Student Learning Journey

Subject: Art Year 9 'Identity' term 5

Previously you have learnt

Throughout your time in year 9 you have explored a wide range of materials, techniques, artists and processes. Throughout year 9 you have worked on two project themes with the main project theme 'Everyday Objects' This is long GCSE Art project has shown you the depth and range of visual investigation needed to create a set of GCSE project work. You have demonstrated resilience, creativity and independence throughout this project and you need to use everything you have learnt in this project to bring forward into this short 6 week new project title 'Identity'

In this unit you will learn

How to create a personal and independent project reflecting your own identity and your own world. You will explore a range of artists who work within the theme of Identity and you will continue to develop how to interpret these artist's to a GCSE standard. In this project you will be expected to work at a faster pace but still with the same high quality so you are ready to start GCSE coursework in term 6.

Key Vocabulary and Terminology

Tier 2: Identity, culture, heritage, media, refine, artist analysis

Tier 3: concertina, composition, aesthetics

Further Learning

Tate modern: Everyday objects

BBC Bitesize (GCSE): Art and Design

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 Studies Year 9 Recruitment

Previously you have learnt

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

In this unit you will learn

About the various methods of recruitment, the stages of recruitment and the different types of employment contracts including full time, part time, seasonal, working from home etc. You will also learn about the various methods of staff development and monitoring processes including appraisals, promotion, disciplinary and dismissal. You will learn about motivation, in particular financial and non-financial motivators and the four motivation theories.

Key Vocabulary and Terminology

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

Tier 3: 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

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 9 Programming Project

Previously you have learnt

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

In this unit you will learn

In this unit, you will learn how to create a large program from start to finish including analysing the problem, planning a solution, programming the solution, testing the solution, making improvements and evaluating the success of the solution based on the client's requirements.

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

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: Drama Year 9 Term 5: Practitioner Project 1 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.

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

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: 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; **Know** and **understand** about the different topics. Apply your **skills, knowledge** and **understanding** to answer questions. You can **analyse** and **evaluate** your outcomes.

Tier 3 Words; **Festival** an organized series of concerts. **Catering** provide food and 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 videos highlighting festival food.

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 9 The Hospitality and Catering Industry

Previously you have learnt

In term 4 you have started studying the topic of nutrition. You were introduced to the two main groups of nutrients: macronutrients and micronutrients. We have explored macro nutrients; protein, fat and carbohydrate. You have looked at how these different nutrients affects the human body, linking to lifestyle and age. You have continued to develop your cooking skills by making a variety of products that shows the nutrients covered.

In this unit you will learn

You will continue to look closely at the food groups and how each life-stage will need different amount of nutrients to ensure a healthy life style. You also need to know the diets of different religious groups. You will look at micronutrients in detail and its importance to the human body. You will also explore the different cooking methods and their impact on nutritional value in both written and practical settings. You will continue to explore practically food that covers these nutrients.

Key Vocabulary and Terminology

Tier 2: Match, Explain, Describe, identify, label, state, Compare, Discuss

Tier 3: Lipids, Non-starch polysaccharide (NSP), Saturated and unsaturated

Further Learning

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

Videos: The function of nutrition

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 9 Practice Assessment Project

Previously you have learnt

So far this year you have developed a wide range of practical skills. This includes decorative surface pattern techniques, pattern adaption and garment construction. You have learnt how to collect primary and secondary research and explore the work or contemporary and traditional designers and textile artists. You are able to organise and present your work creatively and effectively.

In this unit you will learn

In this unit you will learn how to work with greater independence and produce personal responses to a given theme by completing a practice assessment project using a previous exam board brief. You will investigate, generate ideas, refine and develop techniques and processes culminating in a final outcome or outcomes which meet the set brief, organising and presenting your work in an effective and personal way. There will be a focus on generating and communicate creative design ideas as well as recording the development and refinement process, preparing you to complete your live assessment project in Year 10.

Key Vocabulary and Terminology

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

Tier 3: design development, portfolio, client, toile, surface pattern, draping, colour, texture, pattern, line

Further Learning

Victoria and Albert Museum Fashion collection

Textile Artists Contemporary Textile artists

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: Film Studies – Year 9 – Aesthetics – Edward Scissorhands

Previously you have learnt

Over the course you have spent time learning and applying Film Studies terminology and language, film theories (such as Propp, Todorov, Strauss and Barthes) and how to use this terminology in analysing a film. Along with this, you have spent time analysing The Dark Knight (a US mainstream blockbuster) and explored the Hollywood film industry, franchises and the impact of these on the film industry and mainstream films.

In this unit you will learn

This unit will have you analysing the concept of aesthetics and the choices made by auteur Tim Burton. You will continue to apply relevant film language and theory to close analysis of the film Edward Scissorhands. You will spend time exploring the stylistic traits of the director in three key scenes from the film and the spectator responses these key scenes.

Key Vocabulary and Terminology

Tier 2: analyse, connotations, summarise, represents, symbolizes

Tier 3: aesthetics, auteur, cinematography, mise-en-scene, binary oppositions, protagonist antagonist, identification, recognition, alignment, allegiance, uses and gratifications, high key lighting, low key lighting, preferred reading, oppositional reading, negotiated reading, aberrant reading

Further Learning

Tim Burton: In the Director's chair

Aesthetics in Edward Scissorhands

Edward Scissorhands: An allegory about our society

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: Geography – Year 9, Contemporary Issues

Previously you have learnt

About different **extreme environments** and how they present both **opportunities** for and **challenges** to human development. You have developed the ability to evaluate whether or not an environment should be **developed for economic gain** or be left alone. In addition, throughout key stage 3 you have learnt about key physical and human processes, such as **weather and climate** and **migration,** including **push and pull factors**.

In this unit you will learn

To analyse the world's population in reference to the concept of '**carrying capacity'** – are there enough resources on the planet to sustain an ever-increasing global population? You will use this topic to investigate **Climate Change** in depth, exploring causes and the impacts of the anticipated threats posed by climate change. You will also develop a general understanding of the various world issues, including the impact of **migration on donor countries, corruption and war.**

Key Vocabulary and Terminology

Tier 2:

Development, profit, green house gas effect, sustainable

Tier 3:

Carry Capacity, Global Goals, Natural Increase, Optimum Population, Contraception, Agribusiness, United Nation, Industrialisation, Sanitation, Sustainable, Infrastructure, Sustainable Development, Cloud seeding, Corruption, Carbon capture, Eutrophication

Further Learning

Extreme environments - http://aggsgeography.weebly.com/contemporary-issue.html

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: Geography Year 9 Natural History and Environmental Science

Previously you have learnt

Global goals topic, focussing on trying to make development sustainable for all and improve the life of everyone in the world. Since then the focus has been on extreme environments and how we have altered them for better and worse, with a focus on development versus environment. Many of this has been on humans and our impacts which links to the global goals topics of how we need to better manage our world.

In this unit you will learn

All about the UK environment and how we have impacted it. Beginning with an overlook of what is actually in our ecosystem in more depth. The importance of species such as oak trees and bees in supporting our ecosystem, versus species that are invasive and can cause negative impacts. You will investigate water quality, including how to sample, analyse and present this. The topic ends by compiling all of the knowledge to create a green sustainable city.

Key Vocabulary and Terminology

Tier 2: Social, Economic, Environmental, Physical, Human, Development, ecosystem, river, and management

Tier 3: keystone species, environmental science, dichotomy key, invertebrates, invasive species, biological monitoring working party, field sampling, eustainable city, temperate deciduous forest, wetlands.

Further Learning

https://www.woodlandtrust.org.uk/

https://www.wildlifetrusts.org/

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 9 Tenses

Previously you have learnt

In year 7 we have looked at how to use the present tense in first, second and third person. We have also learnt how to give our opinions and justify them. In year 8 we introduced the past tense, perfect and imperfect, and learnt how to describe events using these and give our opinion. We have also covered the future tense and how to describe events that are going to happen.

In this unit you will learn

Confidence in using these three different tenses in German and to be able describe events and to give our opinion. We are going to consolidate the vocabulary we have used so far in year 9 (family and friends, house and area, free time and technology). We will be able to manipulate this language and tenses to be able to answer questions in speaking and writing.

We will continue to focus on phonics, reading and listening skills.

Key Vocabulary and Terminology

Tier 2: gender, article, word order, compound nouns, verbs, conjugation, perfect tense, imperfect tense, present tense, future tense,

Tier 3: you will be able to answer questions like:
Beschreib deine Familie
Was hast du letztes Wochenenede in deine Region gemacht?
Was machst du nächtes Wochenende in deiner Freizeit?
Was sind die besten sozialen Median?

Further Learning

Please look at our department Padlet under Y7 Unit 3: KS3 German

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: Health and Social Care year 9 RO33 Life stages and development

Previously you have learnt

In Biology year 7 and 8 about human growth and development.

In this unit you will learn

About the different life stages and the growth and development of individual through each stage. You will learn how an individual can be affected by physical factors, emotional factors, social factors (P.I.E.S).

Key Vocabulary and Terminology

Tier 2: emotional, debts, income, family, anxiety, fears, grief, sadness,

Tier 3: community, religion, identity, pollution, environment, conflict, orientation, attachment

Further Learning

Life stages support booklet – handed out in class.

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 9: Migration to Britain – Why?

Previously you have learnt

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 have seen how their way of life was impacted through migration and how the white settlers survived across the Great Plains.

In this unit you will learn

About migration to Britain throughout history. You will analyse and evaluate the factors which have led to migration into Britain, examining case studies of Viking, the Windrush generation, Irish, Jewish and South Asian migration to comprehend the impacts these groups have had on Britain. You will compare and contrast this with modern migration, analysing tensions created by migration, as well as the positive aspects, before making a judgement on which factor has had the greatest influence on migration to Britain.

Key Vocabulary and Terminology

Tier 2:

Migration Economic Persecution Colonisation Famine

Tier 3:

Commonwealth Diaspora Anti-Semitism Partition Integration

Further Learning

Immigration - an overview - Migrants to Britain c1250 to the present overview - OCR B - GCSE History Revision - OCR B - BBC Bitesize

The impact of migration in the UK - Migration – WJEC - GCSE Geography Revision - WJEC - 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: Digital information Year 9 Augmented Reality

Previously you have learnt

How to animate objects in a 2D space and program an object to move across the screen. In year 9, you studied good design practices including wireframes, visualisation diagrams, mind-map and mood-board.

In this unit you will learn

You will be learning what augmented reality is and which industries are currently using it. You will learn how to create augmented reality products using Adobe Areo. This will include manipulating objects in a 3D environment, creating objects groups, adding animation to 3D objects and programming 3D objects to move based on human interaction.

Key Vocabulary and Terminology

Tier 2: interface, prototype, animation, interactive, manipulation, navigation, asset, gesture, interaction, immersive

Tier 3: augmented Reality (AR), condition, action, trigger, anchor, static

Further Learning

Welcome to the Aero User Guide (adobe.com) – How to get started with Adobe Areo

Creating your first project (Youtube)

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 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.

Tier 3: 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

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 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	Curiosity	Verbal Confidence	Social Intelligence	Citizenship

Student Learning Journey

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

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 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

Tier 3: 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

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 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

Tier 2: 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

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 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

Tier 3: 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

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 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

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 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

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

Tier 3: 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

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 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

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: 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

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 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

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 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

Tier 3: 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

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 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

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

Further Learning

Significant Figures

Dividing Decimals

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 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

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 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

Tier 3: 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

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 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

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 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

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 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

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 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

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 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

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 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

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

Tier 3: 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

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 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

Tier 2: appreciation, depreciation, simple interest, compound interest, VAT

Tier 3: multiplier, rate of change

Further Learning

Compound Interest Practice Questions

GCSE Repeated Percentage Change Questions

Repeated Percentage Change 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

Term 4

Student Learning Journey

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

3D Pythagoras

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 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

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 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

Tier 3: 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

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 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

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 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

Tier 3: 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

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 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

Tier 3: 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

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 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

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 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

Tier 2: Data, chart, graph, average, compare, justify, interpret, estimate

Tier 3: 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

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 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

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

Tier 3: 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

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 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

Tier 3: 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

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 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

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 9 GCSE Term 5

Previously you have learnt

During Term 4 you have been developing your knowledge of film music, leitmotifs and texture within AoS 4.

You have learnt about structure in popular songs and how bass lines are used within a variety of musical style, genres and traditions.

In this unit you will learn

Term 5 will see you studying a wide variety of popular music styles and genres, including the traditions that they grew from, the techniques and instruments that have developed within them and the technology behind the recording and production of them.

You will also develop your performance skills and confidences within the many genres of pop.

Key Vocabulary and Terminology

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

Tier 3: 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 - https://fosuk.server1.apps.focusonsound.com/lessons/popular-styles

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: 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

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 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

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: Science Year 9 Chemistry CC17 The Earth's Atmosphere

Previously you have learnt

In Year 8, you have learnt how to describe the composition of the modern atmosphere and the importance of greenhouse gases in maintaining the temperature of the Earth. You have learnt to describe a greenhouse gas and the impact of human activity on the greenhouse effect.

In this unit you will learn

To describe the formation, composition and development of the Earth's early atmosphere. You will explain how the Earth's atmosphere has changed over time. You will describe the causes of the greenhouse effect and evaluate the impact of human activity on climate change.

Key Vocabulary and Terminology

Tier 2: Evaluate, formation, describe, explain, impact.

Tier 3: Composition, atmosphere, greenhouse gas.

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: Science Year 9 Physics CP4 Waves

Previously you have learnt

In Year 7, you defined transverse waves and investigated reflection and refraction. You also defined longitudinal waves, identified how sound is produced, described changes in volume and pitch in terms of amplitude and frequency and described uses of ultrasound.

In this unit you will learn

To describe the properties of transverse and longitudinal waves, calculate the speed of waves in water and air, measure waves in solids and liquids, explain refraction of waves and measure angles of incidence and refraction.

Key Vocabulary and Terminology

Tier 2: Interface, prism, ultrasound, transfer, energy, matter.

Tier 3: Transverse, longitudinal, electromagnetic waves, seismic, wavelength, velocity, amplitude, frequency, Hertz, refraction.

Further Learning

BBC Bitesize – Waves 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: Science Year 9 Physics CP5 Light and the Electromagnetic Spectrum

Previously you have learnt

In Year 7, you learnt how to describe transverse light waves and features of waves in the electromagnetic spectrum. Earlier this year, you described waves as something that transfer energy without transferring matter.

In this unit you will learn

To describe the properties of electromagnetic waves and explain how the long and short wavelength parts of the electromagnetic spectrum are used.

Key Vocabulary and Terminology

Tier 2: Describe, explain, properties.

Tier 3: Transverse, vacuum, radio, microwaves, infrared, visible, ultraviolet, x-ray, gamma, absorb, transmit, refract.

Further Learning

BBC Bitesize – Light and the Electromagnetic Spectrum Notes

Hatton Character Qualities

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
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Student Learning Journey

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

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

Further Learning

Are people treated equally?

How can citizens bring about change?

Hatton Character Qualities

Resilience	Open Mindedness	Creativity	Responsibility	Empathy
Self-Regulation	Courage	Commitment	Team Work	Leadership
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Student Learning Journey

Subject: Spanish Year 9 Tenses

Previously you have learnt

In year 7 we have looked at how to use the present tense in first, second and third person. We have also learnt how to give our opinions and justify them. In year 8 we introduced the past tense, perfect and imperfect, and learnt how to describe events using these and give our opinion. We have also covered the future tense and how to describe events that are going to happen.

In this unit you will learn

Confidence in using these three different tenses in German and to be able describe events and to give our opinion. We are going to consolidate the vocabulary we have used so far in year 9 (family and friends, house and area, free time and technology). We will be able to manipulate this language and tenses to be able to answer questions in speaking and writing.

We will continue to focus on phonics, reading and listening skills.

Key Vocabulary and Terminology

<u>Tier 2</u>: gender, article, word order, compound nouns, verbs, conjugation, perfect tense, imperfect tense, present tense, future tense,

<u>Tier 3</u>: you will be able to answer questions like:

Describe du familie

¿Qué hiciste la semana pasada?

¿Qué vas a hacer el fin de semana que viene?

Furthe

Please look at our department Padlet:

https://padlet.com/hattonmfl/ks3-spanish-4gy2hqbz3rvirrlf

Hatton Character Qualities

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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: Summarising Data – Measures of Central Tendency

Previously you have learnt

Students should be able to find the mean, median, mode and range at Key Stage three.

In this unit you will learn

To calculate the mean, mode and median for a list of numbers; Calculate the mean, mode and median for discrete data listed in a table (grouped); Calculate the mean, mode and median for continuous data listed in a table (grouped) including linear interpolation for the median; Understand the appropriateness, advantages and disadvantages of each of the three measures of central tendency; Understand the effect of transformations on the mean, mode, median; Calculate the geometric mean and weighted mean

Key Vocabulary and Terminology

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

Further Learning

Geometric Mean: What It Is and How to Solve it in Finance (msn.com)

Weighted Mean (mathsisfun.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: Statistics: Summarising Data – Measures of Dispersion

Previously you have learnt

Students should be able to find the mean, median, mode and range at Key Stage three. Students may have met quartiles and interquartile range when studying box plots and cumulative frequency in Statistics.

In this unit you will learn

To calculate the range, quartiles, percentiles and interquartile range for discrete and continuous data; Calculate the interpercentile range and interdecile range; Calculate the standard deviation; Compare data samples and to compare sample data with population data when given measures of dispersion.

Key Vocabulary and Terminology

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

Further Learning

Standard Deviation Formula and Uses vs. Variance (investopedia.com)

Standard deviation | Statista

S1 §2.3.1 Measures of spread: Range, IQR, IDR, IPR | Mathsodology (wordpress.com)

Hatton Character Qualities

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