George Fentham Endowed School Year 6 Curriculum Overview

	Autumn Term	Spring term	Summer Term
Maths	Units - Place Value, Addition, Subtraction, Multiplication and Division, Fractions A and B, Measurement - converting units Number - Place Value	Units - Place Value, Addition, Subtraction, Multiplication and Division, Fractions, Decimals and Percentages, Ratio and Proportion, Measurement (conversion), Geometry (2D shape, angles, coordinates), Statistics, Algebra Number -Ratio	Units - Shape, Position and Direction, Themed projects, consolidation and problem solving.
	Steps Numbers to 1 and 10 million Read and write numbers to 10 million Powers of 10 Number line to 10 million Compare, round and order any integer Negative numbers Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit Round any whole number to a required degree of accuracy Use negative numbers in context, and calculate intervals across zero Solve number and practical problems that involve all of the above Number - Addition, subtraction, multiplication and division. Steps Add and subtract integers Common factors/multiples Rules of divisibility Primes to 100 Square and cube numbers Multiply up to a 4 digit number by a 2 digit number Solve problems with multiplication Short division Division using factors Introduction to long division	Steps Add or multiply? Use ratio language Introduction to the ratio symbol Ratio and fractions Scale drawing Use scale factors Similar shapes Ratio/proportion problems Recipes NC objectives Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples Solve problems involving similar shapes where the scale factor is known or can be found Number - Algebra Steps 1 step/ 2 step function machines Form expressions Substitution Formulae Form equations Solve 1 step/2 step equations Find pairs of values	Steps Measure and classify angles Calculate angles Vertically opposite angles Angles in a triangle Angles in a triangle - special cases Angles in a triangle - missing angles Angles in quadrilaterals Angles in polygons Circles Draw shapes accurately Nets of 3D shapes NC objectives Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles Draw given angles, and measure them in degrees (°) (Y5) Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (Y5) Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Draw 2-D shapes using given dimensions and angles
	Long division with remainders	Solve problems with 2 unknowns	Recognise, describe and build simple 3-D

- Solve problems with division
- Solve multi-step problems
- Order of operations
- Mental calculations and estimations
- Reason from known facts

NC objectives

- Solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why
- Solve problems involving addition, subtraction, multiplication and division
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
- Identify common factors, common multiples and prime numbers
- Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication
- Perform mental calculations, including with mixed operations and large numbers
- Divide numbers up to four digits by a 2digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- Use their knowledge of the order of operations to carry out calculations involving the four operations

Number - Fractions

Steps

- Equivalent fractions and simplifying
- Equivalent fractions on a number line
- Compare and order (denominator)
- Compare and order (numerator)

NC objectives

- Use simple formulae
- Generate and describe linear number sequences
- Find pairs of numbers that satisfy an equation with two unknowns
- Enumerate possibilities of combinations of two variables
- Express missing number problems algebraically

Number - Decimals

Steps

- Place value within 1
- Place value integers and decimals
- Round decimals
- Add and subtract decimals
- Multiply/divide by 10, 100 and 1000
- Multiply/divide decimals by integers
- Multiply and divide decimals in context

NC objectives

- Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places
- Solve problems which require answers to be rounded to specified degrees of accuracy
- Solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why
- Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places
- Multiply 1-digit numbers with up to 2
- decimal places by whole numbers

shapes, including making nets

Geometry - Position and Direction Steps

- The first quadrant
- Read and plot points in four quadrant
- Solve problems with co-ordinates
- Translations
- Reflections

NC objectives

- Describe positions on the full coordinate grid (all four quadrants)
- Draw and translate simple shapes on the coordinate plane, and reflect them in the axes

Themed Projects, consolidation and Problem Solving

- White Rose Bakery
- White Rose Tours
- White Rose Futures

These projects have been produced with the aim of being completed in the Summer term of Year 6 following SATs and our Schemes of Learning. The projects provide an opportunity to revisit many of the skills and curriculum content covered both in Year 6 and also the rest of Key Stage 2.

The projects have been designed to explore maths in real life contexts, allowing children to see how important maths is in all aspects of life. They also provide cross-curricular links where appropriate, for example, including tasks that develop design and technology skills and geographical knowledge. They also provide a great opportunity to explore and develop enterprise.

- Add and subtract simple fractions
- Add and subtract any two fractions
- Add/subtract mixed numbers
- Multistep problems
- Multiply fractions by fractions/integers
- Divide a fraction by a fraction/integer
- Mixed questions with fractions
- Fraction of an amount/find the whole

NC objectives

- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- Compare and order fractions, including fractions > 1
- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- Identify common factors, common multiples and prime numbers
- Solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why
- Solve problems involving addition, subtraction, multiplication and division
- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (Y5)
- Multiply simple pairs of proper fractions, writing the answer in its simplest form
- Divide proper fractions by whole numbers
- Associate a fraction with division and calculate decimal fraction equivalents

Measurement - Converting units

Steps

- Metric measures
- Convert/calculate metric measures
- Miles and kilometres
- Imperial measures

- Use written division methods in cases where the answer has up to 2 decimal places
- Solve problems involving addition, subtraction, multiplication and division

Number - Fractions, Decimals and

Percentages

Steps

- Decimals and fractions equivalents
- Fractions as division
- Understand percentages
- Fractions to percentages
- Equivalent fractions, decimals, percentages
- Order fractions, decimals, percentages
- Percentage of an amount 1 step
- Percentage of an amount multi step
- Percentages missing values

NC objectives

- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction
- Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
- Compare and order fractions, including fractions >1
- Solve problems involving the calculation of percentages and the use of percentages for comparison

<u>Measurement - Area, Perimeter and Volume</u> Steps

- Shapes same area
- Area and perimeter
- Area of a triangle counting squares
- Area of a right angles triangle
- •
- Area of any triangle

English	"War Game" by "Goodnight Michael Foreman Tom" by M WW1 poetry Magorian	Michelle	Steps Line graphs Dual bar charts Read and interpret pie charts Pie charts with percentages Draw pie charts The mean NC objectives Calculate and interpret the mean as an average Interpret and construct pie charts and line graphs and use these to solve problems Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (Year 4) "Broken Glass" by Sally Grindley Poetry: "Blessing" by Imtiaz Dharker	"Millions" by Frank Cottrell Boyce	William Shakespeare: Macbeth or Romeo and Juliet
	NC objectives Solve problems involving the and conversion of units of using decimal notation up the places where appropriate Use, read, write and convestandard units, converting measurements of length, mand time from a smaller unimeasureto a larger unit, arversa, using decimal notatical decimal places	measure, to 3 decimal ert between nass, volume nit of nd vice	Line graphs		

	Historical fiction and	Historical fiction	Adventure story and poetry linked to geography	Contemporary, humorous	Focus on speaking and
	poetry linked to	linked to history work	work on India.	fiction.	listening skills and
	history work on WW1.	on WW2.			drama.

- Reading skills: Focusing on the key skills of word meaning, retrieve and record, inference, summarising, predicting, making comparisons and author's choice of vocabulary.
- Writing skills: Write for a range of audiences and purpose, select the appropriate form; plan and develop their ideas through discussion and writing; develop characters, settings and plot in their story writing; develop sentences using increasingly rich vocabulary; organise their writing by using paragraphs; link their ideas in a variety of ways; use organisational devises such as headings, bullet points and underlining; edit their writing for effectiveness, vocabulary, punctuation, spelling, tense and grammar.
- Grammar: Including formal and informal English, passive verbs, expanded noun phrases, hyphens, semi-colons, colons, dashes and bullet points. Be able to use grammatical terminology accurately.
- Spelling: Including prefixes and suffixes, homophones, silent letters and words from the Year 5&6 statutory spelling list. Using a dictionary to check spellings and a thesaurus to improve vocabulary choices.
- Handwriting: use joined handwriting legibly and fluently with increasing speed.

Science	 Classifying organisms: (Biology) Classifying organisms. Find out about Carl Linnaeus and his classification system. Explore how micro-organisms can be classified. 	Healthy Bodies: (Biology) Investigate blood and its properties. Explore the structure of the heart and lungs. Research the effects of exercise, alcohol and drugs on our bodies.	Evolution and Inheritance: (Biology) Explore inherited traits. Understand the link between adaption and evolution. Research historical scientific hypothesis. Consider factors affecting evolution. Human evolution.	Seeing Light: (Physics) Investigate how shadows can be changed. Identify key parts of the eye and how we see. Investigate reflection and refraction. Explore white light.	Changing Circuits: (Physics) Establish relationship between increase/decrease in batteries and bulbs. Recognise and use conventional symbols for circuits.	Scientist focus: (linked to RE) To research the life and work of a chosen modern day scientist. Present research to the class.
RE	What do we mean by the term human rights? John Bunyan The UN Declaration of Human Rights Martin Luther	What does "Christian Love" require of a person? Exploring ideas about love The Good Samaritan The Lord's Prayer	What do Hindus believe? Moksha, Dharma, Artha and Karma One God: Brahman in many forms Pilgrimage to the River Ganges	How do we remember those we have loved? Different faiths' attitudes to death The importance of memories The Easter Story	What can the Bible teach us? The structure of the Bible Stories, proverbs and psalms The gospels	How can one person make a difference in the world? • Mahatma Gandhi • Children's own choice of significant figures who have made a difference in the

	Rosa Parks		Worship and prayer			
Art	Symbols (WW1 & WW2) Drawing and collage Study of Artists: Salvador Dali, Clive Branson, Paul Nash In this unit, the children will use a range of techniques to create a collage. They will draw on previous learning of collages to know the techniques to use. The children will begin by learning about symbolism and how it can be depicted in Art. They will learn about artists such as Salvador Dali, Clive Branson and in particular Paul Nash where they will focus on symbols of WW1 and WW2. They will create a symbol based on WW1 and WW2 which will then be used as a focal point in their final collage piece.		India Drawing and printing Study of Artists: Indian patterns & Mehndi hands In this unit, the children will build on their printing skills from Year 3. They will create an Indian Mehndi pattern inspired relief print. The children will study the shapes, patterns and colours of tradition Mehndi patterns and use the techniques of printing to create their own. Once their work is completed, they will evaluate how successful they have been and think about what they would do differently next time.		Portraits Study of Artists: In this unit, children build on their understanding of creating tone, tints and shades. They will do this through colour mixing and using different tools to create effects when creating Lowry's 'matchstick men' figures. The children will use their sketch books to record their ideas and evaluate the techniques they learn in each lesson before creating their own, Lowry-style art.	
Computing	Coding: Designing and making games including features such as timers and scoring. De-bugging when problems arise.	Online Safety: Considering online risks - SMART rules Online behaviour Balancing screen time with other interests Spreadsheets: Exploring Probability Creating a computational model Use a Spreadsheet to Plan Pocket Money Spending	Text Adventures: • Planning and making a story adventure game	Networks: The World Wide Web and the Internet Tim Berners-Lee Understanding Binary: What is binary? Counting in binary Converting from decimal to binary Using 0 and 1 values in a game	Quizzing: Creating different quizzes/games using a variety of programs	Blogging: What is a blog? Planning and writing a blog Sharing posts and commenting on others' blogs
D&T	1		Vegetable Curry: • Cooking and nutrition • Textiles • Purpose: To design and malusing a variety of differen			

	 Purpose: To design of K'Nex Ferris Wheel control. 		·	erent spices used in urries. To design and ple vegetable curry.	tie-dyeing, use of fabi to join fabrics and for	ric pens/paints and sewing · decoration.
French	Family and Friends Join in traditional songs and rhymes. Recognise rhyming sounds. Use 1st person possessive adjectives confidently and recognise that third person is different. Introduce family members. Say what sort of home they live in and name items inside. Give a simple opinion about a named animal or object. Construct a simple sentence about a variety of topics.		School Life Listen and respond to topic vocabulary. Answer questions orally using the topic vocabulary. Answer questions in writing using the topic vocabulary. Take part in a conversation with a partner and show it to an audience.		 Time Travelling Recognise number words in spoken sentences. Say numbers larger than 100. Match the subject and verb for high-frequency Verbs. Recognise when someone is saying a date. 	
Geography	<u>'</u>	tory - countries involved	 India Use of maps and atlases. Equator, tropics, hemispheres and time zones Physical geography, including climate, biomes and the water cycle Human geography, including land use, trade and the distribution of natural resources 		 Geography linked to work on history - Hampton-in-Arden through the ages Location of counties and cities of UK, land use and patterns and how these have changed over time. Use of maps, atlases and digital mapping. 	
History	Hampton-in-Arden and the surrounding area in WW1 and WW2: • Thematic study in British History to extend chronological knowledge beyond 1066. • Local History study		History link to Geograph British empire and now	hy - India as part of the the Commonwealth.	Thematic study in Britchronological knowledge Local History study.	tish History to extend
Music	Dynamics, pitch and texture: Focus: Appraising the work of Mendelssohn and further developing the skills of improvisation and composition. Composers/Artists/ Music: Mendelssohn's Fingal's Cave.	Songs of World War 2: Focus: World War 2 Songs. Composers/Artists/ Music: Pack Up Your Troubles in Your Old Kit Bag, We'll Meet Again, White Cliffs of Dover. Do Re Mi from The Sound of Music.	Advanced Rhythms: Focus Music: Steve Reich's Clapping Music. Composers/Artists/ Music: Kodaly, Steve Reich's Clapping Music.	Film Music: Focus: Exploring and identifying the characteristics of film music. Composers/Artists/ Music: James Bond Theme, Wallace and Gromit 'A Close Shave', Elgar's Pomp and Circumstance.	Theme and Variations: Pop Art: Focus: Children explore the musical concept of theme and variations and discover how rhythms can 'translate' onto different instruments. Composers/Artists/ Music: Benjamin Britten The Young Person's	Composing and Performing a Leavers' Song: Focus: Evaluating a song based on its lyrics, tempo, melody and arrangement. Composers/Artists/ Music: Take That Never Forget, Toy Story You Got A Friend In Me, The

					Guide to the Orchestra, Henry Purcell.	Beatles With A Little Help From My Friends, S Club 7 Reach
PE	Gymnastics: Focus: Vaulting. Large apparatus. Complex sequences within groups.		Bollywood Dance: Focus: Explore dance form different cultures. Use space, rhythm & expression. Work collaboratively to include more complex compositional ideas.		Rounders: Focus: Basic rules, Hitting for direction.	Swimming: (TBC) Skill Focus: Safe self- rescue Competition: Swim awards
	Football: Focus: Close control ball skills, tackling & goal side marking.	Netball: Focus: Dodging, pivoting & finding space. High 5 rules.	Tag Rugby: Focus: Develop running pass, Magic diamond at defending tactics. Competition: Team gan Tournament		Tennis: Focus: The lob, tennis scoring & tactics	Athletics: Focus: Relay, discus & long jump. Competition: Spirit scoring, PB & Sports Day
PSHE (Jigsaw)					underpin our curriculum off n positive competitive exper Relationships: Mental health Identifying mental	
	for the year Global citizenship Children's universal rights Feeling welcome and valued Choices,	normality Understanding disability Power struggles Understanding bullying Inclusion/exclusio	of school Success criteria Emotions in success Making a difference in the world	 How substances affect the body Exploitation, including 'county lines' and gang culture Emotional and 	health worries and sources of support Love and loss Managing feelings Power and control Assertiveness Technology safety	 Puberty and feelings Conception to birth Reflections about change Physical attraction Respect and consent Boyfriends/girlfrien
	 consequences and rewards Group dynamics Democracy, having a voice 	n • Differences as conflict and difference as celebration	MotivationRecognising achievementsCompliments	mental health • Managing stress	and responsibility with technology	ds Sharing images Transition

Y6 Curriculum Enrichment	 Visit to Coventry Cathedral (History) Playground Leadership Training (PSHE/PE) 	 Church visit (RE) Bollywood Dance Workshop (PE) 	 Tag Rugby Coaching (PE) Hampton Tennis Club (PE) Year 6 Leavers' Services: Hampton and Birmingham Diocese Culmington Mannor (PSHE/PE) Secondary Transition Programme
Whole School Events	 School Induction Programme Anti-Bullying Week Book Fair Parent Consultations & SEND Reviews Harvest Festival Remembrance Day/Poppy Appeal Christmas Church Service Christmas Carol Service Christmas Chronicle Competition School Council Elections Online Safety Group Elections Eco-Group Elections 	 Online Safety Day Health Week British Science Week Easter Church Service Parent Consultations & SEND Reviews World Book Day Red Nose Day Speak Out, Stay Safe (NSPCC) Easter Church Service Marie Curie Daffodil Appeal 	 Sports Day Open Evening Y6 Church Leavers' Service and Diocesan Leavers' Performance Summer Reading Challenge Transition