, choreographic investigation and theoretical practice. There was a strong focus on building students' theoretical practice in preparation for year 10 and 11. During term 5 students developed skills from Professional Works 1 and investigating new skills within Professional Works 2, immercing students into being critical of dance works and building upon their subject specific knowledge.

#### In this unit you will learn

This unit will build upon the knowledge students have previously learnt in KS3. During KS3 students look at stimulus-based work as a part of their units. This term we will look at dance composition to sophistically develop students' choreographic skills and devising skills. Students are encouraged to look at a breadth of Stimulus based work and a wide range of stimuluses as a starting point for their own choreography pieces. They will take part in a variation of workshops to support their devising but will also have a lot of independent tasks to enable them to becoming creatively involved in the dance world.

Key Vo

Tier 2: Compose, choreograph, evaluate, analyse, devising, rehearsal, stimulus

<u>Tier 3:</u> Choreograph, physical skills, Actions, Space, Dynamics, Relationships, motif and development, repertoire, photo, video, quote

# **Further Learning**



BTEC International Level 2 Performing Arts specification (pearson.com)

BTEC Tech Award in Performing Arts: Component 3 - YouTube

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
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#### Subject: Drama Year 9 Term 6: Practitioner Project 2 Brecht

# Previously you have learnt



How to explore a range of drama skills that have become your tool kit for devising theatre. How to practically explore a Script with a focus on Themes, Characters and Performance Ideas. You will have an opportunity to do exam style questions about the text as well as rehearse sections for a practical style examination.

# In this unit you will learn



How Bertolt Brecht influenced and theorised Epic Theatre. You will practically explore non naturalistic strategies and understand why Brecht used these techniques to develop change in the world of theatre. You will use your knowledge and apply the skills to a script to perform your own Brechtian Style Performance.

You will explore and perform the play "Trainers" in a Brechtian style and devise your own Brechtian drama.

# **Key Vocabulary and Terminology**

Tier 2: Space, Voice, Eye Contact, Body Language, Movement, Facial Expression, Gesture



**Tier 3**: Still Images, thought tracking, giving witness, hot seating, non-naturalism, role play, cross cutting

# **Further Learning**



Why is Brecht so important? - Epic theatre and Brecht - GCSE Drama Revision - OCR - BBC Bitesize

Resilience	Open Mindedness	<b>Creativity</b>	<b>Responsibility</b>	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
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#### Subject: English, Year 9, Relationships

# Previously you have learnt



So far, you have explored many different voices and examined different experiences through the use of memoirs, poetry and novels. You have used literature to consider your own experiences throughout your life.

# In this unit you will learn



In this unit, you will explore family and community relationships in the The Hate You Give and then a wide range of poetry which transcends time, race, class, experience and age, but which all comes through the different explorations of relationships. You will study different poetic form, language, structure and voice and become familiar with the more technical aspects of poetry. As well as this, you will become confident in structuring, writing and editing many different forms of poetry.

# **Key Vocabulary and Terminology**

Tier 2: Structure, rhythm, images, empowerment, grief, celebration, and passion.



<u>Tier 3:</u> Sonnet, Villanelle, Petrarchan, Iambic Pentameter, Caesura, Enjambment and Dramatic Monologue

# **Further Learning**

What makes a poem ... a poem? - Melissa Kovacs - YouTube



The pleasure of poetic pattern - David Silverstein - YouTube

Carol Ann Duffy - Poetry - BBC Maestro - YouTube

Resilience	Open Mindedness	Creativity	Responsibility	<mark>Empathy</mark>
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Excellence	Aspiration	Achievement	Inspiration	Community



Subject: Film Studies – Year 9 – Unit 6 – practical screenplay skills

#### Previously you have learnt



Over the course you have spent time learning and applying a range of theory and key film studies terminology to analyse a range of film texts. You have explored how the context of a film has influenced spectator response and you have considered how narrative theories can be applied when analysing a film.

# In this unit you will learn



This unit will have you using your knowledge gained in the study of film texts in order to create your own screenplay for a short film sequence. You will learn how to construct a text to influence spectator response alongside the planning and creation of a shooting script and/or storyboard for your film sequence.

# **Key Vocabulary and Terminology**

Tier 2: narrative, construct, conventions, 3-act structure



<u>Tier 3:</u> Cinematography, mise-en-scene, antagonist, protagonist, Propp, Todorov, connotation, diegetic, non-diegetic, slugline, shooting script, parenthetical

# **Further Learning**



Screenplay writing - https://www.bbc.co.uk/bitesize/guides/z8922p3/revision/1

Anatomy of a screenplay - <u>https://www.youtube.com/watch?v=spweGC4XMi8</u>

Formatting a screenplay - https://www.studiobinder.com/blog/what-is-a-slug-line-definition/

Resilience	Open Mindedness	Creativity	<b>Responsibility</b>	Empathy
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#### Subject: Food and Nutrition

# Previously you have learnt



Last year you have made a variety of products such as pasta salad, pizza, Ragu sauce, biscuits, bread making and muffins. You also had the opportunity to design and make your chosen product suitable for a teenager diet. You have learnt how to be independent and take charge of your own diet by learning about the principles of nutrition and healthy eating. Learning how to cook is a crucial life skill, these skills has enable you to not only cook for yourselves but also for family and friends. You have demonstrated hygiene and safety in the kitchen when making a

# In this unit you will learn



In designing you will use research and exploration, such as the study of different festivals, to identify and understand user needs. You will identify and solve your own design problems and understand how to reformulate problems given to you. You will develop specifications to inform the design of innovative, functional, appealing products that respond to needs of your chosen market. In making you will select from and use specialist tools, techniques, processes, and use a wider, more complex range of materials, components and ingredients.

# **Key Vocabulary and Terminology**

Tier 2 words: Apply, analyse, evaluate



Tier 3 words: festival, catering, beverages.

# **Further Learning**



Quotes: "Eating is a necessity but cooking is and Art". "I'm not a chef, but I'm passionate about food the tradition of it, cooking it and sharing it."

Why watch YouTube <u>videos</u> highlighting festival food.

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Year 9 German- Holidays

# Previously you have learnt



In Year 7 we learnt to give opinions about school life. In Year 9 we have learnt to understand and talk in three time frames in topics.

#### In this unit you will learn



How to extend our vocabulary relating to school life and to talk about school in all three time frames. We will revisit subjects and places in the school building and give opinions on these. These all tie into the GCSE specification where we will learn to self-assess our learning. You will ask questions such as: Beschreib deine Schule? Was ist dein Lieblingsfach?

# **Key Vocabulary and Terminology**

Tier 2: past tense, perfect, imperfect, future conditional, verbs, word order, connectives



Tier 3: You will answer questions such as: Was ist dein Lieblingsfach? Beschreib deine Schule?

# **Further Learning**



Please look at our department Padlet

www.padlet.com/hattonmfl/ks3german

Open Mindedness	Creativity	Responsibility	Empathy
Courage	Commitment	Team Work	Leadership
<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	<mark>Citizenship</mark>
Aspiration	Achievement	Inspiration	Community
	Open Mindedness Courage Curiosity Aspiration	Open MindednessCreativityCourageCommitmentCuriosityVerbal ConfidenceAspirationAchievement	Open MindednessCreativityResponsibilityCourageCommitmentTeam WorkCuriosityVerbal ConfidenceSocial IntelligenceAspirationAchievementInspiration



#### Subject: History Year 9: The American West

#### Previously you have learnt



Why people migrated to Britain and the impacts this had on the groups who arrived and on the cultural make up of Britain today. You compared the experiences of different migrants, often who faced persecution because of their different cultural or religious beliefs. You made cross curricular links with your Geography lessons addressing push and pull factors. This topic will help your vocabulary when looking at the American West where there were also significant tensions through migration.

# In this unit you will learn



About the way of life of the Plains Indians and why unlike the white American settlers we should consider not judging something as 'savage' just because it is different. As well as understanding the beliefs of the Plains Indians, you will see how their way of life was impacted through migration and how the white settlers survived across the Great Plains.

# **Key Vocabulary and Terminology**

Tier 2:					
Migration	farming	settlement	indust	rialisation	mining
<u>Tier 3:</u>					
Wakan Tanka	nomadic	Manifest Desti	iny	Gold Rush	Mormons

# **Further Learning**



Factors encouraging people to go West - Reasons for westward expansion - National 5 History Revision - BBC Bitesize

Main events in the struggle for the Plains - Defeat and demise of the Native Americans of the Plains - National 5 History Revision - BBC Bitesize

Resilience	Open Mindedness	Creativity	Responsibility	<mark>Empathy</mark>
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Hospitality and Catering Year 9 The Hospitality and Catering Industry

# Previously you have learnt



Last term you looked closely at the food groups and how each life-stage will need different amount of nutrients to ensure a healthy life style. You also learnt about the diets of different religious groups. You learnt about macronutrients and micronutrients in depth and its importance to the human body. You have also explored the different cooking methods and their impact on nutritional value in both written and practical settings.

# In this unit you will learn



This term you will be working from a set brief; learning how to write a dovetail plan which will include contingencies and health and safety. You will learn how to plan and make dishes that best suit young children and pregnant women. You will explore the nutritional value of your chosen dishes to meet your clients' needs. You will look at the impact of chosen cooking methods and factors that affect your choices. Your work will be assessed on the exam board criteria band for marking.

# **Key Vocabulary and Terminology**



Tier 2: demonstrate, analyse, evaluate

Tier 3: factors, dovetail, toddler, contingencies

# **Further Learning**



Textbook: Level 1/ 2 Vocational Award Hospitality and Catering; Course Companion Author Alison Palmer and Knowledge Organisers by WJEC.

Videos: The function of nutrition

BBC Bitesize: Hospitality and Catering

Resilience	Open Mindedness	<b>Creativity</b>	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
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#### Subject: Digital information Year 9 R050 System Security

#### Previously you have learnt



About human computer interface in everyday life and data and testing. You will have learnt about the characteristics of each data type and how each data type can be used. You will also learn the different roles of validation and verification.

# In this unit you will learn



About each type of threat and why the threats are used by attackers. You will also learn how the threat can occur and how the threat works. It will be important to understand how each type of social engineering can be used to gather data and information and how to mitigate against the threats. You will also learn how the impact of these threats and how each prevention measure works.

# **Key Vocabulary and Terminology**



Tier 2: hacking, malware, data manipulation

<u>Tier 3:</u> adware, Trojan, worm, baiting, denial of service, RFID, data erasure, magnetic wipe, security backups, firewalls, data manipulation

# **Further Learning**



OCR Cambridge Nationals IT overview

Cambridge Nationals I.T.: Prevention Measures

Resilience	Open Mindedness	Creativity	<b>Responsibility</b>	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
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Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Term 6, Life Skills, Year 9: Personal Finance and Digital Citizenship

#### Previously you have learnt



In Year 7 and 8, you cover an overview of personal safety and how to be safe online. In year 8, your HBACC session focuses on the Hatton Character qualities and core competencies that you need to be a successful individual. You consider what is right and wrong so you are able to be an "upstander and not a bystander". You are also introduced to the role that the Government plays in managing the country.

# In this unit you will learn



There will be a focus on a brief introduction to personal finance. You will learn about budgeting and saving and look at how to manage income and expenditure as well as how tax and national insurance works in the UK. There is also a focus on your digital footprint as it is vital that you know how to protect your data online.

# **Key Vocabulary and Terminology**



Tier 2: discuss, list, identify, explain, think pair share.

Tier 3: Expenditure, gross pay, Piece-work, Commission, fraud, fee, tip, overtime, wage, bonus, salary, Budget, Income, debt, necessary expenses, optional expenses, social media, selfie, healthy, likes, editing, celebrities, filters, followers, attention, comments

# **Further Learning**



https://natwest.mymoneysense.com/young-adults/

https://classroom.thenational.academy/lessons/digital-footprint-c4v3ee

Resilience	Open Mindedness	Creativity	<b>Responsibility</b>	<b>Empathy</b>
Self-Regulation	Courage	Commitment	Team Work	Leadership
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Excellence	Aspiration	Achievement	Inspiration	Community

# Term 1



#### Subject: Mathematics Year 9 Number Sense: KLP 1, 2, 3, 4

#### Previously you have learnt



How to recall multiplication facts for numbers between 1 and 12 and how to multiply and divide by 10, 100 and 1000. You will also have learnt the order of operations and how to apply basic index laws.

# In this unit you will learn



How to calculate with positive and negative integers and decimals. You will learn how to calculate and solve problems involving HCF and LCM. You will learn how to round values to varying degrees of accuracy and use estimation to support calculations.

# **Key Vocabulary and Terminology**

Tier 2: evaluate, process, decimal, figure, numeral, product, factor, multiple



Tier 3: common multiple, times table, integer, significant figure, standard form, HCF, LCM

# **Further Learning**



Significant Figures Dividing Decimals

# **Hatton Character Qualities**

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship

Excellence

Community



#### Subject: Mathematics Year 9 Data and Statistics: KLP 1

#### Previously you have learnt



How to collect and represent data using tallies. How to draw and interpret simple charts and diagrams.

#### In this unit you will learn



How to recognise and classify different types of data. You will learn how to collect data using tables, and how to display both discrete and continuous data in tables. You have learnt how to interpret data from different from different types of timetables and two way tables.

# **Key Vocabulary and Terminology**



Tier 2: frequency, tally, timetable, construct, interpret

Tier 3: discrete data, continuous data, frequency table, two way table

# **Further Learning**



Sampling Techniques
Types of Data

Two Way Tables

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 2

Excellence



#### Subject: Mathematics Year 9 Intro to Algebra: KLP 1, 2, 3, 4

# Previously you have learnt



how to define and find square and cube numbers. You have also learned how to use index notation to represent square numbers, cubes numbers with index notation.

# In this unit you will learn



how to represent real life situations using algebra. You will learn how to interpret and simplify algebraic expressions. You will learn how to simplify and manipulate expressions. This includes collecting like terms, multiplying terms and factorising expressions. You will learn how to simplify terms using index notation.

# **Key Vocabulary and Terminology**



Tier 2: simplify, expand, evaluate, represent, unknown

<u>Tier 3:</u> term, expression, equation, formula, identify, indices, powers, like terms, square root, cube root, inverse, variable,

# **Further Learning**



Practice Collecting Like Terms

Algebraic Terms Test Questions

Algebra Practice

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<b>Curiosity</b>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 3



#### Subject: Mathematics Year 9 Representing Numbers: KLP 1, 2, 3, 4

#### Previously you have learnt



How to perform calculations with integers, and estimate solutions of problems in real life contexts. You have also learnt how to represent fractions visually, and how to order key fractions, decimals and percentages.

## In this unit you will learn



How to convert between fractions, decimals and percentages, and how to order the values by size. You will consider several different strategies, depending on the values. You will learn how to simplify fractions, how to convert between mixed numbers and improper fractions and how to apply arithmetic to different fractions. You will then perform arithmetic with percentages in real life contexts, and how to increase and decrease values using percentages.

# **Key Vocabulary and Terminology**



<u>Tier 2:</u> Compare, represent, fraction, percentage, increase, decrease, appreciation, depreciation, growth, decay, VAT, interest

Tier 3: Mixed number, top heavy fraction, denominator, numerator

# **Further Learning**



**Converting Fractions Decimals and Percentages** 

Fractions of Numbers - Tablet Version

Percentages in Real Life

**Reverse Percentages - Exam Questions** 

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 4

Excellence



#### Subject: Mathematics Year 9 3D Shape and Space: KLP 1

# Previously you have learnt



How to identify 2D shapes, and know if they are regular or irregular. How to find the volume and surface area of 2D shapes. How to describe different types of polygons and how to solve real life problems involving area and perimeter.

# In this unit you will learn



How to recognise and sketch 3D solids, and how to name key 3D solids. How to identify the key features and names of common 3D shapes. How to sketch elevations and plans of shapes made from simple solids.

# **Key Vocabulary and Terminology**



Tier 2: dimension, sketch, calculate, convert, net, estimate

<u>Tier 3:</u> face, edge, vertex, cylinders, cube, cubes, prism, pyramid, sphere, cones, side elevation, front elevation

# **Further Learning**



Naming 3D Shapes Quiz

Interactive Nets of 3D Shapes

Exam Questions for 3D Shapes

Resilience	Open Mindedness	<b>Creativity</b>	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Algebra in Context: KLP 1, 2, 3, 4

# Previously you have learnt



How to form expressions in algebra, and how to interpret algebra into words. You will also have learnt how to collect like terms, how to multiply terms, how to multiply terms with brackets. You will have learnt how to apply algebra to powers.

# In this unit you will learn



How to apply algebra in a variety of real life situations. You will learn how to substitute values into expressions, and how to solve linear equations. You will learn how to find the area and perimeter of shapes, and then how to apply your algebra skills to solve problems involving shapes. You will then learn how to apply Pythagoras' Theorem to find missing lengths of right angled triangles.

# **Key Vocabulary and Terminology**



Tier 2: area, perimeter, inverse, indices, square root

Tier 3: variable, term, equation, formula, linear, coefficient, surd

# **Further Learning**

Algebraic Expressions for Perimeter & Algebraic Perimeters Practice

Linear Equations Practice

Pythagoras' Theorem

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 5

Community



#### Subject: Mathematics Year 9 Data and Statistics: KLP 2

#### Previously you have learnt



How to collect data using tables, and how to display both discrete and continuous data in tables. You have learnt how to interpret data from different from different types of timetables and two-way tables.

#### In this unit you will learn



How to display information using charts and graphs, and how to interpret charts and graphs. These charts include pictograms, composite bar charts, comparative bar charts, bar-line charts, vertical line charts, line graphs, histograms and stem and leaf diagrams. You will learn how to find averages from different charts, and how to identify trends and relationships between bar charts and line graphs.

# **Key Vocabulary and Terminology**



<u>Tier 3:</u> pictograms, composite bar charts, comparative bar charts, bar-line charts, vertical line charts, line graphs, histograms, stem and leaf diagrams, discrete data, continuous data

# **Further Learning**



Types of Graphs and Charts

GCSE Exam Questions: Representing Data

GCSE Exam Questions: Interpreting Data

Resilience	Open Mindedness	<b>Creativity</b>	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Ratio & Proportion: KLP 1

# Previously you have learnt



How to recognise common factors, how to find highest common factors and lowest common multiples. How to identify prime numbers, and how to simplify fractions to their simplest form.

#### In this unit you will learn



How to divide a quantity into a given ratio. How to apply ratio to solve a range of problems which involve sharing a quantity. You will learn how to understand ratio as a fraction, how to compare ratios and how to apply ratios to problems involving area and volume.

# **Key Vocabulary and Terminology**



Tier 2: ratio, proportion, relationship, represent, statement

Tier 3: direct proportion, inverse proportion, equation, constant, variable

# **Further Learning**



Sharing into a Ratio: Graphic

Ratio in different Contexts

Ratio: Exam Style Problems

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 6



#### Subject: Year 9 Mathematics Algebra in Context: KLP 5

# Previously you have learnt



How to form expressions in algebra from real life contexts. You have learned how to substitute values into expressions, and how to solve linear equations. You have learned how to apply these skills to find the area and perimeter of shapes, and then how to apply your algebra skills to solve problems involving shapes. You will then learn how to apply Pythagoras' Theorem to find missing lengths of right angled triangles.

# In this unit you will learn



How to form equations in algebra based on real life context, and how to interpret algebra into words. You will learn how to solve more complex problems using angle and perimeter of compound shapes. You will also learn how to derive simple formulae.

# **Key Vocabulary and Terminology**



Tier 2: area, perimeter, inverse, indices, square root

Tier 3: variable, term, equation, formula, linear, coefficient, surd

# **Further Learning**

Algebraic Expressions for Perimeter & Algebraic Perimeters Practice

Forming And Solving Equations

Forming Equations: Practice Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 2D Shape and Space: KLP 3

#### Previously you have learnt



How to use a protractor to draw an angle. You have learned how to recognise key angles, and how to recognise and describe different types of triangles.

#### In this unit you will learn



How to use a compass to sketch standard constructions. You will learn how to construct perpendicular bisectors and diagrams given specific information. You will also learn how to construct loci and describe regions satisfying a combination of loci. You will also learned how to construct and interpret scale drawings from maps.

# **Key Vocabulary and Terminology**



Tier 2: scale, accuracy, estimate, compass, protractor

Tier 3: perpendicular bisector, constructions, loci, line segment, obtuse, acute, reflex

# **Further Learning**



Loci & Constructions

Perpendicular Bisector

Scale Drawings

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
<b>Determination</b>	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Data and Statistics: KLP 3, 4

#### Previously you have learnt



How to display information using charts and graphs, and how to interpret charts and graphs. These charts included pictograms, composite bar charts, comparative bar charts, bar-line charts, vertical line charts, line graphs, histograms and stem and leaf diagrams. You have also learned how to find averages from different charts, and how to identify trends and relationships between bar charts and line graphs. You have also learned how to recognise fractions visually, and convert between fractions, decimals and percentages.

# In this unit you will learn



How to interpret data in a pie chart, and how to construct a pie chart from data. You will learn how to find averages from a pie charts, and identify relevant contexts for pie charts.

# **Key Vocabulary and Terminology**



Tier 2: proportion, data, percentage, compare

<u>Tier 3:</u> pie chart, mode, frequency, sectors

# **Further Learning**



Drawing Pie Charts: Practice Questions

Interpreting Pie charts - Maths - Learning with BBC Bitesize - BBC Bitesize

Pie Charts: Practice Exam Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 1


#### Subject: Mathematics Year 9 Number Sense: KLP 1, 2

## Previously you have learnt



How to recall multiplication facts for numbers between 1 and 12 and how to multiply and divide by 10, 100 and 1000. You will also have learnt the order of operations and how to apply basic index laws.

## In this unit you will learn



How to calculate with positive and negative integers and decimals. You will learn how to calculate and solve problems involving HCF and LCM. You will learn how to round values to varying degrees of accuracy and use estimation to support calculations.

## **Key Vocabulary and Terminology**



Tier 2: evaluate, process, decimal, figure, numeral, product, factor, multiple

<u>Tier 3:</u> common multiple, times table, integer, significant figure, standard form, HCF, LCM, prime, prime number decomposition

## **Further Learning**



Significant Figures

**Dividing Decimals** 

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Representing Numbers: KLP 1

## Previously you have learnt



How to perform calculations with integers, and estimate solutions of problems in real life contexts. You have also learnt how to represent fractions visually, and how to order key fractions, decimals and percentages.

## In this unit you will learn



How to convert between fractions, decimals and percentages, and how to order the values by size. You will consider several different strategies, depending on the values. You will learn how to simplify fractions, how to convert between mixed numbers and improper fractions and how to apply arithmetic to different fractions. You will learn how to convert recurring decimals into fractions.

## **Key Vocabulary and Terminology**

Tier 2: Compare, represent, fraction, terminating, recurring



Tier 3: Mixed number, top heavy fraction, denominator, numerator, reciprocal

## **Further Learning**



Converting Fractions Decimals and Percentages

Fractions of Numbers - Tablet Version

Percentages in Real Life

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Introduction to Algebra: KLP 1, 2

## Previously you have learnt



How to recognise and calculate square and cube numbers. You have also learned how to use index notation to represent square numbers, cubes numbers with index notation.

## In this unit you will learn



How to represent real life situations using algebra. You will learn how to interpret and simplify algebraic expressions, and how to substitute values back into expressions. You will then learn how to multiply algebraic expressions in a range of forms, included where brackets are involved. You will learn how to factorise expressions in different forms.

## **Key Vocabulary and Terminology**



Tier 2: simplify, expand, evaluate, represent, unknown

<u>Tier 3:</u> term, expression, equation, formula, identify, indices, powers , like terms, square root, cube root, inverse, variable, factorise, product, 'difference of two squares'

## **Further Learning**



Practice Collecting Like Terms, Algebraic Terms Test Questions, Algebra Practice

Multiplying Expressions, Expanding Quadratics

Factorising Expressions Factorising Quadratics

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
<b>Determination</b>	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 2



#### Subject: Mathematics Year 9 Representing Numbers: KLP 2

## Previously you have learnt



How to represent numbers using fractions and decimals, and how to recognise equal fractions. You have also developed your key numbers skills, including recognising factors of 100 and multiplying and dividing by 100.

## In this unit you will learn



How to represent numbers between fractions, decimals and percentages and compare the size of different numbers. You will apply this knowledge to find percentages of a quantity, and compare the size of quantities. You will then apply your new percentage skills in context, to find VAT and to work backwards where a percentage increase or decrease has been applied.

## **Key Vocabulary and Terminology**



Tier 2: Portion, simplify, quantity, increase, decrease, tax

Tier 3: Multiplier, percentage, loan, VAT

## **Further Learning**



Test Your Percentages

Percentage of an Amount

Percentage Change Practice

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Algebra in Context: KLP 1, 2

## Previously you have learnt



How to find the area and perimeter of simple shapes and how to find missing values in simple calculations.

## In this unit you will learn



How to represent relationships between numbers using algebra. You will then learn to solve different types of linear equations. Next, you will then learn how to find the area and perimeter of different shapes and you will apply your algebra skills to form equations related to shape and space.

## **Key Vocabulary and Terminology**



Tier 2: length, width, area, form, solve, represent

Tier 3: equation, variable, perimeter

## **Further Learning**



Simple Linear Equation Problems Solving Linear Equations: Practice Problems

Forming and Solving Equations from shapes

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Ratio and Proportion: KLP 1

## Previously you have learnt

How to use division to share numbers and how to represent and simplify fractions.



In this unit you will learn



How to apply ratio notation and how to divide quantities into ratios. You will apply this knowledge to find missing quantities and write fractions in terms of ratios. You will learn how to apply ratios to solve problems.

## **Key Vocabulary and Terminology**



Tier 2: ratio, proportion, share, quantity

Tier 3: direct proportion, inverse proportion

## **Further Learning**



Sharing in a Ratio: Bar Model

Ratio: Sharing the Total

Sharing into a Ratio

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<b>Curiosity</b>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 3



#### Subject: Mathematics Year 9 Introduction to Algebra: KLP 3

## Previously you have learnt



How to evaluate numbers that have indices, and how to find square roots. You have also learnt how to write an algebraic expression and simplify algebraic terms.

## In this unit you will learn



How to apply laws of indices when working with algebra, and how to simplify algebraic terms that involve indices. You will be able to recognise powers of 2, 3, 4 and 5. You will also be able to evaluate and simplify expressions with fractional and negative indices and powers of powers. You will apply of this knowledge to solve problems involving index laws.

## **Key Vocabulary and Terminology**



Tier 2: expression, power, simplify, inverse

Tier 3: indices, like term, square, cube, square root, cube root, reciprocal

## **Further Learning**



Laws of indices practice questions

Laws of indices algebra practice

Negative Indices Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Number Sense: KLP 3, 4

## Previously you have learnt



How to write out large numbers from words. You have also learnt to recall the first 12 square numbers, and recognise the relationship between squaring and square rooting. You have previously learnt to perform calculations involving indices.

## In this unit you will learn



How to represent large or small numbers in standard form, and how to perform calculations in standard form. You will learn how to apply this to different contexts. You will then learn how recognise and simplify surds, and how to perform calculations in surd notation. You will apply this to fractions, in order to rationalise the denominator of a fraction.

## **Key Vocabulary and Terminology**



Tier 2: express, multiply, square, inverse

Tier 3: standard form, surd, rational, irrational number, rationalise

## **Further Learning**



Standard Form Practice Questions

Surds - Examples

Surds Practice Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<b>Curiosity</b>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Data & Statistics: KLP 1, 2

## Previously you have learnt



How to collect data with tally charts and how to represent data in bar charts. You have also learnt to interpret data from basic charts and table.

## In this unit you will learn



How to implement the data collection process and how to represent and interpret data. You will learn to specify a problem, plan how to collect data, consider bias and different types of sources. You will understand how different sample sizes may skew results. You will learn how to identify the correct chart to use for a data set and product several different types of graphs and charts. You will learn how to find averages from different charts and recognise simple patterns in the data.

## **Key Vocabulary and Terminology**



<u>Tier 2:</u> Data, bar chart, line chart, average, bias, sample, population, trend, distributions, primary and secondary data, survey

<u>Tier 3:</u> frequency polygon, time-series graph, comparative bar chart, composite bar chart, dual bar chart

## **Further Learning**

Sampling: GCSE Questions,	Data Sampling and Questionnaires Worksheets
Bar Charts: GCSE Questions,	Line Graphs: GCSE Questions
GCSE Pie Charts Questions	

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Representing in Numbers: KLP 3

## Previously you have learnt



How to convert between percentage and decimals. How to find the percentages of amounts, and how to increase and decrease amounts by a given percentage. You have applied percentages to several real life contexts.

## In this unit you will learn



How to calculate percentage change in real life contexts. You will learn to apply multipliers to calculate repeated proportional change. You will learn about compound interest and depreciation in many important real life financial situations.

## **Key Vocabulary and Terminology**





<u>Tier 3:</u> multiplier, rate of change

## **Further Learning**



Compound Interest Practice Questions

GCSE Repeated Percentage Change Questions

Repeated Percentage Change GCSE Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 4



#### Subject: Mathematics Year 9 Trigonometry: KLP 1

## Previously you have learnt



How to solve linear equations, and how to square and square root values. How to identify different types of 2D shapes. How to solve problems using area and perimeter. How to plot coordinates and recognise a line in the form y=mx+c.

## In this unit you will learn



How to identify the hypotenuse of a triangle, and how to apply Pythagoras' Theorem to find side lengths of right angled triangles. Using Pythagoras' Theorem, you will learn to justify whether or not a triangle in right angled. You will then learn how to apply Pythagoras' Theorem to find the length of a line segment, and how to apply Pythagoras' Theorem to 3D shapes.

## **Key Vocabulary and Terminology**

Tier 2: formula, right angled triangle, 3D shape, squaring, square rooting, justify



Tier 3: hypotenuse, Pythagoras' Theorem, surds

## **Further Learning**



Pythagoras' Theorem

Length of a Line Segment

<u>3D Pythagoras</u>

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Eventleren	Application		la option tip o	Community
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Algebra in Context: KLP 3

## Previously you have learnt



How to calculate the area and perimeter of a range of 2D polygons. You have learnt how to solve linear equations, and how to substitute values into a formula. You have also learnt how to square and square root values.

## In this unit you will learn



How to identify and describe the key features of a circle, including the radius. How to calculate the area and the circumference of circles, and of sectors. How to calculate the perimeters and areas of composite shapes involving circles. You will learn how to apply your knowledge to solve problems, and to find a missing radius. You will calculate all of this in terms of both pi and with significant figures.

## **Key Vocabulary and Terminology**



Tier 2: circle, sector, proportion, area, perimeter, degrees

Tier 3: radius, diameter, circumference, formula, arc

## **Further Learning**



Parts of a Circle

Area of a Circle: Exam Questions

Arc Lengths - Circles, Sectors and Arcs

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Probability: KLP 1

### Previously you have learnt



How to interpret probability on a scale from 0 to 1, and how to interpret words like 'unlikely', 'impossible, 'certain' on the scale. Find probabilities as a fraction for simple events. How to list outcomes of events systematically.

## In this unit you will learn



Use fractions, decimals and percentages to represent probabilities. Identify independent, dependant and mutually exclusive events. How to represent and calculate probabilities from two-way tables. Represent events in Venn Diagrams, and tree diagrams, and calculate probabilities from each. Use both diagrams to calculate conditional probability.

## **Key Vocabulary and Terminology**



Tier 2: impossible, unlikely, even chance, likely, certain, probability, experimental

<u>Tier 3:</u> Venn diagram, tree diagram, two way table, sample space diagram, relative frequency, theoretical frequency, conditional probability

## **Further Learning**



Probability Scales

Venn Diagram GCSE Questions

Tree Diagrams GCSE Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	<mark>Citizenship</mark>
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Sequences and Graphs: KLP 1

## Previously you have learnt

How to recognise different types of sequences. How to solve linear equations.



In this unit you will learn



How to describe sequences both as a term to term rule, and using algebra. Identify arithmetic and geometric sequences, and find the nth term for both linear and quadratic sequences. How to apply the nth terms in order to solve problems.

## **Key Vocabulary and Terminology**



Tier 2: difference, describe, sequence

Tier 3: nth term, linear, geometric, quadratic, term

## **Further Learning**



Linear Sequences

Quadratic Sequences

GCSE Exam Questions: Sequences

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 5

Excellence



#### Subject: Mathematics Year 9 3D Shape and Space: KLP 1

## Previously you have learnt



How to recognise and classify a range of 2D shapes. How to apply angle facts to find missing angles in 2D shapes and solve problems involving angles. You will be able to name basic 3D shapes and identify their key features.

## In this unit you will learn



How to recognise and sketch 3D solids, and how to name key 3D solids. How to identify the key features and names of common 3D shapes. How to sketch elevations and plans of shapes made from simple solids.

## **Key Vocabulary and Terminology**



Tier 2: volume, capacity, length, width, height, edges, faces

<u>Tier 3:</u> surface area, perimeter, vertices, nets, cylinders, cube, cubes, prism, pyramid, sphere, cones, side elevation, front elevation

## **Further Learning**



Naming 3D Shapes Quiz

Interactive Nets of 3D Shapes

Exam Questions for 3D Shapes

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 2D Shape and Space: KLP 1

## Previously you have learnt



How to recognise simple 2D shapes and describe their key features. You have also learnt how to measure angles using a protractor, and recognise different types of angles. You will know key angle facts for angles around a point and on a line.

## In this unit you will learn



How to classify quadrilaterals using their key features, and recognise different types of triangles. You will be able to use this information to find missing angles in these shapes. You will learn to calculate both interior and exterior angles in triangles and quadrilaterals. You will learn and apply key angle facts for parallel lines, to find missing angles, and to justify the size of angles.

## **Key Vocabulary and Terminology**



Tier 2: angle, parallel, perpendicular

<u>Tier 3:</u> polygon, regular, irregular, isosceles, scalene, equilateral, right angled, interior and exterior angles, congruent, quadrilaterals, corresponding, alternate angles, co-interior angles

## **Further Learning**



Triangles: GCSE Quiz

Angles in Parallel Lines: Explanation

Angles in Parallel Lines: Exam Style Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Algebra in Context: KLP 4

## Previously you have learnt



How to find the area and perimeter of a range of shapes. You have learned to form equations based on area and perimeter, and use algebra to help you solve problems involving shapes.

## In this unit you will learn



How to identify the difference between a term, an expression, an equation, a formula and an identity. You will learn how to derive simple formulae, and how to change the subject of a formula. In particular, you will learn how to use the kinematics formula in real life contexts.

## **Key Vocabulary and Terminology**



Tier 2: derive, substitute, subject, acceleration, speed, initial, velocity

Tier 3: formula, term, expression, identity, equation

## **Further Learning**



Expression, Identity, Equation or Formula - Practice

Formulae: Exam Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Data and Statistics: KLP 3

## Previously you have learnt



How to implement the data collection process and how to represent and interpret data. You will learn to specify a problem, plan how to collect data, consider bias and different types of sources. You will understand how different sample sizes may skew results. You will learn how to identify the correct chart to use for a data set and product several different types of graphs and charts. You will learn how to find averages from different charts and recognise simple patterns in the data.

## In this unit you will learn



How to calculate different averages from lists of data and different charts. You will learn how to interpret these averages to make judgements. You will also learn how to compare distributions using different measures. You will learn to estimate averages from grouped data, and discuss the accuracy of your estimation.

## **Key Vocabulary and Terminology**



<u>Tier 2:</u> Data, chart, graph, average, compare, justify, interpret, estimate

<u>Tier 3:</u> distribution, skew, stem and leaf diagram, frequency polygon, median, mean, mode, range, interpolate, extrapolate, grouped data, continuous data, discrete data

## **Further Learning**



Averages from Steam and Leaf Diagrams

Analysing Data

Grouped Data: Exam Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community

# Term 6



#### Subject: Mathematics Year 9 Representing Movements: KLP 1, 2

## Previously you have learnt



How to recognise similar shapes, and how to describe movements of shapes on coordinate axis. You have learned how to apply angle facts and how to solve problems using Pythagoras' Theorem and trigonometry.

## In this unit you will learn



How to identify, describe and apply transformations on 2D shapes. You will learn how to find scale factors and identify congruent shapes. The transformations you will learn are; translations using a vector, rotations using a centre, enlargements using a centre and scale factor and a reflection using a mirror line in the form y=mx+c. You will then learn how to describe and apply bearings to real life contexts, and solve problems involving bearings.

## **Key Vocabulary and Terminology**



<u>Tier 2:</u> parallel, perpendicular, north, east south, west, transformation, rotation, reflection, enlargement,

<u>Tier 3:</u> movement, relationship, direction, column vector, scalar multiplication, scale factor, bearing

## **Further Learning**



 Interactive Reflections, Interactive Rotations,
 Interactive Translations

 Lesson: Describing Transformations,
 Transformations Quiz

 Interactive Bearings & Trigonometry,
 Bearings: Practice Exam Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	Curiosity	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 2D Shape and Space: KLP 2

## Previously you have learnt



How to recognise and describe a range of 2D shapes. You have learned to calculate both interior and exterior angles in triangles and quadrilaterals. You have learned a range of angle facts in shapes and in parallel lines. You have used these to find missing angles, and to prove the size of angles.

## In this unit you will learn



How to describe key features of a circle. You will learn to recognise and apply a range of different circle theorems to find a missing angle. You will learn to construct a logical proof when applying circle theorems.

## **Key Vocabulary and Terminology**



Tier 2: angle, parallel, perpendicular, semi circle, prove, justify

<u>Tier 3:</u> radius, diameter, circumference, segment, chord, arc, pi, subtended, cyclic quadrilateral, alternate segment,

## **Further Learning**



Interactive Circle Theorems

Circle Theorems Practice

Circle Theorems: Exam Style Questions

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
Determination	<mark>Curiosity</mark>	Verbal Confidence	Social Intelligence	Citizenship
Excellence	Aspiration	Achievement	Inspiration	Community



#### Subject: Mathematics Year 9 Data and Statistics: KLP 4

## Previously you have learnt



How to implement the data collection process and how to represent and interpret data. You will learn to specify a problem, plan how to collect data, consider bias and different types of sources. You have learned how to interpret averages to make judgements, and how to compare distributions.

## In this unit you will learn



How to identify when it is appropriate to use a scatter graph. You will learn to draw and interpret scatter graphs, identify correlation and identify outliers. You will learn how to interpret a line of best fit, and how to make predictions and identify trends.

## **Key Vocabulary and Terminology**



Tier 2: relationship, correlation, positive, negative

Tier 3: interpolate, extrapolate, continuous data, bivariate data, causality

## **Further Learning**



Collecting Data

Scatter Graphs

Scatter Graphs: Exam Questions

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#### Subject: Music Year 9 GCSE Term 6

## Previously you have learnt



During Term 5 you have been developing your knowledge of popular music styles and genres, the technology behind the music, and broader techniques used within the creation and performance of popular music

## In this unit you will learn

Term 6 will see your study of popular music styles and genres broaden.



You will also develop your performance skills and confidence within the many genres of pop, composing chord progressions and bass lines, and developing your listening skills across a wide variety of popular genres and styles of music.

## **Key Vocabulary and Terminology**



<u>Tier 2:</u> compose, contrast, improve, develop, evaluate, texture, structure, dynamics, tempo, verse, chorus, middle 8, bridge, intro, outro, sequence

<u>Tier 3:</u> monophonic, homophonic, polyphonic, verse-chorus structure, conjunct, disjunct, regular meter, irregular meter, sonority, tonality, syllabic, melismatic, four-on-the-floor, one drop, skank, riff

## **Further Learning**



Popular Music Genres

Focus On Sound - <u>https://fosuk.server1.apps.focusonsound.com/lessons/eduqaswjec-</u> gcse#eduqas--popular-styles

BBC Bitesize - <u>https://www.bbc.co.uk/bitesize/examspecs/zbmct39</u> - Popular Music

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#### Subject: Year 9 Football

## Previously you have learnt



Students have previously learnt; Dribbling and turn against defenders, Development of attacks, Teamwork, Defensive strategies

## In this unit you will learn



Students will learn; Heading, Attacking at Pace, Shooting under pressure, Defensive Tactics and Set Plays

## **Key Vocabulary and Terminology**

Tier 1: Technique, positioning, creativity, movement



Tier 2: Pace, Accuracy

## **Further Learning**



Movement Patterns

Small Sided Games

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
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#### **Subject: Physical Education Year 9 Hockey**

## Previously you have learnt



How to dribble and move with the ball, passing and reverse stop. How to create a space/ attacking principles. How to defend using the 'Jab' tackle, shooting and applied these in to a game situation, you also continued to demonstrate teamwork and outwitting an opponent.

## In this unit you will learn



To dribble the ball with fluency, control and speed in a small-sided game with the intention of outwitting opponents using the Indian dribble. To understand and demonstrate the ability to beat defensive players. To use information gained on opponents to influence play and tactical ideas. To perform an effective hit and push shot incorporating strategies for shooting to produce a successful outcome. To understand the basic positions and associated roles.

## **Key Vocabulary and Terminology**

Tier 1: Indian dribble, obstruction, timing, third party, penalty corner, self-pass,



Tier 2: Exploit, strategy, analyse, formation, roles, assess

## **Further Learning**



Stopping the ball, creating space and advanced shooting

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#### Subject: Physical Education Year 9 Netball

## Previously you have learnt



In Year 8, you recapped passing skills and fundamental rules, identified which pass is used when on a netball court. Progressed your attacking, defending and shooting skills then moved onto game situations using all the new skills you developed. You developed your overall knowledge of a netball game looking at positions. As well as knowing basic netball rules

## In this unit you will learn



In Year 9, you will recap netball fundamentals rules, use space on court, look at attacking and defending principles, team tactics with centre passes and working the ball around the circle.

## **Key Vocabulary and Terminology**



Tier 2: decision-making, speed, tactical, covering

Tier 3: footwork, pivoting, obstruction, possession, outwitting, intercepting, passing, receiving, ball handling, shooting, marking, dodging, speed, agility

## **Further Learning**



Passing and receiving development

Creating space and use of movement

Shooting

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Subject: Religious Education, Year 9, Does Hinduism have the right response to the multi-faceted nature of God?

## Previously you have learnt



You have foundational knowledge of the beliefs and practices of different core faiths and Humanism which you are able to apply to different thematic studies such as the relationship between religion and the environment. You have a good understanding of the way religion interacts with every day practices, for example science, and can explain its impact on society. You have an understanding of the religious teachings on social justice and charity, and can apply them to issues such as prejudice and discrimination.

## In this unit you will learn



You will explore the way in which the Hindu religion explains the multi-faceted nature of God. You will explore Hindu ideas of the divine, and be able to study the Upanishads to gain an understanding of the Tri- Murti and deities within Hinduism. You will consider the effectiveness of a religion which is both poly theist and monotheist at the same time. You will explore the Hindu beliefs regarding the Divine and Avatars, and compare the approach to that of other religions and faiths.

## **Key Vocabulary and Terminology**

Tier 2



Nature of God, Multifaceted, Hinduism, Belief, Faith

Tier 3

Omnipotent, Upanishad, Brahman, Divine, Purana, Brahma, Vishnu, Shira, Deities, Avatars, Atman, Imageo Dei, Ex Nihilo, Omnibenevolent

## Further Learning



Hindu beliefs about the nature of God

Video about 3 of the Deities

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#### Subject: Design and Technology (RM) Year 9 Door Hook project

## Previously you have learnt



In Key Stage 3 you will have learnt how to mark out, cut and finish materials and basic information about working with and joining timber safely. You will have worked with simple hand tools and used CAD and CAM to produce simple products. So far within year 9 you have learnt practical skills linked to cutting, shaping, forming and joining woods, plastics and metals. In this project, you will have the opportunity to develop and combine skills in wood working and metal working.

## In this unit you will learn



During this unit you will practice and refine your practical working skills in woods and metals to produce a door hook suitable for batch manufacture. Within the practical metal working skills you will learn how to cut, bend and join metals.

## **Key Vocabulary and Terminology**



Tier 2: follow, marking out, prepare, finish, shape

Tier 3: Hack saw, metal file, emery cloth, anvil, pillar drill

## **Further Learning**



BBC Bitesize: Metal-based materials

Technology Student: Working with Metals

Supporting textbook: CGP Design and Technology GCSE textbook

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#### Subject: Design and Technology (RM) Year 9 Environmental issues

## Previously you have learnt



In Key Stage 3 you will have learnt how to mark out, cut and finish materials and basic information about working with and joining timber safely. You will have worked with simple hand tools and used CAD and CAM to produce simple products. So far within year 9 you have learnt practical skills linked to cutting, shaping, forming and joining woods, plastics and metals. You will also have learnt about the theory behind woods, metals and plastics.

## In this unit you will learn



During this unit you will learn about the environmental issues that designers and manufacturers need to consider when designing new products. This will include issues of sustainability and the 6Rs. You will learn what planned obsolescence is and the environmental impact of this.

## **Key Vocabulary and Terminology**



Tier 2: compare, explain, discuss, contrast, analyse

<u>Tier 3:</u> planned obsolescence, sustainability, recycle, rethink, reuse, repair, reduce, refuse

## **Further Learning**



BBC Bitesize: Sustainability

Technology Student: Environmental issues

Supporting textbook: CGP Design and Technology GCSE textbook

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#### Subject: Science Year 9 Biology CB5 Health and Disease

## Previously you have learnt



In <u>Year 8, you learnt what it means to be healthy and compared infectious and lifestyle</u> diseases.

## In this unit you will learn



To explain what is meant by health and disease, describe the risk factors that may lead to different non-communicable diseases (including cardiovascular disease), describe diseases caused by pathogens, describe how pathogens spread, describe physical and chemical barriers that the human body has, explain how the body responds to invading pathogens and describe how antibiotics work and how to make new medicines.

## **Key Vocabulary and Terminology**



<u>Tier 3:</u> Communicable, non-communicable, pathogen, physical barrier, chemical barrier, immune system, lymphocyte.

## **Further Learning**



BBC Bitesize – Health and Disease Notes

Resilience	Open Mindedness	Creativity	<b>Responsibility</b>	Empathy
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#### Subject: Science Year 9 Chemistry CC8 Acids and Alkalis

## Previously you have learnt



In <u>Year 8 you have compared the properties of acids and alkalis and described the difference</u> between the terms concentrated and dilute. You learnt to use the pH scale to measure acidity and alkalinity. You learnt to write basic neutralisation equations for the reaction of acids with metals, metal oxides, metal hydroxides and metal carbonates. In <u>Year 9</u> you learnt how to separate mixtures using filtration and crystallisation.

## In this unit you will learn



To describe acids and alkalis using key terms. You will be able to explain the acidity and alkalinity of a substance using indicators and the pH scale. You will investigate and explain neutralisation reactions. You will investigate the different methods of synthesising salts and predicting the solubility of different salts. You will explain the difference between strong and weak acids in terms of particle dissociation.

## **Key Vocabulary and Terminology**

Tier 2: Predict, describe, explain, investigate.



<u>Tier 3:</u> Acid, alkali, neutralisation, pH, concentrate, dilute, strong, weak, soluble, insoluble, dissociate.

## **Further Learning**



Acidic and Alkaline solutions - Acids and alkalis - Edexcel - GCSE Combined Science Revision -Edexcel - BBC Bitesize

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#### Subject: Sociology Year 9 – Research Methods

## Previously you have learnt



The role of a sociologist in society and as a career; this includes the development of your sociological imagination and the importance of understanding issues of inequality and societal systems. You have also learnt about the difference between primary and secondary socialisation. Additionally, you have learnt how society is divided by process of globalisation and stratification, and examples of inequality by CAGE factors and the proposed potential solutions.

## In this unit you will learn



How to identify, describe and explain various methods and methodological issues. You will also be able to identify and explain the advantages and disadvantages, strengths and weaknesses of a particular method for a specific area of research. Additionally, you will learn how to demonstrate an understanding of the process of research design for a specific area of research, including practical difficulties and ethical issues, and how to interpret data presented in a variety of forms.

## **Key Vocabulary and Terminology**

Tier 2: Equality, inequality, class, age, gender, ethnicity, poverty, racism, sexism

<u>**Tier 3:</u>** Bias, Control theory, Hypothesis, Response rate, Informed consent, Interactionism, Pilot study, Positivism, Controlled conditions, Grounded theory, Confidentiality, Ethical considerations, Objectivity</u>

## **Further Learning**



Are people treated equally?

How can citizens bring about change?

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Excellence	Aspiration	Achievement	Inspiration	Community