The Robert Drake Primary School

Curriculum—Year 5

English

Reading

- Apply knowledge of morphology and etymology when reading new words
- Read and discuss a range of texts
- Read books structured in different ways; read for a range of purposes
- Recommend books to others
- Identify and discuss themes and conventions and make comparisons
- Learn a range of poetry by heart
- Prepare poems/plays to read aloud and perform
- Check for sense and ask questions to improve understanding
- Draw inference and make predictions
- Identify how structure contributes to meaning
- Discuss authors' use of language
- Distinguish between fact and opinion
- Retrieve, record and present information from non-fiction
- Discuss books they read and hear
- Explain and discuss their understanding, including through formal presentations and debates
- Justify their views

Writing

- Spell: words with prefixes, suffixes and silent letters; homophones and other confusing words; using knowledge of morphology and etymology
- Use a thesaurus/dictionary to check meanings/spellings
- Write legibly, fluently and with increasing speed
- Plan writing: to suit audience and purpose; noting and developing initial ideas; considering how authors develop characters and settings
- When writing: select appropriate grammar and vocabulary; use linking, organisational and presentational devices; in narratives, use dialogue and develop character, setting and atmosphere
- Précis longer passages
- Assess effectiveness of own and others' writing and propose changes to enhance, effect and clarify meaning
- Check writing for: correct and consistent tenses; subject/verb agreement; distinction between spoken/written language; appropriate register; correct spelling and punctuation
- Perform own compositions
- Understand formal language structures
- Use: expanded noun phrases; modal and passive verbs; relative clauses
- Use: commas and hyphens to avoid ambiguity; brackets, dashes and commas for parenthesis; colons in lists; punctuation of bullet points
- Learn and use grammar and terminology in Appendix 2 of The National Curriculum for English

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Spoken Language

- Listen and respond appropriately
- Ask relevant questions
- Build and use vocabulary
- Articulate and justify own ideas
- Describe, explain and narrate for different purposes; express feelings
- Participate actively in conversations
- Speculate, hypothesise and explore ideas
- Speak clearly and fluently in Standard English
- Take part in discussions, presentations, performances, role-play, improvisations and debates
- Keep listeners interested
- Explore different viewpoints
- Communicate effectively using appropriate register

Languages

- Listen and respond using fully structured sentences
- Explore complex language through stories, songs, and rhymes
- Converse; ask and answer questions; express opinions; seek help with a range of complex phrases
- Speak in sentences independently
- Develop accurate pronunciation
- Express complex ideas and describe things orally and in writing
- Understand and make links in written words and phrases
- Broaden vocabulary
- Understand a range of grammatical rules

Science

- Explain life cycle differences in a mammal, amphibian, insect and bird
- Describe reproduction in some plants and animals
- Describe changes as humans develop and age
- Classify materials according to various properties
- Know that some materials dissolve in water to form a solution
- Separate mixtures of materials
- Give reasons for particular uses of everyday materials
- Explore reversible changes and changes that are difficult to reverse
- Describe the movement of Earth and other planets relative to the Sun and of the Moon relative to Earth
- Use Earth's rotation to explain day and night
- Explore the effects of gravity and friction (including air and water resistance)
- Know that some mechanisms affect forces

Working scientifically

- Plan different types of enquiry to answer questions
- Take accurate measurements and repeat them if needed
- Record increasingly complex data in various ways
- Use results to make predictions and suggest further tests
- Present findings orally and in writing
- Identify scientific evidence for or against an idea

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Mathematics

Number – Number and Place Value

- 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 0
- Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000
- Solve number problems and practical problems that involve all of the above
- Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals

Number – Addition and Subtraction

- Add and subtract whole numbers with more than 4 digits, including using formal written methods (column, 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

- Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers
- Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) 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 1,000
- 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

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Number – Fractions (Including Decimals)

- 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 2 decimal places to the nearest whole number and to 1 decimal place
- Read, write, order and compare numbers with up to 3 decimal places
- Solve problems involving numbers up to 3 decimal places
- Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write a percentage as a fraction with a denominator of 100, and as a decimal fraction
- 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

- 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), including using standard units, square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes
- Estimate volume [for example, using 1 cm^3 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

Statistics

- Solve comparison, sum and difference problems using information presented in a line graph
- Complete, read and interpret information in tables, including timetables

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Geometry – Properties of Shape

- 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 1 whole turn (total 360°), angles at a point on a straight line and half 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
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Geometry – Position and Direction

- 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

Music

- Use voice and instruments with increasing accuracy, control and expression
- Improvise and compose music using tuned and untuned instruments
- Listen with a greater attention to detail
- Use and understand more complex musical notation
- Appreciate a wide range of live and recorded music
- Develop a more in-depth understanding of musical history

Physical Education

- Use running, jumping, catching and throwing in isolation
- Play competitive games, modified as appropriate
- Develop flexibility and control in gym, dance and athletics
- Take part in outdoor adventurous activities
- Compare performances to achieve personal bests
- Swim at least 25 metres; use a range of strokes; perform self-rescue

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Geography

- Locate the world's countries, focusing on Europe
- Study UK counties, cities, regions, physical features and land use
- Identify the lines and zones on a globe
- Compare a UK region with one in Europe and one in North or South America
- Understand key aspects of physical and human geography
- Use maps, atlases and globes
- Use eight points of the compass, four grid references, with simple symbols and keys
- Use a range of methods to study the local area

History

- A non-European society that provides contrasts with British history
- A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066
- A local history study, tracing how several aspects of national history are reflected in the locality
- The achievements of the earliest civilisations including an overview of where and when the first civilisations appeared and an in-depth study
- Ancient Greece—a study of Greek life and achievements and their influence on the Western world

Design and Technology

- Communicate design ideas in various ways to meet specific design briefs
- Use a wider range of tools and materials
- Evaluate existing products analytically and improve own products
- Build and strengthen more complex structures
- Use mechanical, electrical and computing systems in own products
- Understand and apply principles of a healthy diet and its effects
- Prepare and cook more complex savoury dishes
- Understand seasonality

Computing

- Design and write complex programs
- Use sequence, selection and repetition in complex programs
- Use logical reasoning to achieve complex outcomes
- Understand complex computer networks
- Use search technologies effectively and understand how to search safely
- Create a range of digital products across the curriculum and fit for a purpose
- Use technology safely, respectfully and responsibly

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Art and Design

- Use sketchbooks to collect, record and evaluate ideas and suggest next steps for improvement
- Improve skills in drawing, painting and sculpture, using various materials
- Learn about great artists, architects and designers, make comments and begin to use their style in own work