Year 6 Summer term 2022-2023





Dear Parents of Year Six children,

The Summer Term is a very busy and extremely important time for Year 6 students. It is within this term that the children sit their End of Year exams. We will continue to deliver the National Curriculum. This booklet will provide you with up-to-date material and information on what the pupils will be covering in the following subjects:

- > English
- Maths
- > Science
- World Studies

We hope that this will provide you with an accurate picture on what your children will be studying in the last term of this academic year.

Thank you

The Year 6 team

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English in the Summer Term

In the Summer Term the students will learn about the following:

- Fiction: Narrative and plays: The playscript 'The Elephant in the Room' is about a child-carer. Children will study the plot, characters and dramatic conventions, and elements of performance are included. Children will build a character and explore the stages of development of a script, then go on to write an extra scent for the play.
- Fiction: Authors and texts: This unit explores the work of Michael Morpurgo using 'I
 believe in Unicorns' as the central text. The children will study Morpurgo's themes and
 style of writing as well as analysing how he creates atmosphere, character and
 imagery. Children will work in role as the central character which supports their
 narrative writing.

In Grammar, we will revisit what has been covered the entire Year Six syllabus.

Year 6 programme of study



= covered curriculum objectives

N.B any skills that are not highlighted, are the ones we will be focusing on in the summer term.

Reading – word reading

Statutory requirements

Pupils should be taught to:

Apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), both to read aloud and to understand the meaning of new words that they meet.

Reading - comprehension

Statutory requirements

- 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
 - 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.

Writing - transcription

Statutory requirements

Spelling

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.
- 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.

Writing - handwriting and presentation

Statutory requirements

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

Statutory requirements

- 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]
- 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

Writing - vocabulary, grammar and punctuation

Statutory requirements

- develop their understanding of the concepts 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
- 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



Maths in the Summer Term

Maths in the Summer Term is when the children build on their knowledge that they have learnt throughout the year.

Summer term

| Wk | Weekly Summary | Strands | Objectives |
|----|--|---|--|
| 23 | Revise reading, writing, comparing and ordering numbers with up to seven digits and decimal numbers with up to three decimal places; revise rounding | Number and place value (NPV) | NPV.76 Read, write, compare and order 7-digit numbers NPV.77 Locate 7-digit numbers on a line and round to nearest million NPV.81 Round any whole number to a required degree of accuracy NPV.72 Read, write and order negative numbers NPV.73 Use negative numbers in context, and calculate intervals across zero |
| | decimal numbers to the nearest tenth and whole number; revise rounding big numbers to the nearest thousand, ten thousand, hundred thousand and million; revise locating a number on a number line marking numbers it lies between; revise comparing and ordering negative numbers including calculating differences between negative numbers and positive and negative numbers | Decimals, percentages and their equivalence to fractions (DPE) | DPE.75 Identify the value of each digit in numbers given to 3 decimal places DPE.82 Compare and order numbers with up to 3 decimal places DPE.76 Multiply and divide by 10, 100 and 1000 giving answers up to 3 decimal places DPE.77 Round decimals to nearest tenth and nearest whole number |
| 24 | Revise adding and subtracting whole numbers and decimal numbers using mental and written methods; revise finding percentages of numbers, converting fractions, decimals and percentages and making comparisons using percentages; revise how | Number and place value (NPV) Mental addition and subtraction (MAS) Written addition and subtraction and subtraction and subtraction and subtraction | NPV.88 Solve number and practical problems that involve square and cube numbers, numbers up to 10 000 000 and rounding any whole number to a required degree of accuracy MAS.75 Solve additions using appropriate mental strategies MAS.78 Solve subtractions using appropriate mental strategies MAS.84 Perform mental additions and subtractions with mixed operations and large numbers MAS.80 Add mixed decimal numbers using appropriate mental strategies MAS.82 Subtract mixed decimal numbers using appropriate mental strategies WAS.76 Subtract 5- and 6-digit numbers using column subtraction WAS.79 Subtract large numbers using column subtraction (6–7 |
| | brackets can be | (WAS) | digits) WAS.73 Add decimal numbers using column addition |

| | used in calculation problems, revise the order of operations for calculations involving the four operations; revise solving missing number problems using inverse operations; revise using trial and improvement to solve equations involving one or two unknowns, and find missing lengths and angles | | WAS.82 Choose the most appropriate method to add and subtract decimal numbers |
|----|---|---|--|
| | | Decimals, percentages and their equivalence to fractions (DPE) | DPE.80 Find simple percentages of amounts DPE.83 Solve problems involving the calculation of percentages and the use of percentages for comparison |
| | | Fractions, ratio and proportion (FRP) | FRP.86 Associate a fraction with division and calculate decimal fraction equivalents |
| | | Problem solving, reasoning and algebra (PRA) | PRA.82 Use order of operations and brackets for calculations involving the four operations |
| | | Geometry: properties of shapes (GPS) | GPS.83 Find missing lengths and angles in shapes |
| 25 | Revise scaling, using mental strategies for multiplying and dividing; revise solving problems involving rate; revise multiplying pairs of 2-digit numbers and finding factors of 2-digit numbers; multiply 3-digit and 4-digit numbers including decimals by whole 1-digit numbers and solve word problems involving multiplication of money and measures; use a systematic approach to solve problems involving multiplication and division, including long multiplication of 3-digit and 4-digit numbers and decimals | Mental addition and subtraction (MAS) | MAS.84 Perform mental additions and subtractions with mixed operations and large numbers |
| | | Fractions, ratio and proportion (FRP) | FRP.89 Solve problems involving similar shapes where the scale factor is known or can be found |
| | | Written multiplication and division (WMD) | WMD.68 Solve problems involving multiplication and division including scaling by simple fractions and problems involving simple rates WMD.70 Use long multiplication to multiply 2-digit and 3-digit numbers by 2-digit numbers (friendly numbers) WMD.86 Use long multiplication to multiply 3- and 4-digit numbers with 2 decimal places by numbers between 10 and 30 |
| | | Mental multiplication and division (MMD) | MMD.61 Identify factors and multiples, and begin to find common factors |
| | | Problem solving, reasoning and algebra (PRA) | PRA.75 Solve problems involving addition, subtraction, multiplication and division |
| | | Number and place value (NPV) | NPV.88 Solve number and practical problems that involve square and cube numbers, numbers up to 10 000 000 and rounding any whole number to a required degree of accuracy |
| 26 | Revise using short division to find unit fractions of amounts, including decimals, and round answers to money problems according to the context; revise using long division to divide 4-digit by 2-digit numbers, giving remainders | Written multiplication and division (WMD) | WMD.89 Use written division methods in cases where the answer has up to 2 decimal places WMD.59 Understand when it is appropriate to round up or down after division WMD.87 Use long division to divide 4-digit numbers by 2-digit numbers WMD.88 Use long division to divide 3-digit and 4-digit numbers by numbers between 10 and 30, writing the fractional part of the answer as a decimal |
| | | Problem solving, reasoning and algebra (PRA) | PRA.81 Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy |

| Wk | Weekly Summary | Strands | Objectives |
|----|---|--|--|
| 27 | Revise equivalence simplifying fractions and changing | Number and place value (NPV) | NPV.71 Read years using Roman numerals |
| | improper fractions into mixed numbers and vice versa; revise adding and subtracting fractions with different denominators, including those which give answers greater than 1; revise multiplying pairs of fractions and multiplying and dividing fractions by whole numbers; solving problems involving ratios; read intermediate points off scales | Fractions, ratio and proportion (FRP) | FRP.64 Convert mixed numbers to improper fractions and vice versa FRP.85 Use common multiples to express fractions in the same denomination FRP.90 Use common factors to simplify fractions FRP.79 Use equivalence to add mixed numbers with different denominators FRP.80 Use equivalence to subtract fractions and mixed numbers with different denominators FRP.81 Multiply fractions less than 1 by whole numbers, converting improper fractions to whole numbers FRP.82 Multiply fractions by whole numbers FRP.83 Divide proper fractions by whole numbers FRP.84 Multiply simple pairs of proper fractions, writing the answer in its simplest form FRP.87 Describe ratio and use ratio to solve problems FRP.88 Solve problems involving the relative size of two quantities where missing values can be found by using integer multiplication and division facts MEA.78 Calculate time intervals |
| | | (MEA) | MEA.87 Read intermediate points off a variety of scales |
| 28 | Revise properties and classification of 2D shapes, drawing 2D shapes using ruler, protractor and compasses, parts of a circle and angles in polygons; revise calculating missing | Geometry: properties of shapes (GPS) | GPS.81 Draw 2D shapes with ruler, protractor, compass using given dimensions and angles GPS.88 Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons GPS.82 Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles GPS.83 Find missing lengths and angles in shapes |

| | angles by knowing angle facts; use a protractor to measure and draw angles in degrees; identify and name acute, right, obtuse and reflex angles; understand perimeter, area and volume; find the perimeter of rectangles, find the area of rectangles, parallelograms and triangles, and find the volumes of cubes and cuboids; revise reading and interpreting different types of data display | Measurement (MEA) Statistics (STA) | MEA.79 Convert between miles and kilometres MEA.80 Calculate perimeter of rectangles, triangles, parallelograms and other polygons MEA.81 Calculate area of rectangles and parallelograms including use of formulae MEA.84 Calculate volume of cuboids and cubes using cm3 and m3 MEA.75 Use, read, write and convert between standard units, converting measurements of length, mass and volume from a smaller to a larger unit of measure and vice versa, using up to 3 decimal places MEA.77 Read and tell the time using analogue, digital and 24-hour clocks, converting times between the three STA.65 Complete, read and interpret information in timetables STA.71 Solve comparison, sum and difference problems using information presented in line graphs STA.83 Interpret and construct pie charts and use these to solve problems |
|----|---|---|---|
| 29 | | Number and place value (NPV) Problem solving, reasoning and algebra (PRA) Geometry: position and direction (GPD) | NPV.88 Solve number and practical problems that involve square and cube numbers, numbers up to 10 000 000 and rounding any whole number to a required degree of accuracy PRA.78 Use mathematical reasoning to investigate and solve problems and puzzles, justify their reasoning PRA.81 Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy GPD.85 Use knowledge of geometry to make tessellating patterns |
| | | Written multiplication and division (WMD) | WMD.90 Multiply 2-, 3- and 4-digit numbers using alternative historical methods (Brahmagupta / Napiers Bones / lattice) |
| 30 | Explore binary numbers; solve mathematical puzzles; including using multiplication facts, find digital roots and look for patterns; explore Fibonacci | Number and place value (NPV) | NPV.89 Understand that numbers can be represented in different ways, including binary NPV.70 Find square and cube numbers, and use the notation for squared and cubed |
| | | Problem solving, reasoning and algebra (PRA) | PRA.78 Use mathematical reasoning to investigate and solve problems and puzzles, justify their reasoning PRA.70 Identify patterns, devise and test rules and use them to make predictions |
| | sequences and Pythagoras' theorem | Geometry: properties of shapes (GPS) | GPS.91 Understand Pythagoras theorem (lengths of sides in a right-angled triangle) |

Year 6 programme of study

Number - number and place value

Statutory requirements

- 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 that involve all of the above
- read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

Number - addition and subtraction

Statutory requirements

- 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.

Number - multiplication and division

Statutory requirements

- 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
 (2) and cubed (3)
- 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, including scaling by simple fractions and problems involving simple rates.

Number – fractions (including decimals and percentages)

Statutory requirements

- 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 [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]
- add and subtract fractions with the same denominator and denominators that are multiples of the same number
- multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$]
- 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 of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.

Measurement

Statutory requirements

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 (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 - properties of shapes

Statutory requirements

- 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 (°)
- identify:
 - angles at a point and one whole turn (total 360°)
 - angles at a point on a straight line and ½ a turn (total 180°)
 - other multiples of 90°
- 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.

Geometry – position and direction

Statutory requirements

Pupils should be taught to:

 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

Statutory requirements

- solve comparison, sum and difference problems using information presented in a line graph
- complete, read and interpret information in tables, including timetables.



Science in the Summer Term

- Scientific inquiry
- Revision on changing circuits
- Revision on states of matter including reversible and irreversible changes
- Revision on forces and their effect

The programme of study included in this booklet for science outlines exactly what skills the children will have to cover during the units above.

Scientific enquiry

| Α | to teach the principles of scientific inquiry |
|---|---|
| В | to improve understanding of theory through practical experience |
| С | to teach specific practical skills, such as measurement and observation, that may be useful in future study or employment |
| D | to motivate and engage students |
| Е | to develop higher level skills and attributes such as communication, teamwork and perseverance |

In the Science primary curriculum five types of enquiries are explicitly named in all year groups

- Observing changes over time
- Noticing patterns
- Grouping and classifying things (noticing similarities and differences)
- · Comparative and fair testing
- Finding things out using secondary sources of information (researching)
- Modelling is not explicitly mentioned but will be used

These types of enquiries will be revised in year 6 across the different subject areas as appropriate (biology, physics and chemistry).



World Studies in the Summer term

Geography

Purpose of study

A high-quality geography education should inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. Teaching should equip pupils with knowledge about diverse places, people, resources and natural and human environments, together with a deep understanding of the Earth's key physical and human processes. As pupils progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments. Geographical knowledge, understanding and skills provide the frameworks and approaches that explain how the Earth's features at different scales are shaped, interconnected and change over time. We will support that by teaching them the history topic 'Cities, Food and Famine

Aims

The national curriculum for geography aims to ensure that all pupils:

- develop contextual knowledge of the location of globally significant places both terrestrial and marine – including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes
- understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time
- are competent in the geographical skills needed to:
 - collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes
 - interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS)
 - communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length.

