Student Learning Journey

Subject: Art Year 10 Structures term 5

Previously you have learnt

You will have previously explored a selection of project titles in year 9 including 'Everyday Objects' and 'Human'. A wide selection of media will have been introduced including 3D, printmaking and various painting and drawing techniques.

This is an extended project where you will develop structures into a final outcome. This will enable you to develop AO4 and really work on a personal outcome from all your work.

In this unit you will learn

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.

Key Vocabulary and Terminology

Tier 2: evaluate, analyse, create, accuracy

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

Further Learning

Tate Gallery: Structures

Saatchi Gallery: Structural Artists

Hatton Character Qualities

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

Student Learning Journey

Subject: Business & Enterprise NCFE Year 10 Finance

Previously you have learnt

About costs, revenue and profit from Year 9. You have learnt about the different types of costs, such as fixed and variable, revenue (price x quantity) and profit (Revenue – costs).

In this unit you will learn

About cash flow, how to construct and interpret a break-even chart and understand the difference between assets and liabilities. You will learn how to interpret data from a balance sheet and a profit and loss account – this is a very important skill for the course. You will also learn about ratio analysis and acid test ratio.

Key Vocabulary and Terminology

Tier 2: List, research, search, identify, define, describe, analyse, financial, non-financial.

Tier 3: Assets, liabilities, current, non-current, cash flow, inflow, outflow, margin of safety, acid test, ratio analysis

Further Learning

Basic financial terms - Financial terms and calculations

The importance of cash flow - Cash and cash flow

Analysing the financial performance of a business

Hatton Character Qualities

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

Student Learning Journey

Subject: Computer Science Year 10 Impacts of Digital Technology

Previously you have learnt

This is the first time you will have considered ethics and laws in computer science.

In this unit you will learn

to consider the ethical, moral, cultural and environmental impacts of computer science and technology on the wider world.

You will also look at the laws and regulations in computer science, how they might be broken and the consequences that breaking them brings on the individual and the organisation.

Key Vocabulary and Terminology

Tier 2: evaluate, analyse, context, apply, link, investigate, describe, explain, research, discuss, expand, explore

Tier 3: ethical, cultural, environment, legislation, manufacture, disposal, upgrade, e-waste, privacy, legal, data protection, computer misuse, copyright, patent, open source, proprietary, licence

Further Learning

OCR GCSE (J277) 1.4 Threats posed to networks

OCR GCSE (J277) 1.5 The purpose and functionality of operating systems

Hatton Character Qualities

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

Student Learning Journey

Subject: Drama Year 10 Term Five: Component 1 DEVISING

Previously you have learnt

The skills of responding, developing, creating, rehearsing and performing during practical lessons throughout Year 7, 8 and 9.

Using different stimuli to work with imagination to bring practical rehearsals to performance.

In this unit you will learn

You will collaboratively devise an original drama in groups based on a range of stimuli.

You must respond imaginatively, develop and refine your work following feedback and rehearse to perform to an audience. You will also write a supporting document 'portfolio' of 2,000 words.

Key Vocabulary and Terminology

Tier 2: respond, devise, stimuli, refine, process, evaluate, create, perform, analyse, intention, develop, convention, physicality, collaborate

Tier 3: stimulus, portfolio, empathy, sympathy, climax, anti-climax, tension, narrative structure, form, style, genre, Freytag's pyramid, rising action, inciting moment, catalyst, complication, conflict, resolution, context, improvise, hotseat, thought-track, tableaux, mark the moment, canon, unison, choral speaking, narration, flashback, aside,

Further Learning

Devising - GCSE Drama Revision - Edexcel - BBC Bitesize

Hatton Character Qualities

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

Student Learning Journey

Subject: Hospitality and Catering Year 10 NEA

Previously you have learnt

Last term you have been working on your Non-Examination Assessment (NEA/coursework). Analysed the assignment brief and recommend one dish for each customer. Assess how the dish meets the nutritional needs of the customers. Explain the impact of cooking methods on the nutritional value of your chosen dishes.

In this unit you will learn

This Term you will complete your Non-Examination Assessment (NEA/coursework) which values 60% of your grade. You must discuss the factors which affected your chosen dishes and plan the production of the two dishes by writing a dovetail plan. You will demonstrate how to work safely, follow correct food safety and hygiene practices and procedures in relation to the preparation and cooking of food and use of equipment and facilities in a practical setting. You will also review your performance to conclude your coursework. You will also explore the hospitality and catering industry.

Key Vocabulary and Terminology

Tier 2: collate, find, identify, label, state

Tier 3: Organoleptic, Commodity, Dovetail/sequencing.

Further Learning

Textbook: Level ½ Vocational Award Hospitality and Catering; Course Companion Author Alison Palmer

Website: WJEC H&C

BBC Bitesize: Hospitality and Catering

Hatton Character Qualities

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

Student Learning Journey

Subject: Textiles Year 10 Skills Building Project

Previously you have learnt

This year you have applied your understanding of art and design practice to complete your Assessment project. In this project you worked independently to showcase your ability to investigate, generate ideas, refine and develop techniques and processes. You organised and presented your work in an effective and personal way culminating in a final outcome which met the set brief.

In this unit you will learn

In this skills building unit you will enhance you technical skills by exploring a range of more complex techniques and processes inspired by a given theme. You will also learn how Computer Aided Design and Manufacture can be used to enhance the development and visual communication of your work.

Key Vocabulary and Terminology

Tier 2: investigate, experiment, generate, review, develop, refine, record, communicate, confident, competent, effective

Tier 3: CAD, CAM, embroidery, canotype, mixed media, screen printing

Further Learning

Victoria and Albert Museum Fashion collection

Fashion Designers inspired by structure 8 Strangely Fascinating and Innovative Fashion Designers – Scene360

BBC Bitesize The creative process

Hatton Character Qualities

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

Student Learning Journey

Subject: English Year 10 GCSE English Language: Spoken Language Endorsement

Previously you have learnt

Throughout your English studies at Sir Christopher Hatton you have developed your skills in presenting a strong viewpoint on a variety of topics. For example, in Year 9, you wrote an article on whether being a teenager could be considered a "universal experience". You have developed your oracy skills through a variety of tasks in the English classroom and beyond. Now you will put all these skills together to give a presentation to an audience.

In this unit you will learn

How to structure a formal presentation to engage an audience: You will consider how to grab your audience's attention at the beginning of your speech, ensuring that the audience can clearly understand the importance of the topic that you will be presenting on. You will develop your ideas in detail so that the presentation is rich in information that the audience can follow. Finally, you will signpost to your listeners when your presentation is coming to an end and you will use language to leave them with powerful closing thoughts. Throughout your presentation you will keep your expression formal, using sophisticated vocabulary to interest your audience.

Key Vocabulary and Terminology

Tier 2: Structure, discourse markers, pace, pause, delivery, argument, viewpoint, engagement

Tier 3: This will depend on the topic you choose to give your presentation on. You should take time to plan the language that you will use and choose a range of subject specific vocabulary. If the audience will not have heard the word before, be sure to define it.

Further Learning

2016 Word Public Speaking Champion, Darren Tay Wen Jie

Michelle Obama's Speech "Let Girls Learn"

BBC Ideas "How to Write a Perfect Speech"

Hatton Character Qualities

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

Student Learning Journey

Subject: English Year 10 GCSE English Literature Past and Present: Poetry Anthology (Power and Conflict Cluster)

Previously you have learnt

You have studied a variety of poems linked to the theme of conflict in Year 7. In Year 8 you revisited conflict along with ideas about power and corruption in your studies of *Animal Farm*. You studied a corrupt leader in *Macbeth* by William Shakespeare in Year 9. You also studied a wide variety of poems in Year 9. Whilst studying these poems you explored how to approach and analyse poetic language and form, and how to understand and utilise historical context.

In this unit you will learn

Ways to approach poetry as a form of human expression: understanding each poem's place within history and the literary canon. You will review the ways in which poets make meaning, including the exploration of layers of meaning. You will learn to construct sophisticated arguments to explain your evaluation of poems, poets and their ideas. You will explore and discuss the contexts that shaped the poems, looking at the Romantic Era, Colonisation and the Windrush experience, Irish identities, the Crimean War and both World Wars. You will consider how the themes of power and conflict can be traced through to more modern wars and the immigrant experience. You will learn how to make a confident and well-argued personal response in which you compare two poems.

Key Vocabulary and Terminology

Tier 2: Form, structure, inference, analysis, interpretation, context, sensory, speaker, subject

Tier 3: Sonnet, enjambement, end-stopped, alliteration, metaphor, simile, assonance, sibilance, figurative expression, personification, imagery, meter, rhyme, iambic pentameter, volta, octet, sestet, Petrarchan, Shakespearean, onomatopoeia

Further Learning

Short Course of Lectures on Poetry

Linking the Poems: Power and Conflict Revision

William Blake's London BBC Teach (all the videos in this series are really helpful)

Hatton Character Qualities

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

Student Learning Journey

Subject: Film Studies – GCSE – Component 2, Section B – Global non- English Language films - Tsotsi - Representation

Previously you have learnt

This year you have learnt how to analyse a film and have explored how to embed film terminology and theories. As well as this, you have spent time analysing the films Attack the Block (aesthetics) and District 9 (narrative). You have also explored the contexts of the Apartheid and the London riots of 2011 and how these have influenced how the films were made and received by spectators.

In this unit you will learn

This unit will have you exploring the representations of characters, issues and themes in the non-English language film Tsotsi. Alongside this, you will explore the context surrounding the film – focusing on the Apartheid in South Africa and the AIDS/HIV epidemic. You will consider the impact of this context on the spectator, alongside making links to the themes of poverty and ethnicity, gender and youth representations.

Key Vocabulary and Terminology

Tier 2: exposition, equilibrium, representation, protagonist, antagonist

Tier 3: Segregation, apartheid, township, Kwaito

Further Learning

http://www.filmeducation.org/pdf/ resources/secondary/Tsotsi.pdf
http://www.scoop.it/t/tsotsi
http://www.film.sentamu.com/wp-content/ uploads/2014/02/TSOTSI-STUDY-GUIDE.pdf
http://www.bbfc.co.uk/case-studies/tsotsi

Hatton Character Qualities

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

Student Learning Journey

Subject: Geography – Year 10, Physical Landscapes of the UK

Previously you have learnt

About **tectonic hazards** by studying the **2011 Japan earthquake** and the **2010 Haiti earthquake** and how those hazards are **managed.** You also studied the concept of **development** and the **development gap**. In this you have looked at the **impact that physical geography has on development**. You developed your geography skills through using **OS maps** and **analysing** other sources such as photographs and geographical reports.

In this unit you will learn

You are going to learn about how the UK landscape is dynamic and constantly changing. You will look at the process of **erosion, transportation** and **deposition**. You will examine how these key areas such as **Hunstanton**, which you will also visit as a part of your fieldwork study, the **River Tees** and **Somerset Levels**.

Key Vocabulary and Terminology

Tier 2: primary effects, protection, secondary effects, economic impact, environmental impact,

Tier 3: hydrological cycle, geology, hydraulic action, Longshore drift

Further Learning

UK Landscapes - https://www.bbc.co.uk/bitesize/topics/zskbv4j

Hatton Character Qualities

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

Student Learning Journey

Subject: German Year 10 – Revision

Previously you have learnt

In Key Stage 3 we covered lots of different topics – Family, pets, home, sport, hobbies, school, holidays, technology and food. We have revisited these topics at least once sometimes twice and extended our vocabulary and tenses the second time.

In this unit you will learn

Prepare ourselves for our mock exams by revisiting all the topics we have learnt so far. We will up level this by increasing the difficulty by looking at higher Tier reading and listening content in these revisited topics.

Key Vocabulary and Terminology

<u>Tier 2</u> preterite, perfect tense, future tense, conditional

<u>Tier 3</u> Was hast du letzte Woche gemacht? Wie war es?

Was machst du nächste Woche?

Was würdest du machen, wenn du viel Geld hättest?

Further Learning

Please look at our department Padlet

https://padlet.com/hattonmfl/ks4-german-links-ksd8i6h1yzgc4fkz

Hatton Character Qualities

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

Student Learning Journey

Subject: History Year 10 Elizabethan England c 1568 - 1603

Previously you have learnt

About the rule of the Tudors in particular Elizabeth I's father Henry VIII and how he started a religious rollercoaster with England changing from Catholicism to Protestantism and the creation of the Church of England. As well as religious changes you learnt about the impact of Elizabeth I not having an heir to the throne and choosing James IV of Scotland who became James I of England.

In this unit you will learn

You will study in depth the last 35 years of Elizabeth I's reign. The study will focus on major events of Elizabeth I's reign considered from economic, religious, political, social and cultural standpoints, and arising contemporary and historical controversies. For example, her control of the court, why she never married and how she led her army in foreign affairs. You will also look at life in the Elizabethan period for the different classes including the Golden Age and Exploration Abroad.

Key Vocabulary and Terminology

Tier 2

Ministers heir succession rebellion Catholicism Protestantism

Tier 3

Patronage Puritans vagabondage circumnavigation voyage

Further Learning

Elizabeth I - GCSE History Revision - AQA - BBC Bitesize

AQA History GCSE - Elizabethan England Flashcards | Quizlet

Elizabethan England: Student revision day for AQA GCSE (9–1) History 2023 - YouTube

Hatton Character Qualities

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

Student Learning Journey

Subject: Digital Information Year 10 Data Manipulation Using Spreadsheets

Previously you have learnt

About the planning required for spreadsheets and human interfaces this academic year. You have learnt basic and advance spreadsheet skills including functions, charts, pivot tables and formatting. You have learnt about different types of hardware and software including their advantages and disadvantages.

In this unit you will learn

How to plan, implement, test and evaluate a spreadsheet based on a client's requirements. Every day you create data. For example, you count your daily steps and buy and sell items using the internet. Organisations take this data and turn it into useful information that they can use, often using spreadsheet applications. You will be expected to manage coursework deadlines while make sure work is completed to a high standard.

Key Vocabulary and Terminology

Tier 2: Charts, Data, row, column, sort, filter, client

Tier 3: formatting, If Formulas, vlookups, conditional formatting, validation, pivot tables, macros

Further Learning

19 Most Useful Excel Skills, Functions & Formulas

20 Must-Have Excel Skills for Professionals in 2022 – One Education

Hatton Character Qualities

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

Student Learning Journey

Subject: Extremism, diversity and safe relationships

Previously you have learnt

In Year 7, you looked at criminal law, community cohesion, consent, and online relationships as well as digital footprints. In Year 8, you focus on Prevent and the impact of discrimination on pupils' mental health and welfare. In Year 9, you covered what radicalisation and what would lead someone to this extreme behaviour. You have learned how to notice peer-on-peer abuse and you should know how to report this. You will have learned about the impact of outside influences on an individual from peers and gangs so you can recognise when something is not

In this unit you will learn

How to deal with the influences of gangs or peers as well as the impact of vaping and smoking. You will also have a lesson on the impacts of knife crime and how to support your mental health in KS4 (exam pressures etc). This series of lessons builds on your knowledge form previous years allowing you to delve more deeply into these topics.

Key Vocabulary and Terminology

Tier 2: Discuss, identify, explain, analyse, think, pair share,

Tier 3: disclosure, person of trust, abuse, extremism, terrorism, right-wing, conflict, diversity, discrimination, protected characteristics

Further Learning

https://www.youngminds.org.uk/

https://www.bbc.co.uk/bitesize/guides/zt4m6fr/revision/1

https://www.nspcc.org.uk/

Hatton Character Qualities

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

Term 1

Student Learning Journey

Subject: Mathematics Year 10 3D Shape and Space: KLP 2

Previously you have learnt

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.

In this unit you will learn

How to calculate the surface area and volume of different 3D shapes. You will then apply this to more challenging shapes, including cones, spheres, pyramids and frustums. You will then apply this knowledge to a range of different contexts, solving problems involving both volume and surface area.

Key Vocabulary and Terminology

Tier 2: volume, surface area, dimension, sketch, calculate, convert, net, estimate

Tier 3: face, edge, vertex, cylinders, cube, cubes, prism, pyramid, sphere, cones, frustum side elevation, front elevation

Further Learning

Volume of a Prism

Surface Area Problems

Cones, Spheres and Cylinders

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Ratio & Proportion: KLP 2, 3

Previously you have learnt

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 have also learned how to represent ratio as a fraction, how to compare ratios and how to apply ratios to problems involving shapes, area and volume.

In this unit you will learn

How to apply proportional reasoning to a range of real life contexts. You will learn the difference between inverse and direct proportion. You will apple these to recipes, currency conversions, scale drawings and other contexts. You will then learn how to represent proportion graphically.

Key Vocabulary and Terminology

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

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

Further Learning

Currency Conversion Practice

Best Buys

Proportional Reasoning Exam Questions

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Data and Statistics: KLP 5

Previously you have learnt

How collect data, how to analyse data and how to represent different types of data in appropriate charts and graphs. You have learned how to recognise samples and populations, and how to identify and discuss bias in data.

In this unit you will learn

How to represent bivariate data in a scatter graph. You will learn how to interpret data displayed in a scatter graph, and how to make inferences about the relationships between two variables. You will learn to identify outliers, and consider the reliability of interpolation and extrapolation.

Key Vocabulary and Terminology

Tier 2:

Construct, interpret, chart, graph, sample, population

Tier 3:

Discrete, continuous, bivariate data, interpolation, extrapolation, outlier, correlation, causality

Further Learning

Scatter Graphs - Video explanation

Scatter Graphs - Exam Practice

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Sequences and Graphs: KLP 1

Previously you have learnt

How to recognise simple sequences, and how to find the next term in a sequence. You have also learnt how to simplify simple algebraic expressions, how to form simple expressions and how to substitute values into expressions.

In this unit you will learn

How to recognise, form and continue different types of sequences. You will learn how to calculate and apply the nth term of an arithmetic sequence, and represent a range of contexts using sequences. You will use the nth term to make judgements and to solve problems.

Key Vocabulary and Terminology

Tier 2: ascending, descending

Tier 3: arithmetic, geometric, Fibonacci, linear, quadratic, term, progression,

Further Learning

Explanation: How to find the nth term.

nth term: practice questions

Sequences and Patterns

Hatton Character Qualities

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

Term 2

Student Learning Journey

Subject: Mathematics Year 10 2D Shape and Space: KLP 2

Previously you have learnt

How to construct different types of triangles and angles using a compass. You will have also learnt how to recognise different types of angles and to find missing angles in basic shapes.

In this unit you will learn

How to recall and apply key angle facts for triangles, perpendicular lines and parallel lines. This will include proving key angle facts. You will learn how to apply multiple angle facts logically in order to solve problems.

Key Vocabulary and Terminology

Tier 2: prove, justify, identify, orientation, dimensions, construct, angle

Tier 3: polygon, regular, irregular, perpendicular, parallel, interior and exterior angles, corresponding and alternate angles, vertically opposite angles.

Further Learning

Basic Angle Facts - Interactice Practice

Angles and Triangles Test Questions

Angles in Parallel Lines - Examples and Practice

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Number Sense: KLP 5

Previously you have learnt

How to express numbers in different forms. This includes using decimals, indices and square roots. You have also learnt how to multiply and divide by powers of 10, and how to multiply decimals.

In this unit you will learn

How to express numbers in standard form, by applying multiplication of powers of 10. You will also learn how to apply arithmetic to numbers in standard form.

Key Vocabulary and Terminology

Tier 2: Evaluate, Multiply, Divide

Tier 3: Indices, standard form, tenth, hundredth, thousandth

Further Learning

Standard Form Practice

Standard Form Questions

Standard form - Further Questions

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Representing Movements: KLP 1

Previously you have learnt

How to represent movement with 8-point compass cardinal directions You will also be expected to understand basic transformations of 2D shapes. Whilst connecting to algebra you will need to be able to solve linear equations.

In this unit you will learn

The definition of a vector and how to represent on a grid and using column vectors. You will learn how to identify, describe and apply transformations on 2D shapes using vectors. You will learn perform calculations with vectors.

Key Vocabulary and Terminology

Tier 2: parallel, perpendicular, north, east south, west, transformation, enlargement, magnitude

Tier 3: movement, relationship, direction, column vector, scalar multiplication, scale factor

Further Learning

Vectors Explanation and Practice

Vectors - Examples and Practice

Further Vectors Exam Practice

Hatton Character Qualities

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

Term 3

Student Learning Journey

Subject: Mathematics Year 10 Algebra in Context: KLP 6

Previously you have learnt

How to form and solve equations relating to area and perimeter. You have looked at the area and perimeter of squares, rectangles, triangles, trapeziums and parallelograms. You have also calculated area and perimeter of compound shapes which use the shapes listed above, and used this knowledge to work with real life problems

In this unit you will learn

How to identify and draw all of the key parts of a circle. You will learn how to find the area and circumference of a circle and a part circle. You will learn what the value of π represents, and how to apply π to help with different calculations. You will apply your knowledge in composite shapes and real life contexts.

Key Vocabulary and Terminology

Tier 2: area, semi-circle, angle, formula

Tier 3: radius, diameter, tangent, chord, segment, circumference

Further Learning

Parts of a Circle

Area & Circumference - Exam Questions

Sectors & Arcs - Exam Questions

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Representing Numbers: KLP 5

Previously you have learnt

How to convert between fractions, decimals and percentages, and how to order the values by size. How to find percentages of amounts. How to perform arithmetic with percentages in real life contexts, and how to increase and decrease values using percentages.

In this unit you will learn

How to apply your understanding of percentage change to profit and loss. You will learn the difference between how simple and compound interest are calculated, and which is better in different situations. You will apply this to real life financial situations. You will learn about real life situations with appreciation, depreciation, growth and decay.

Key Vocabulary and Terminology

Tier 2: Compare, simple interest, compound interest, appreciation, depreciation, growth, decay, VAT, interest

Tier 3: Multiplier, repeated percentage change

Further Learning

Simple and compound Interest Practice

Appreciation and Depreciation Questions

Compound Interest - Exam Questions

Hatton Character Qualities

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

Term 4

Student Learning Journey

Subject: Mathematics Year 10 Data and Statistics: KLP 6

Previously you have learnt

How to calculate the mean, median, mode and range of data from a list. How to represent and interpret data using bar charts, pie charts and scatter graphs. How to identify different types of data.

In this unit you will learn

How to calculate averages from bar charts, stem and leaf diagrams. How to represent and interpret data from frequency tables, and how to estimate averages from grouped data. You will be able to explain why these averages are estimates. You will also be able to compare averages and distributions from different types of bar graphs and charts.

Key Vocabulary and Terminology

Tier 2: sample, population, chart, graph, construct, interpret

Tier 3: discrete and continuous data, outlier, mean, median, mode, measure of central tendency

Further Learning

Comparing Distributions

Averages From Frequency Tables: Exam Questions

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 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.

Key Vocabulary and Terminology

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

Tier 3: Venn diagram, tree diagram, two way table, sample space diagram, relative frequency, theoretical frequency

Further Learning

Probability Scales

Venn Diagram GCSE Questions

Tree Diagrams GCSE Questions

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Sequences and Graphs: KLP 2, 3

Previously you have learnt

How to simplify different types of algebraic expressions, how to solve linear equations and how to substitute values into expressions.

In this unit you will learn

How to plot graphs in the form y=mx+c, and how to recognise equations from a graph. You will learn how to identify key features, including gradients and y-intercepts. How to find an equation of a line given key information, or given two points. You will then move onto how to form simultaneous equations from a context, and how to solve simultaneous equations both algebraically and graphically.

Key Vocabulary and Terminology

Tier 2: represent, axis, coordinate, relationships, parallel, perpendicular

Tier 3: y-intercept, x-intercept, gradient, simultaneous equations, variables

Further Learning

Straight Line Graphs

y=mx+c: Examples and GCSE Questions, Exam Questions: Equation of a Line

Simultaneous Equations

Hatton Character Qualities

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

Term 5

Student Learning Journey

Subject: Mathematics Year 10 2D Shape and Space: KLP 3

Previously you have learnt

How to recall and apply key angle facts for triangles, perpendicular lines and parallel lines. You have learnt how to prove key angle facts. You have also learnt how to apply multiple angle facts logically in order to solve problems.

In this unit you will learn

How to identify and describe 2D polygons. This includes both regular and irregular polygons. You will learn to classify different types of quadrilaterals, and identify their key features. You will then learn how to recognise polygons with more sides, and how to recognise congruent shapes.

Key Vocabulary and Terminology

Tier 2: prove, justify, identify, orientation, dimensions, construct, angle

Tier 3: polygon, regular, irregular, perpendicular, parallel, interior and exterior angles, congruent, quadrilaterals, pentagon, hexagon, heptagon, octagon, nonagon, decagon

Further Learning

Regular 2D Shapes: Interactive Tool

2D Shapes: Explanation

2D Polygons: Practice Exam Questions

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Representing Movements: KLP 2, 3

Previously you have learnt

How to represent moving using column notation for vectors. You have learnt how to translate shapes using vectors. You have learnt how to reflect shapes using vertical and horizontal mirror lines.

In this unit you will learn

How to identify, describe and apply transformations. You will learn how to identify scale factors, similar shapes and congruent shapes. The transformations that you will learn are; translations with a vector, rotations with a centre, enlargements with a centre and a scale factor and a reflection in a line y=a or x=a. You will then learn to describe movements using bearings, and interpret bearings in context. You will solve problems involving shape and space where bearings are used.

Key Vocabulary and Terminology

Tier 2: parallel, perpendicular, north, east south, west, transformation, rotation, reflection, enlargement,

Tier 3: movement, relationship, direction, column vector, scalar multiplication, scale factor

Further Learning

Interactive Reflections, Interactive Rotations, Interactive Translations

Lesson: Describing Transformations, Transformations Quiz

Bearings Practice Questions – Corbettmaths

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Algebra in Context: KLP 7, 8

Previously you have learnt

How to form and solve equations relating to area and perimeter. You have looked at the area and perimeter of squares, rectangles, triangles, trapeziums and parallelograms. How to identify and draw all of the key parts of a circle. You will learn how to find the area and circumference of a circle and a part circle. You will learn what the value of π represents, and how to apply π to help with different calculations. You will apply your knowledge in composite shapes and real life contexts.

In this unit you will learn

How to use compound measures for density, pressure and speed. You will learn how to convert between metric speed measures and how to calculate averages for speed, distance and time. You will learn how to use the kinematics formulae to calculate speed and acceleration.

Key Vocabulary and Terminology

Tier 2: area, semi-circle, angle, formula, velocity, distance

Tier 3: density, pressure, speed, metric, kinematics

Further Learning

Kineamtics: Exam Style Questions on Kinematics

Speed, Distance, Time Graphs

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 2D Shape and Space: KLP 4, 5

Previously you have learnt

How to apply basic angle facts to 2D shapes. How to solve problems and find missing angles using angle facts. You have learnt to calculate and apply scale factors and enlargements

In this unit you will learn

How to identify regular and irregular polygons. You will learn how to calculate both exterior and interior angles in different sized polygons. You will use this knowledge to calculate the amount of sides of a regular shape given the interior or exterior angles. You will use these skills to solve problems, including tessellations. You will also learn to identify and prove congruence and similarity for triangles. You will learn to construct proofs for similarity and congruence.

Key Vocabulary and Terminology

Tier 2: angles, degrees, regular, irregular, similarity

Tier 3: polygon, interior angle, exterior angle, tessellation, congruent, scale factor, enlargement

Further Learning

Angles in Polygons

GCSE Exam Questions: Angles in Polygons

Tessellations

Hatton Character Qualities

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

Student Learning Journey

Subject: Year 10 Mathematics Sequences and Graphs: KLP 4

Previously you have learnt

How to plot graphs in the form y=mx+c, and how to recognise equations from a graph. You have learned to identify key features, including gradients and y-intercepts. You have learned how to find an equation of a line given key information, or given two points. You have also learned how to form simultaneous equations from a context, and how to solve simultaneous equations both algebraically and graphically.

In this unit you will learn

How to draw and interpret graphs that represent real life situations. This includes conversion graphs, distance-time graphs and velocity-time graphs. For each type, you will be expected to interpret the graph in order to answer questions.

Key Vocabulary and Terminology

Tier 2: represent, axis, coordinate, relationships, parallel, perpendicular

Tier 3: y-intercept, x-intercept, gradient, simultaneous equations, variables

Further Learning

Velocity-Time Graphs

Distance Time Graphs

Hatton Character Qualities

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 1

Student Learning Journey

Subject: Mathematics Year 10 Trigonometry: KLP 2

Previously you have learnt

How to find the missing length of a right angled triangle, using the other sides of the triangle. You have learned when it is appropriate to apply Pythagoras' Theorem, and have applied it to a range of contextual 2D and 3D Problems.

In this unit you will learn

How to find missing sides and angles using the sine, cosine and tangent functions. You will learn to apply this to a range of contexts, including in terms of angles of depressions/elevations, using reasoning in contexts and 3D contexts. You will learn about the relationships between the ratios and how they relate to similar shapes.

Key Vocabulary and Terminology

Tier 2: Adjacent, Opposite, Angle, Inverse, Elevation

Tier 3: Hypotenuse, Sine, Cosine, Tangent, Function, Trigonometric Ratio, Angle of Elevation, Angle of Depression

Further Learning

Trigonometry Practice - SOHCAHTOA

Trigonometry - Mixed Exam Practice

3D Trigonometry Practice

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Sequences and Graphs: KLP 2, 3, 4

Previously you have learnt

How to recognise a range of sequences, and how to describe both arithmetic and quadratic sequences using algebra. You have learned how to apply sequences to real life contexts. You have also learned how to solve linear equations which include a range of operations

In this unit you will learn

How to represent and solve quadratic equations, and you will understand why there are often multiple solutions. You will learn how to solve quadratic equations by factorising, by using the formula and by completing the square. You will then learn how to represent linear relationships graphically and solve problems relating to straight line graphs. You will learn how to find midpoints and lengths of line segments, and apply coordinate geometry.

Key Vocabulary and Terminology

Tier 2: relationship, represent, equation, solve, formula, gradient, graph, axis, intercept, parallel, perpendicular, midpoint coordinate

Tier 3: quadratic, complete the square, factorise, y-intercept, line segment

Further Learning

Factorising Quadratics, Factorising Harder Quadratics, Completing the Square

Quadratic Formula, Drawing Linear Graphs

Equation of a Line, Equation of a Line, Midpoint of a Line

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Data and Statistics: KLP 5

Previously you have learnt

How to find averages and measures of spread given a list of data, and how to make judgements based on this data. You have also learned how to represent data in a range of relevant diagrams.

In this unit you will learn

How to find quartiles and cumulative frequency from data, and how to represent and interpret data on a cumulative frequency diagram. You will learn how to make judgements based on a cumulative frequency diagram in context, and then how to translate data from a cumulative frequency diagram to a box plot diagram. You will learn how to interpret and compare box plot diagrams in context, and how to describe the distribution of a data sets.

Key Vocabulary and Terminology

Tier 2: average, distribution, represent, interpret, prediction

Tier 3: cumulative frequency, box plot, quartiles, interquartile range, median, mean, measures of spread, measure of central tendency, skew

Further Learning

Drawing Cumulative Frequency Diagrams

Cumulative Frequency Diagrams and Box Plots: Exam Questions

Comparing Box Plot Diagrams

Hatton Character Qualities

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

Term 2

Student Learning Journey

Subject: Mathematics Year 10 3D Shapes and Space: KLP 2, 3

Previously you have learnt

How to recognise and sketch different 3D shapes. How to identify and sketch elevations and plans based on 3D solids.

In this unit you will learn

How to find the surface area and volume of different types of 3D shapes. These shapes include prisms, pyramids, spheres and cones. You will then apply this knowledge to find missing lengths and solve problems in context.

Key Vocabulary and Terminology

Tier 2: volume, capacity, length, width, height, dimension, symmetry

Tier 3: surface area, volume, prism, cross-section

Further Learning

Surface Area and Volume Questions

Volume and Surface Area

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Sequences and Graphs: KLP 5

Previously you have learnt

How to set up and solve linear equations from a range of contexts. How to sketch linear graphs and interpret them in several contexts.

In this unit you will learn

How to set up and solve simultaneous equations from different contexts. You will learn multiple strategies to solve different types of simultaneous equations, including linear and quadratic equations. You will also learn to interpret solutions in context.

Key Vocabulary and Terminology

Tier 2: solve, unknowns, simultaneous, system

Tier 3: elimination, substitution, variables, factor, linear, quadratic

Further Learning

Simultaneous Equations - Steps and Examples

Simultaneous Equations Worksheets - Questions and Revision

Simultaneous Equations Practice Questions

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Algebra in Context: KLP5, 6

Previously you have learnt

How to apply your algebra skills to a range of different contexts, mostly relating to shape and space. You have learned to solve a range of linear equations and to interpret and justify solutions in context.

In this unit you will learn

How to apply your algebra skills to convert between measurements for speed, density and pressure. You will learn to apply this to a range of contexts, and to solve problems using these measures. You will then apply your algebra skills to representing and solving inequalities. This will include both algebraic and graphical representations.

Key Vocabulary and Terminology

Tier 2: Density, pressure, speed, solve, represent, justify, integers, continuous

Tier 3: constant speed, formulae, equations, variables, inequality, quadratic

Further Learning

Speed, Density and Pressure Questions

Pressure practice Exam Questions

Hatton Character Qualities

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

Term 3

Student Learning Journey

Subject: Mathematics Year 10 Financial Maths

Previously you have learnt

How to apply percentages to increase and decrease amounts. You have learnt to apply this to several contexts, and how to calculate percentage change. You have also learnt how to apply ratio to best buys.

In this unit you will learn

How to apply the Maths that you have learnt to support your understanding of financial and business applications. This will include how to calculate taxes, how to understand loans and mortgages. You will learn the difference between simple and compound interest, and the impact that these have on your financial decisions.

Key Vocabulary and Terminology

Tier 2: tax, interest, bank account, exchange rate, loans, mortgages

Tier 3: percentage increase, simple interest, compound interest, best buys, multiplier, appreciation, depreciation

Further Learning

Simple & Compound Interest

Percentage Change

Best Buys

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Data and Statistics: KLP 6

Previously you have learnt

How to collect and interpret data using different measures. You have represented data in different methods: bar charts, line graphs, scatter graphs, cumulative frequency diagrams and box plot diagrams. You have used these methods to compare and interpret different types of data.

In this unit you will learn

When it is appropriate to construct a histogram. You will then learn how to construct and interpret histograms from class intervals with both even and uneven class intervals. You will then learn to estimate the mean and median from a histogram, and make interpretations from the data.

Key Vocabulary and Terminology

Tier 2: data, class, quantitative, qualitative, axis, frequency

Tier 3: Histogram, class width, frequency density

Further Learning

Histograms - Explanations

Histograms - Online Practice

Histograms GCSE Exam Questions

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Sequences & Graphs: KLP 6, 7

Previously you have learnt

How to plot and interpret linear graphs, in the form y=mx+c and the form ax+by=c. You have applied these in different contexts, and been able to interpret the gradient and y-intercept in real life. You have also solved questions relating to straight line graphs and coordinates, including find the equation of a line between two points.

In this unit you will learn

How to plot non-linear graphs, and how to identify these graphs based on their key features. You will look at quadratics, cubics and circles. You will learn to apply your algebraic skills to find roots, turning points, and points of intersections (where relevant). You will then move onto reciprocal and exponential graphs, and relate them to real life growth and decay contexts.

Key Vocabulary and Terminology

Tier 2: substitute, gradient, growth, decay

Tier 3: quadratic, cubic, exponential, reciprocal, function, y-intercept, x-intercept, turning point, minimum and maximum points, factorise, asymptote

Further Learning

Non-Linear Graphs

Quadratic Graphs: Examples

Reciprocal Graphs, Exponential Graphs

Hatton Character Qualities

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

Term 4

Student Learning Journey

Subject: Mathematics Year 10 Trigonometry: KLP 3, 4

Previously you have learnt

How to apply trigonometry to find missing lengths and angles of right angled triangles. How to identify different sides of a right angled triangle. How to apply Pythagoras' Theorem to find side lengths. How to find angles of elevation and depression, and apply Pythagoras' Theorem and Trigonometry in real life contexts.

In this unit you will learn

How to find missing sides and angles of non-right angled triangles using trigonometry. You will learn to apply the sine rule, the cosine rule and the area if a triangle using trigonometry. You will learn to apply these to both 2D and 3D shapes, and to coordinate geometry. You will also learn how to identify trigonometric values. You will then learn how to sketch the graphs y=sinx, y=cosx and y=tanx

Key Vocabulary and Terminology

Tier 2: formula, degrees, bearings, apply, 3D

Tier 3: sine, cosine, tangent, inverse function, periodic,

Further Learning

The Sine Rule, The Cosine Rule

Trigonometric Graphs

Challenging Sine Rule Problems, Cosine Rule Problems

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Ratio and Proportion: KLP 2

Previously you have learnt

How to apply ratio to solve a range of problems which involve sharing a quantity. You have learnt to understand ratio as a fraction, and use proportion in real life contexts, including exchanging money, recipes and to calculate value for money. You have also learnt how to apply ratio to scale drawings.

In this unit you will learn

How to represent proportion graphically. You will learn the difference between direct and inverse proportion. You will start by working with linear proportion, but will then move onto exponential relationships. You will learn how to represent this with algebra, and how to apply algebra in order to solve problems involving proportion.

Key Vocabulary and Terminology

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

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

Further Learning

Proportion using Graphs

Direct and Inverse Proportion

Exam Style Questions: Direct and Inverse Proportion

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 2D Shape and Space: KLP 3

Previously you have learnt

How to apply basic angle facts to 2D shapes. How to solve problems and find missing angles using angle facts.

In this unit you will learn

How to identify regular and irregular polygons. You will learn how to calculate both exterior and interior angles in different sized polygons. You will use this knowledge to calculate the amount of sides of a regular shape given the interior or exterior angles. You will use these skills to solve problems, including tessellations.

Key Vocabulary and Terminology

Tier 2: angles, degrees, regular, irregular

Tier 3: polygon, interior angle, exterior angle, tessellation

Further Learning

Angles in Polygons

GCSE Exam Questions: Angles in Polygons

Tessellations

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Number Sense: KLP 5

Previously you have learnt

How to round values to decimal values and significant figures. How to represent large and small numbers using standard form, and how to represent and manipulate surds.

In this unit you will learn

How to apply accuracy and bounds to estimate solutions. You will learn how to calculate the upper and lower bounds of numbers when they have been rounded. This will include when different operations have been applied to the numbers. You will learn to apply this to real life contexts, involving shape and space.

Key Vocabulary and Terminology

Tier 2: round, accuracy, appropriate degree of accuracy

Tier 3: significant values, bounds, error interval, truncation

Further Learning

Upper and Lower Bounds

Bounds: Further Notes

Revision of Bounds and Error Intervals

Hatton Character Qualities

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

Term 5

Student Learning Journey

Subject: Mathematics Year 10 Algebra in Context: KLP 7, 8

Previously you have learnt

How to interpret linear graphs in context, and how to find the gradient of a linear graph. You have learnt how to sketch non-linear functions, and find key points. You have also learned how to convert between compound measures.

In this unit you will learn

How to draw and interpret graphs that represent real life situations. This includes conversion graphs, distance-time graphs and velocity-time graphs. For each type, you will be expected to interpret the graph in order to answer questions. You will then learn how to estimate the area under a quadratic graph, and interpret the gradient in non-linear graphs. You will use this to interpret non-linear real life graphs, including estimating the speed at a given time.

Key Vocabulary and Terminology

Tier 2: distance, time, velocity, acceleration, convert, average, rate of change.

Tier 3: gradient, intercepts, quadratic, tangent, displacement, instantaneous rate of change

Further Learning

Velocity-Time Graphs

Distance Time Graphs

Finding Gradients of Non-Linear Graphs

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Advanced Algebra: KLP 1, 2

Previously you have learnt

How to apply algebra to help you solve a range of real life problems. You have learnt how factorise expressions and how to solve difficult linear and quadratic equations. You have also learnt how to simplify surds, and how to simplify fractions.

In this unit you will learn

How to work with fractions involving algebra. You will learn to simplify algebraic fractions and how to apply arithmetic to them. You will apply your knowledge of quadratics to algebraic fractions. You will also solve problems involving algebraic fractions. You will then move onto proof theory, and learn how to prove simple statements using algebraic language. This will include statements with odd and even numbers.

Key Vocabulary and Terminology

Tier 2: solve, prove, simplify, express, evaluate

Tier 3: quadratic, rationalise, surd, expression, factor, factorise

Further Learning

Algebraic Fractions: Practice Exam Questions

Proof Questions

Algebraic Proof: Exam Style Questions

Hatton Character Qualities

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

Term 6

Student Learning Journey

Subject: Mathematics Year 10 Sequences and Graphs: KLP 8

Previously you have learnt

How to plot linear graphs, and how to solve problems using linear graphs, including finding perpendicular lines. You have also learned to plot non-linear graphs, and how to identify these graphs based on their key features. You have learnt to identify the key features of quadratic and cubic graphs. You have learned to apply your algebraic skills to find roots, turning points, and points of intersections (where relevant).

In this unit you will learn

How to recognise and plot equations of a circle, in the form $x^2 + y^2 = r^2$. You will use this knowledge to solve problems involving circle graphs, and find the radius of the graph of a circle. You will then learn how to find the equation of a tangent of a circle at a given point. You will apply your knowledge to solve problems involving circular graphs.

Key Vocabulary and Terminology

Tier 2: substitute, gradient, perpendicular, intersection

Tier 3: quadratic, cubic, exponential, reciprocal, function, y-intercept, x-intercept, turning point, and radius, tangent

Further Learning

Circle Graphs

Equation of a Tangent to a Circle

Equation of a Circle Exam Papers

Hatton Character Qualities

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

Student Learning Journey

Subject: Mathematics Year 10 Representing Movements: KLP 3

Previously you have learnt

How to identify, describe and apply transformations on 2D shapes. These include translations, rotations, reflections and enlargements. You have also learned how to describe movements through the use of bearings. You have learned how to solve problems using Pythagoras' Theorem and right angled trigonometry. You have also learned how to construct simple logical proofs.

In this unit you will learn

How to describe movements using column vector notation, and using variables. You will learn how to describe movements between two points using variables, and recognise parallel vectors. You will learn how to calculate the sum, the scale multiple and the resultant of two vectors. You will use vector notation to solve 2D geometric problems and to construct geometric proofs.

Key Vocabulary and Terminology

Tier 2: parallel, perpendicular, movement, inverse, displacement

Tier 3: movement, relationship, direction, column vector, scalar multiplication, scale factor,

Further Learning

Vectors Explanation and Practice

Vectors - Examples and Practice

Further Vectors Exam Practice

Vector Proof Exam Questions

Hatton Character Qualities

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

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Student Learning Journey

Subject: Mathematics Year 10 Advanced Algebra: KLP 3

Previously you have learnt

How to apply algebra to help you solve a range of real life problems. You have learnt how factorise expressions and how to solve difficult linear and quadratic equations.

In this unit you will learn

How to interpret and use function notation, and how this notation relates to a coordinate axis. You will learn to apply functions, to find inverse functions and composite functions, and how to solve problems using function notation.

Key Vocabulary and Terminology

Tier 2: solve, prove, simplify, express, evaluate, input, output

Tier 3: function, inverse, composite, quadratic

Further Learning

Composite Functions

Functions Practice

Functions: Exam Style Questions

Hatton Character Qualities

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

Student Learning Journey

Subject: Music Year 10 BTEC Term 5

Previously you have learnt

During Terms 3 and 4 you have worked to complete your coursework and evidence for Component 1, creating and performing examples of music linked with the topic “colour” and evidencing your understanding of a variety of music styles and genres.

In this unit you will learn

During this term you will start to develop evidence for Component 2 – Music Skills Development. You will be focusing your techniques and skills to evidence your knowledge and skills, recording your progress and creativity throughout the term.

Key Vocabulary and Terminology

Tier 2 – analyse, adequate, balanced, coherent, comprehensive, creative, detailer, dexterity, insightful, investage, linkages, logical, methodical, professional, realistic, refine, secure

Tier 3 – digital portfolio, audition, raw recording, bouncing, mixing, effects, Digital Audio Workstation (DAW), jam, vamp

Further Learning

Hatton Character Qualities

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

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Student Learning Journey

Subject: Religious Education, Year 10, Should the individual be sovereign when making personal decisions?

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 can explain the difference between fundamentalist and liberalist views and apply this to everyday scenarios. You can use scripture to support you in your writing and can differentiate between different perspectives. You recognise what a worldview is and understand that an individual's beliefs are closely linked to their geographical and religious heritage.

In this unit you will learn

You will explore the way in which Religion impacts life, considering the links between religion and the value of the world, abortion, euthanasia, and life after death. You will focus on the application of religious and atheist views to various ethical debates, considering what your own view is on contentious issues in society. You will think about whether you as an individual, should have full control over the decisions you make, both in terms of the environment and your personal autonomy. Should the individual be sovereign or should be defer to a higher power or religious law?

Key Vocabulary and Terminology

Tier 2

Abortion, Euthanasia, Value of Life, Palliative care, Value, Evolution, Sovereign, Autonomy

Tier 3

Stewardship, Dominion, Awe, Wonder, Sanctity of Life, Imageo Dei, Ex Nihilo, Omnibenevolent

Further Learning

the rights and wrongs of euthanasia video

what is the evidence for evolution

Hatton Character Qualities

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

Student Learning Journey

Subject: Design and Technology (RM) Year 10 Design and Making principles

Previously you have learnt

In years 7-9 you have learned about the theory of different material areas and the environmental impact of manufacturing with different resistant materials. So far in year 10 you have learnt about new and emerging technologies, energy generation, storage and developments in new materials. This knowledge has been developed alongside you developing practical skills across different material areas.

In this unit you will learn

In this unit you will learn how design and technology activities take place within a wide range of contexts. You will learn how designs and prototypes satisfy wants and needs and are fit for their intended use. For example, the home, school, work or leisure. You will learn about designing and prototyping strategies and practical skills.

Key Vocabulary and Terminology

Tier 2: explain, describe, analyse, justify

Tier 3: primary and secondary data, prototype, tolerance, materials, components

Further Learning

BBC Bitesize: Systems Approach to Designing

Technology Student: Control Systems

Technology Student: Mechanisms

Supporting textbook: CGP Design and Technology GCSE textbook

Hatton Character Qualities

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

Student Learning Journey

Subject: Design and Technology (RM) Year 10 Prototyping

Previously you have learnt

Throughout yeas 7-10 you have completed a range of different design projects where you have been required to develop a range of design ideas and develop a final design. You have learnt different drawing methods and communicated your ideas through drawing and simple modelling.

In this unit you will learn

In this unit you will learn strategies to support you in generating design ideas. This will include idea generation, innovative design strategies and drawing methods. You will also learn different modelling and prototyping strategies and how to generate quick 3D models to communicate your design thinking.

Key Vocabulary and Terminology

Tier 2: respond, generate, discuss

Tier 3: prototype, sketch, annotate, innovation, design fixation, iterative design

Further Learning

BBC Bitesize: Designing

Technology Student: Iterative design

Supporting textbook: CGP Design and Technology GCSE textbook

Hatton Character Qualities

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

Student Learning Journey

Subject: Science Year 10 Physics CP13 Forces and Matter

Previously you have learnt

In Year 7, you learnt about different forces including friction, drag, squashing and stretching as well as ways to reduce the effects of some forces such as lubricants to minimise friction and streamlined shapes to minimise drag. In Year 9, you learnt about different stores of energy including elastic potential energy.

In this unit you will learn

To explain how forces cause objects to change shape, investigate the extension and work done when applying forces to a spring, calculate force applied and work done in stretching a spring.

Key Vocabulary and Terminology

Tier 2: Explain, investigate, cause.

Tier 3: Elastic, inelastic, force, distortion, extension, work done.

Further Learning

BBC Bitesize – Revision Notes

Hatton Character Qualities

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

Student Learning Journey

Subject: Sociology Year 10 The Sociology of Family and Households

Previously you have learnt

The sociological research process considering the practical, ethical and theoretical considerations for a variety of methods. Alongside this you have considered the core themes of sociology; Socialisation, Culture, Identity, social stratification and power. Finally, you learnt about the key principles of the structural sociological theories of Functionalism, Marxism, Feminism and then compared this to Interactionism.

In this unit you will learn

To apply the theoretical views learnt last year to understand the function of the family and the changing nature of the nuclear family. Equally, by considering the core themes of sociology we will aim to explain potential causes for the changing domestic division of labour. Finally, you will apply your research methods knowledge to answer 4 mark methods in context questions.

Key Vocabulary and Terminology

Tier 2: Family, household, divorce, marriage, industrialisation, monogamy, polygamy,

Tier 3: Family diversity, domestic division of labour, nuclear family, socialisation, triple shift, unit of consumption, kibbutz, commune, globalisation, cereal packet family, social construction, secularisation, instrumental and expressive roles, congeal roles.

Further Learning

AQA GCSE Sociology- Family. Flashcards | Quizlet

Why women file for divorce more than men - BBC Worklife

Hatton Character Qualities

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
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Student Learning Journey

Subject: Spanish Year 10

Previously you have learnt

In Key Stage 3 we covered lots of different topics – Family, pets, home, sport, hobbies, school, holidays, technology and food. We have revisited these topics at least once sometimes twice and extended our vocabulary and tenses the second time.

In this unit you will learn

Prepare ourselves for our mock exams by revisiting all the topics we have learnt so far. We will up level this by increasing the difficulty by looking at higher Tier reading and listening content in these revisited topics.

Key Vocabulary and Terminology

Tier 2: Preterite/imperfect, near future, future, conditional, ser/estar

Tier 3:

¿Qué hiciste la semana pasada? ¿Cómo fue?

¿Qué vas a hacer este fin de semana? ¿Qué te gustaría hacer?

Further Learning

Please look at our department Padlet

Spanish KS4 (padlet.com)

Hatton Character Qualities

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

Student Learning Journey

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

Hatton Character Qualities

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

Reflection on my learning journey

What do I remember form last term? (complete at the start 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 terms PE sessions built on my knowledge and skills from last term (complete at the end of the term)			

Student Learning Journey

Subject: Statistics – Normal Distribution and Standardised Scores

Previously you have learnt

Students should have a good understanding of probability. Knowledge of tree diagrams when the probability remains the same. They will also have knowledge of binomial distributions from the previous topic.

In this unit you will learn

Know the shape of a normal distribution curve and how this occurs; Understand the notation $N(\mu, \sigma^2)$; Know the conditions that make the normal distribution model suitable; Know that 68% of data lies within one standard deviations of the mean, 95% of data lies within two standard deviations of the mean; Know how to draw two distribution curves on the same graph; Use standardised scores to compare two samples of data.

Key Vocabulary and Terminology

Event, outcome, percentage, decimal, normal distribution, binomial distribution, standard deviation, mean, symmetrical, frequencies

Further Learning

6 Real-Life Examples of the Normal Distribution - Statology

9 Real Life Examples Of Normal Distribution – StudiousGuy

Hatton Character Qualities

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