Little Hallingbury C of E Primary School KS2 Curriculum Overview 2016-17

<table>
<tr><th></th><th>Year 3</th><th>Year 4</th><th>Year 5</th><th>Year 6</th></tr>
<tr><td rowspan="4">English

We follow the national curriculum 2014</td><td colspan="4">Speaking and Listening ongoing:
listen and respond appropriately to adults and their peers
ask relevant questions to extend their understanding and knowledge
use relevant strategies to build their vocabulary
articulate and justify answers, arguments and opinions
give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings
maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
speak audibly and fluently with an increasing command of Standard English
participate in discussions, presentations, performances, role play, improvisations and debates
gain, maintain and monitor the interest of the listener(s)
consider and evaluate different viewpoints, attending to and building on the contributions of others
select and use appropriate registers for effective communication.</td></tr>
<tr><td colspan="2">Word Reading
Pupils should be taught to:
apply their growing knowledge of root words, prefixes and suffixes (etymology and morphology) as listed in English Appendix 1, both to read aloud and to understand the meaning of new words they meet
read further exception words, noting the unusual correspondences between spelling and sound, and where these occur in the word.</td><td colspan="2">Word Reading
Pupils should be taught to:
apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in English Appendix 1, both to read aloud and to understand the meaning of new words that they meet.</td></tr>
<tr><td colspan="2">Comprehension
Pupils should be taught to develop positive attitudes to reading and understanding of what they read by:
listening to and discussing a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks
reading books that are structured in different ways and reading for a range of purposes
using dictionaries to check the meaning of words that they have read
increasing their familiarity with a wide range of books, including fairy stories, myths and legends, and retelling some of these orally
identifying themes and conventions in a wide range of books
preparing poems and play scripts to read aloud and to perform, showing understanding through intonation, tone, volume and action
discussing words and phrases that capture the reader's interest and imagination
recognising some different forms of poetry [for example, free verse, narrative poetry]
understand what they read, in books they can read independently, by:
checking that the text makes sense to them, discussing their understanding and explaining the meaning of words in context
asking questions to improve their understanding of a text
drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
predicting what might happen from details stated and implied
identifying main ideas drawn from more than one paragraph and summarising these
identifying how language, structure, and presentation contribute to meaning</td><td colspan="2">Comprehension
Pupils should be taught to maintain positive attitudes to reading and understanding of what they read by:
continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks
reading books that are structured in different ways and reading for a range of purposes
increasing their familiarity with a wide range of books, including myths, legends and traditional stories, modern fiction, fiction from our literary heritage, and books from other cultures and traditions
recommending books that they have read to their peers, giving reasons for their choices
identifying and discussing themes and conventions in and across a wide range of writing
making comparisons within and across books
learning a wider range of poetry by heart
preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience
understand what they read by:
checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context
asking questions to improve their understanding
drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
predicting what might happen from details stated and implied
summarising the main ideas drawn from more than one paragraph, identifying key details that support the main ideas
identifying how language, structure and presentation contribute to meaning</td></tr>
</table>

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	• retrieve and record information from non-fiction • participate in discussion about both books that are read to them and those they can read for themselves, taking turns and listening to what others say.	• discuss and evaluate how authors use language, including figurative language, considering the impact on the reader • distinguish between statements of fact and opinion • retrieve, record and present information from non-fiction • participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging views courteously • explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary • provide reasoned justifications for their views.
	Spelling (see English Appendix 1 of 2014 National Curriculum online) *Pupils should be taught to:* • use further prefixes and suffixes and understand how to add them (English Appendix 1) • spell further homophones • spell words that are often misspelt (English Appendix 1) • place the possessive apostrophe accurately in words with regular plurals [for example, girls', boys'] and in words with irregular plurals [for example, children's] • use the first two or three letters of a word to check its spelling in a dictionary • write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far. **Handwriting** *Pupils should be taught to:* • use the diagonal and horizontal strokes that are needed to join letters and understand which letters, when adjacent to one another, are best left unjoined • increase the legibility, consistency and quality of their handwriting [for example, by ensuring that the downstrokes of letters are parallel and equidistant; that lines of writing are spaced sufficiently so that the ascenders and descenders of letters do not touch].	**Spelling** (see English Appendix 1 of 2014 National Curriculum online) *Pupils should be taught to:* • use further prefixes and suffixes and understand the guidance for adding them • spell some words with 'silent' letters [for example, knight, psalm, solemn] • continue to distinguish between homophones and other words which are often confused • use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in English Appendix 1 • use dictionaries to check the spelling and meaning of words • use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary • use a thesaurus. **Handwriting** *Pupils should be taught to:* • write legibly, fluently and with increasing speed by: • choosing which shape of a letter to use when given choices and deciding whether or not to join specific letters • choosing the writing implement that is best suited for a task.
	Writing Composition *Pupils should be taught to:* - *plan their writing by:* • discussing writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar • discussing and recording ideas - *draft and write by:* • composing and rehearsing sentences orally (including dialogue), progressively building a varied and rich vocabulary and an increasing range of sentence structures (English Appendix 2) • organising paragraphs around a theme • in narratives, creating settings, characters and plot • in non-narrative material, using simple organisational devices [for example, headings and sub-headings] - *evaluate and edit by:* • assessing the effectiveness of their own and others' writing and suggesting improvements	**Writing Composition** *Pupils should be taught to:* - *plan their writing by:* • identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own • noting and developing initial ideas, drawing on reading and research where necessary • in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed - *draft and write by:* • selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning • in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action • précising longer passages • using a wide range of devices to build cohesion within and across paragraphs • using further organisational and presentational devices to structure text and to guide the reader [for example, headings, bullet points, underlining]

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	• proposing changes to grammar and vocabulary to improve consistency, including the accurate use of pronouns in sentences • proof-read for spelling and punctuation errors • read aloud their own writing, to a group or the whole class, using appropriate intonation and controlling the tone and volume so that the meaning is clear. - *develop their understanding of the concepts set out in English Appendix 2 by:* • extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although • using the present perfect form of verbs in contrast to the past tense • choosing nouns or pronouns appropriately for clarity and cohesion and to avoid repetition • using conjunctions, adverbs and prepositions to express time and cause • using fronted adverbials • learning the grammar for years 3 and 4 in English Appendix 2 - *indicate grammatical and other features by:* • using commas after fronted adverbials • indicating possession by using the possessive apostrophe with plural nouns • using and punctuating direct speech • use and understand the grammatical terminology in English Appendix 2 accurately and appropriately when discussing their writing and reading.		- *evaluate and edit by:* • assessing the effectiveness of their own and others' writing • proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning • ensuring the consistent and correct use of tense throughout a piece of writing • ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register • proof-read for spelling and punctuation errors • perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear. - *develop their understanding of the concepts set out in English Appendix 2 by:* • recognising vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms • using passive verbs to affect the presentation of information in a sentence • using the perfect form of verbs to mark relationships of time and cause • using expanded noun phrases to convey complicated information concisely • using modal verbs or adverbs to indicate degrees of possibility • using relative clauses beginning with who, which, where, when, whose, that or with an implied (i.e. omitted) relative pronoun • learning the grammar for years 5 and 6 in English Appendix 2 - *indicate grammatical and other features by:* • using commas to clarify meaning or avoid ambiguity in writing • using hyphens to avoid ambiguity • using brackets, dashes or commas to indicate parenthesis • using semi-colons, colons or dashes to mark boundaries between independent clauses • using a colon to introduce a list • punctuating bullet points consistently • use and understand the grammatical terminology in English Appendix 2 accurately and appropriately in discussing their writing and reading.	
Maths	**Year 3** **Number** *Pupils should be taught to:* • count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 • identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words • solve number problems and practical problems involving these ideas.	**Year 4** **Number** *Pupils should be taught to:* • count in multiples of 6, 7, 9, 25 and 1000 • find 1000 more or less than a given number • count backwards through zero to include negative numbers • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • order and compare numbers beyond 1000 • identify, represent and estimate numbers using different	**Year 5** **Number** *Pupils should be taught to:* • read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems	**Year 6** **Number** *Pupils should be taught to:* • 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 • multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • divide numbers up to 4 digits by a two-digit whole number using the formal written method of long

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	• add and subtract numbers mentally, including: • a three-digit number and ones • a three-digit number and tens • a three-digit number and hundreds • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. • count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 • recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • recognise and show, using diagrams, equivalent fractions with small denominators • add and subtract fractions with the same	representations • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. • add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. • recall multiplication and division facts for multiplication tables up to 12 × 12 • use place value, known and derived facts to multiply and divide mentally, including: • multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • multiply two-digit and three-digit numbers by a one-digit number using formal written layout • solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. • recognise and show, using diagrams, families of common equivalent fractions • count up and down in hundredths; recognise that hundredths arise when dividing an • object by one hundred and dividing	that involve all of the above • read Roman numerals to 1000 (M) and recognise years written in Roman numerals • add and subtract whole numbers with more than 4 digits, including using formal • written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19 • multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • multiply and divide numbers mentally drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • recognise and use square numbers and cube numbers, and the notation for squared and cubed • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and	division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers • identify common factors, common multiples and prime numbers • use their knowledge of the order of operations to carry out calculations involving the four operations • solve addition and subtraction multi-step 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. • 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 • 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 for a simple fraction • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • multiply one-digit numbers with up to two decimal places by whole numbers • use written division methods in cases where the answer has up to two decimal places • solve problems which require answers to be rounded to specified degrees of accuracy • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

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	denominator within one whole • compare and order unit fractions, and fractions with the same denominators • solve problems that involve all of the above. **Measurement** *Pupils should be taught to:* • measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • measure the perimeter of simple 2-D shapes • add and subtract amounts of money to give change, using both £ and p in practical contexts • tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • know the number of seconds in a minute and the number of days in each month, year and leap year • compare durations of events [for example to calculate the time taken by particular events or tasks]. **Geometry** *Pupils should be taught to:* • draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • recognise angles as a property of shape or a description of a turn • identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • identify horizontal and vertical lines and	tenths by ten. • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to ½, ¼, ¾ • find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • solve simple measure and money problems involving fractions and decimals to two decimal places. **Measurement** *Pupils should be taught to:* • Convert between different units of measure [for example, kilometre to metre; hour to minute] • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares • estimate, compare and calculate different measures, including money in pounds and pence • read, write and convert time between analogue and digital 12- and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	division, including scaling by simple fractions and problems involving simple rates. • compare and order fractions whose denominators are all multiples of the same number • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • read and write decimal numbers as fractions • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places • solve problems involving number up to three decimal places • recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal • solve problems which require knowing percentage and decimal equivalents **Measurement** *Pupils should be taught to:* • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangles	**Ratio and Proportion** • 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 the calculation of percentages [for example, of measures,and such as 15% of 360] and the use of percentages for comparison • solve problems involving similar shapes where the scale factor is known or can be found • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. **Algebra** • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables. **Measurement** *Pupils should be taught to:* • solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • convert between miles and kilometres • recognise that shapes with the same areas can have different perimeters and vice versa • recognise when it is possible to use formulae for area and volume of shapes • calculate the area of parallelograms and triangles • calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units **Geometry** *Pupils should be taught to:* • draw 2-D shapes using given dimensions and angles • recognise, describe and build simple 3-D shapes, including making nets

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	pairs of perpendicular and parallel lines. **Statistics** *Pupils should be taught to:* • interpret and present data using bar charts, pictograms and tables • solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	**Geometry** *Pupils should be taught to:* • compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify acute and obtuse angles and compare and order angles up to two right angles by size • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry. • describe positions on a 2-D grid as coordinates in the first quadrant • describe movements between positions as translations of a given unit to the left/right and up/down • plot specified points and draw sides to complete a given polygon. **Statistics** *Pupils should be taught to:* • interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	(including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes • estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • solve problems involving converting between units of time • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. **Geometry** *Pupils should be taught to:* • identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees (o) *identify:* • angles at a point and one whole turn (total 360o) • angles at a point on a straight line and ½ a turn (total 180o) • other multiples of 90o • use the properties of rectangles to deduce related facts and find missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. **Statistics** *Pupils should be taught to:* • solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables	• 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 • recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. • 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. **Statistics** *Pupils should be taught to:* • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average

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<table>
<tr><td rowspan="2">Science</td><td colspan="2">During Year 3 and 4

Children should use the following practical scientific methods, processes and skills:
- Asking relevant questions and using different types of scientific enquiries to answer them
- Set up simple practical enquiries, comparative and fair tests
- Make systematic and careful observations and where appropriate, taking accurate measurements using standard units, using a range of equipment, for example thermometers and data loggers
- Gather, record, classify and present data
- Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests
- Identifying differences, similarities or changes related to simple scientific ideas and processes
- Use straightforward scientific evidence to answer questions to support their findings</td><td colspan="2">During Year 5 and 6

Children should use the following practical scientific methods, processes and skills:
- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs and models.
- Report and present findings from enquiries, including conclusions, causal relationships and explanations of results in oral and written forms such as displays and other presentations
- Use test results to make predictions to set up further comparative and fair tests
- Use simple models to describe scientific ideas
- Identify scientific evidence that has been used to support or refute ideas or arguments</td></tr>
<tr><td>Our Changing World
Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.
Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.

How Does Your Garden Grow?
Investigate the way in which water is transported within plants.
Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.
Identifying differences, similarities or changes related to simple scientific ideas and processes.
Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Rock Detectives
Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.
Recognise that soils are made from rocks and organic material.</td><td><u>Our Changing World</u>
Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.

<u>In A State</u>
Compare and group materials together according to whether they are solids, liquids or gases.
Observe that some materials change state when they are heated or cooled and measure or research the temperature at which this happens in degrees Celsius °C.
Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
<u>Good Vibrations</u>
Identify how sounds are made, associating some of them with something vibrating.
Recognise that vibrations from sounds travel through a medium to the ear
Find patterns between the pitch of a sound and features of the object that produced it
Find patterns between the volume of a sound and the strength of the vibrations that produced it
Recognise that sounds get fainter as the distance from the sound source increases.
<u>Switched on</u>
identify common appliances that run on electricity
Construct a simple series electrical circuit,</td><td>Our Changing World
Describe the life process of reproduction in some plants and animals.

Circle of Life
Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird.
Reproduction in Plants and Animals

Get Sorted
Compare and group together everyday materials based on evidence from comparative and fair tests, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets.

Everyday Materials
Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic.

Marvellous Mixtures
Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.
Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.

All Change
Demonstrate that dissolving, mixing and changes of</td><td>Evolution and inheritance:

recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago

recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents

identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Animals, including humans:

identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood

recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function

describe the ways in which nutrients and water are transported within animals, including humans.</td></tr>
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	Can You See Me? Recognise that we need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Find patterns in the way that the size of shadows change. Recognise that shadows are formed when the light from a light source is blocked by a solid (opaque) object. **The Power of Forces** Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Compare how things move on different surfaces. Describe magnets as having two poles. Observe how magnets attract or repel each other and attract some materials and not others. Predict whether two magnets will attract or repel each other, depending on which poles are facing. **Amazing Bodies** Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Identify that humans and some animals have skeletons and muscles for support, protection and movement.	identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit Recognise some common conductors and insulators, and associate metals with being good conductors. **<u>Where Does all That Food Go?</u>** Identify that animals, including humans, need the right type and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions Construct and interpret a variety of food chains, identifying producers, predators and prey. **<u>Human Impact</u>** Recognise that environments can change and that these changes can sometimes pose dangers to living things. Recognise that living things can be grouped in a variety of ways Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment **<u>Who Am I?</u>** Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Recognise that living things can be grouped in a variety of ways.	state are reversible changes. Explain that some changes result in the formation of new materials and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. **Feel the Force** Identify the effects of air resistance, water resistance and friction, which act between moving surfaces. Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect **The Earth and Beyond** Describe the movement of the Earth, and other planets, relative to the Sun in the solar system Describe the movement of the Moon relative to the Earth Describe the Sun, Earth and Moon as approximately spherical bodies Use the idea of the Earth's rotation to explain day and night, and the apparent movement of the sun across the sky.	**Living things and their habitats** describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals give reasons for classifying plants and animals based on specific characteristics. **<u>Our changing world</u>** *How do animals behave at different times during the year? How can we observe animals when we are not there? *How can we observe the life cycles of specific animals more closely? *How does the number, type and behaviour of birds found around our school vary during the year? What happens to invertebrates during the year? Electricity associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches use recognised symbols when representing a simple circuit in a diagram.

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				Light up your world What is light and what does it do? *Can you see more than just your face in the mirror? Can light go round corners? *Can you make a camera with a box, paper and a pin? How can you measure a shadow? What do you know about changing shadow sizes?
History	**Ancient Greece c.500 BC to 330 BC** **a study of Greek life and achievements and influence on the Western World** This could include… • Clothing and hairstyles • Domestic life • Greek alphabet • Gods goddesses and myths • Theatre and art • The Olympic games **The Roman Empire and its impact on Britain** This could include: • Julius Caesar's attempted invasion in 55-54 BC • the Roman Empire by AD 42 and the power of its army • successful invasion by Claudius and conquest, including Hadrian's Wall • British resistance, for example, Boudica • 'Romanisation' of Britain: sites such as	**Ancient Greece c.500 BC to 330 BC** **a study of Greek life and achievements and influence on the Western World** • Greek architecture • The Elgin marbles • The Persian wars • The Trojan horse • Legacy- medicine maths philosophy and science **Early civilisations Egypt c 3300 BC to 330 BC** This could include… • Timelines and maps • Social structure • Jewellery • Hieroglyphics • Pyramids • Howard Carter and discovery of Tutankhamen tomb • Gods and Goddesses • Mummification • Egyptian art • The river Nile	**A study of an aspect or theme in British History extending chronological knowledge beyond 1066 – changes in an aspect of social history** - Crime and punishment from the Anglo-Saxons to the present **A study of a non-European society that provides contrasts with British history** - Mayan civilization c. AD 900; Benin (West Africa) c. AD 900-1300. **A local history study** - A study of an aspect of a site dating from a period beyond 1066 that is significant in the locality. St Mary's Church and War memorial (link to WW1)	**A study of the Industrial Revolution. (A study of an aspect of theme in British History extending chronological knowledge beyond 1066).** Identify significant features and events that took place during the Industrial Revolution. Make comparisons and contrasts between life before, during and after the Industrial Revolution. Explore the impact the Industrial Revolution had on where we live, the technology we use and how we are educated. Identify and discuss the impact of significant figures in the Industrial Revolution, their inventions, innovations and the consequence of these. Explore the ideas of evolution and revolution within human history, comparing with other events and gradual changes that have affected how we live. **The achievements of earlier civilisations –**

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	Caerwent and the impact of technology, culture and beliefs, including early Christianity	**5. Britain's Settlement by Anglo Saxons and Scots** **C 400-910** This could include…. • Roman withdrawal from Britain in 410 and the fall of the western Roman empire • Scottish invasion • Anglo –Saxon Invasion; settlements, place names, village life, art and culture • Christian conversion- Canterbury , Iona and Lindisfarne		**Chinese civilisation, including the Shang Dynasty.**
Geography	**<u>Geographical Skills, Fieldwork and Vocabulary (Essential throughout the Key Stage)</u>** • Use maps, atlases and globes and digital/computer mapping to locate countries and describe features described • Use the 8 points of a compass, 4 and 6 figure grid references, symbols and key, (including OS maps) to build knowledge of the UK and wider world Use fieldwork to observe, measure, record, and present the human and physical features in the local area using a range of methods including sketch maps, plans, graphs and digital technologies.			
	PLACE AND LOCATIONAL KNOWLEDGE • What on Earth? Starting points: Identifying features such as cities and countries, looking at the world from the ISS. (European settlements) • The local area • What's in a region? Starting points: compare East Anglia with a region in the UK (the North West for example) or Europe eg Catalonia **HUMAN AND PHYSICAL GEOGRAPHY** • Volcanoes and earthquakes) • Where does our lunch (or clothes) come from? **Use simple fieldwork and observational skills** to study the geography of their school and its grounds and the key human and physical features of its surrounding environment.	**PLACE AND LOCATIONAL KNOWLEDGE** • Where on Earth? Starting points: Using globes, maps and ICT to locate key features, climates and landscapes (North and South America) • A detailed study of a region **Geographical skills and fieldwork/ Locational Knowledge/ Human and Physical Geography** - Use maps, atlases and globes related to Egypt - types of settlement, land use (Nile) and trade Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital	**HUMAN AND PHYSICAL GEOGRAPHY** • Weather around the world Starting points: Focus on field work and measuring the weather at a local scale, then progressing to look at climate zones, biomes and vegetation belts • Global caretakers Starting points: use of fossil fuels, impact on global warming and climate change **PLACE AND LOCATIONAL KNOWLEDGE** • Where on Earth? Starting points: Using globes, maps and ICT to locate key features, understand time differences ,explain day/ night features/ Greenwich Meridian, time zones Identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night) use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world	**Global knowledge – starting with UK and Europe. Focus on locations and use of maps at different scales.** Use of computing (through presentation, hyper-linked maps and satellite images and use of open-source digital images) to identify locations and look for similarities and differences. A starting point for this will be landmarks or themed locations, such as football grounds. Identify longitude and latitude when describing places. Link in to Industrial Revolution – map locations influenced by the Industrial Revolution and, latterly, the British Empire. **A detailed local study, focusing on rivers.** Studying of maps at different scales to identify how water courses join together to feed the Stort, then the Lea and then the Thames. > Local fieldwork to identify drainage ditches and

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		technologies.		link water transport to geology and contour features. > Study of the Stort itself (links to art work during the second term), identifying natural and man-made features. > Explore the history of the Stort as a navigable canalised river. How do locks function? How did the Stort impact industry and the transport of goods. > Study water cleanliness and use of the Stort for leisure purposes.
Art	*Pupils should be taught:* • to create sketch books to record their observations and use them to review and revisit ideas • to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] • about great artists, architects and designers in history			
	Linked to termly/half termly themes, covering NC objectives. To include: Drawing – pencils, pens (stll life, portraits) Painting - water colours/ acrylics, pastels, other media Sculpture – clay, papier mache Textile work – sewing Work of great artists and designers - Kadinsky	Linked to termly/half termly themes, covering NC objectives. To include: Drawing – pencils, pens (action sketches, fieldwork sketches, tone and shade) Painting - water colours/ acrylics, pastels, other media in the style of Egyptians Sculpture – different types of clay, papier mache Work of great artists and designers - Picasso	Linked to termly/half termly themes, covering NC objectives. To include:Drawing – pencils, inks, pens, charcoal Painting - water colours/ acrylics, pastels, other media Sketch book development of ideas Sculpture - mouldable material (clay, modrock) Textile work – collage , use of material for printing blocks, chain stitching Work of great artists and designers - Monet	Linked to termly/half termly themes, covering NC objectives. To include: Cross stitching – linked to computing and maths. Use of templates, patterns and co-ordinates when describing designs. Comparison to other techniques, including pointillism in art and pixilation in Bitmap images in computing. Mouldable material – everyday items such as tin foil. Work of great artists and designers – Andy Warhol Design of Christmas Cards.
Design Technology	**Design** • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design **Make** • select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately • select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities **Evaluate** • investigate and analyse a range of existing products • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • understand how key events and individuals in design and technology have helped shape the world			

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<table>
<tr><td></td><td colspan="4">Technical knowledge
• apply their understanding of how to strengthen, stiffen and reinforce more complex structures
• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
• understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
• apply their understanding of computing to program, monitor and control their products.
Food and nutrition
• understand and apply the principles of a healthy and varied diet
• prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
• understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</td></tr>
<tr><td rowspan="2">Music</td><td colspan="4">• play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression
• improvise and compose music for a range of purposes using the inter-related dimensions of music
• listen with attention to detail and recall sounds with increasing aural memory
• use and understand staff and other musical notations
• appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians
• develop an understanding of the history of music.</td></tr>
<tr><td>Music Express Y3

Animal Magic
- create, perform and analyse short descriptive compositions that combine sounds, movements and words.

Play it again
- create simple rhythmic patterns and perform them rhythmically using notation as a support.

The Class Orchestra
- create, combine and perform rhythmic and melodic material as part of a class performance of a song.</td><td>Music Express Year 4

Playground Games
- recognise and explore some characteristics of singing games. It consolidates their sense of pulse and ability to perform with others.

Cyclic Patterns
- develop ability to perform rhythmic patterns confidently and with a strong sense of pulse.
-
Exploring Rounds
- sing and play music in two (or more) parts.
- explore the effect of two or more pitched notes sounding together - harmony.
- experiment with clusters of pitched notes and discover which combinations are 'comfortable' (concords), and which 'clash' (discords).
- sing rounds and experiment with melodic ostinati to provide accompaniments.
- play drones and single note accompaniments.

Christmas Concert
Perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions.</td><td>Music Express Year 5

Songwriter
- compose a song with an awareness of the relationship between lyrics and melody.

Performing Together
- sing and play a two-part song, play instrumental accompaniments and rehearse and develop musical and performance ideas with understanding of how to achieve a quality class performance.

Musical Processes
- develop an understanding of the process of composing by creating and performing music in response to musical and non-musical stimuli</td><td>Linked to Music Express Year 6

Musical Cliches
- recognise, analyse and use a range of musical clichés used in different musical genres.

The Overture
- recognise and compose within the musical genre of overture. Pupils learn how different themes can be used, eg to provide musical contrast, to describe different characters, events or moods, to suggest a particular time or place.
-
Musical Theory:
> Identify scales based on notes and sharps/flats.
> Identify time signature in 4/4, 3/4 and other common times.
> Identify rhythmic patterns.
> Identify melodies and distinguish this from harmony.
> Read and write music in various representations including graphic and standard scores.

Composition:
> Create polyrhythms from basic blocks put together to create greater complexity.
> Composed based around a chord progression.
> Composed based around a melody.</td></tr>
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	Christmas Concert Perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions. **Painting with sound** - create, perform and analyse expressive compositions and extend their sound vocabulary.		**Christmas Concert** Perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions. **Music of Holst – The Planets** Varying rhythms Playing instruments with control Selecting instruments based on their sound Playing repeated rhythms and ostinatos Composing own music in groups based on a well-known compostion (Mars)	Performance: > Sing and perform own compositions collaboratively. > Sing and perform others' compositions collaboratively. **Christmas Concert** Perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions.
PE	*Pupils should be taught to:* • use running, jumping, throwing and catching in isolation and in combination • play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending • develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics] • perform dances using a range of movement patterns • take part in outdoor and adventurous activity challenges both individually and within a team • compare their performances with previous ones and demonstrate improvement to achieve their personal best • swimming and water safety			
RE We follow a scheme from the Chelmsford Diocesan Scheme with units from other faiths from the Essex syllabus	Harvest: Taking responsibility Worshipping and Celebrating in the Home: Puja and Divali Focus: Hinduism Christmas: Christmas is coming Jesus the Healer Faith in Action Easter: Changing roles The Lord's Prayer Pentecost: Celebration Muhammad and the Qur'an Focus: Islam	Harvest: Belonging to each other Christian Symbols Christmas: The Christmas message Parables of Jesus Moses, the Exodus and Pesach Focus: Judaism	Easter: Changing relationships The mosque and Prayer Focus: Islam Pentecost: God's transforming power Circle of the Christian Year	Harvest: Our place in creation Saints Christmas: mystery of Christmas Death and Reincarnation Focus: Hinduism The Eucharist Easter: Change from death to life The Ka'bah and the Hajj Focus: Islam Pentecost: The Holy Spirit at work Christian Pilgrimage

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<tr><td>Computing</td><td colspan="4">Pupils should be taught to:
design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
use sequence, selection, and repetition in programs; work with variables and various forms of input and output
use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</td></tr>
<tr><td>PSHE
Pshe may be taught as a discrete lesson or these themes may be incorporated into discussions and work in other subjects.</td><td>Relationships: wider networks of friends, making and breaking friends
Medicine: recognising illness, medicines, feeling better, people who make them better
Keeping Safe: unsafe feelings, fire safety, safety at school, accidents, identifying possible risks
Healthy Lifestyle: health routines, taking responsibility for eating balanced food, basic hygiene
Me and Growing and Changing: Physical and emotional changes. Dealing with emotions</td><td>Relationships: network of friends, different types of community relationships , emotions of others, empathy
Medicines and Drugs: Coping with illness, drugs, safety and uses,
Me and Keeping Safe: dangers in the community, being in charge, coping with feelings of danger
Healthy Lifestyle: effects on emotions and physical appearance</td><td>Relationships: impact of community relationships, bullying and discrimination, changing moods,
Growing and Changing: body changes including puberty, managing emotions, hygiene, responsibility
Medicines and Drugs: smoking risks, short/long term illness, media pressure
Healthy Lifestyle: effects on leisure, pressures and influences</td><td>Relationships: leadership, peer pressure, choosing friends, conflict and resolution , different types of relationships, global connections
Medicines and Drugs: short/long term harm, risks of smoking, alcohol and drug taking
Keeping Safe: responsibility, accidents, conflicts, strategies for staying safe
Healthy Lifestyle: compare lifestyles, maintaining healthy lifestyles, body types, emotions
Growing and Changing: body changes including puberty, managing emotions, preparation for secondary school</td></tr>
<tr><td>MFL (French)</td><td colspan="4">Pupils should be taught to:
listen attentively to spoken language and show understanding by joining in and responding
explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words
engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help
speak in sentences, using familiar vocabulary, phrases and basic language structures
develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases
present ideas and information orally to a range of audiences
read carefully and show understanding of words, phrases and simple writing
appreciate stories, songs, poems and rhymes in the language
broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary
write phrases from memory, and adapt these to create new sentences, to express ideas clearly
describe people, places, things and actions orally and in writing
understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to English.</td></tr>
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