

Milestone 2

English

- Apply a growing knowledge of root words, prefixes and suffixes (etymology and morphology).
- Read further exception words, noting the spellings.
- Draw inferences from reading.
- Predict from details stated and implied.
- Recall and summarise main ideas.
- Discuss words and phrases that capture the imagination.
- Retrieve and record information from non-fiction, using titles, headings, sub-headings and indexes.
- Prepare poems and plays to read aloud with expression, volume, tone and intonation.
- Identify recurring themes and elements of different stories (e.g. good triumphing over evil).
- Recognise some different forms of poetry.
- Explain and discuss understanding of reading, maintaining focus on the topic.
- Draw inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence.
- Predict what might happen from details stated and implied.
- Identify main ideas drawn from more than one paragraph and summarise these.
- Identify how language, structure and presentation contribute to meaning.
- Ask questions to improve understanding of a text.
- Use the main features of a type of writing (identified in reading).
- Use techniques used by authors to create characters and settings.
- Compose and rehearse sentences orally.
- Plan, write, edit and improve.
- Create characters, settings and plots.
- Use alliteration effectively.
- Use similes effectively.
- Use a range of descriptive phrases including some collective nouns.
- Use organisational devices such as headings and sub headings.
- Use the perfect form of verbs to mark relationships of time and cause.
- Use connectives that signal time, shift attention, inject suspense and shift the setting.

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| • Organise paragraphs around a theme. |
| • Sequence paragraphs. |
| • Use a mixture of simple, compound and complex sentences. |
| • Write sentences that include: |
| • conjunctions |
| • adverbs |
| • direct speech, punctuated correctly |
| • Join letters, deciding which letters are best left un-joined. |
| • Make handwriting legible by ensuring downstrokes of letters are parallel and letters are spaced appropriately. |
| • Use prefixes and suffixes and understand how to add them. |
| • Spell homophones correctly. |
| • Spell correctly often misspelt words. |
| • 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. |
| • Develop understanding of writing concepts 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. |
| • 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 grammatical terminology when discussing writing and reading: |
| Year 3 |
| • word family, conjunction, adverb, preposition, direct speech, inverted commas (or 'speech marks'), prefix, consonant, vowel, clause, subordinate clause. |
| Year 4 |
| • pronoun, possessive pronoun, adverbial. |

• Use and understand grammatical terminology when discussing writing and reading:

• Read aloud writing to a group or whole class, using appropriate intonation

Communication

- Engage in discussions, making relevant points.
- Ask for specific additional information to clarify.
- Understand the meaning of some phrases beyond the literal interpretation.
- Use time, size and other measurements to quantify.
- Use interesting adjectives, adverbial phrases and extended noun phrases in discussion.
- Use vocabulary that is appropriate to the topic being discussed or the audience that is listening.
- Use verbs with irregular endings.
- Use a mixture of sentence lengths to add interest to discussions and explanations.
- Use intonation to emphasise grammar and punctuation when reading aloud.
- Bring stories to life with expression and intonation.
- Read the audience to know when to add detail and when to leave it out.
- Make relevant comments or ask questions in a discussion or a debate.
- Seek clarification by actively seeking to understand others' points of view.
- Respectfully challenge opinions or points, offering an alternative.

Mathematics

- Count in multiples of 2 to 9, 25, 50, 100 and 1000.
- Find 1000 more or less than a given number.
- Count backwards through zero to include negative numbers.
- Identify, represent and estimate numbers using different representations.
- 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.
- Order and compare numbers beyond 1000.
- Recognise the place value of each digit in a four-digit number. (thousands, hundreds, tens, and ones)
- Round any number to the nearest 10, 100 or 1000.
- Solve number and practical problems with increasingly large positive numbers.
- Solve two-step addition and subtraction problems in contexts, deciding which operations and methods to use and why.
- Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.
- Add and subtract numbers mentally, including:
 - A three-digit number and ones.
 - A three-digit number and tens.
 - A three-digit number and hundreds.
- Estimate and use inverse operations to check answers to a calculation.
- Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction.
- Solve problems involving multiplying and dividing, 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).
- Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.
- 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.
- Recognise and use the inverse relationship between multiplication and division and use this to check calculations and solve missing number problems.
- Recall multiplication and division facts for multiplication tables up to 12×12 .
- 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.
- Round decimals with one decimal place to the nearest whole number.

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| • Compare numbers with the same number of decimal places up to two decimal places. |
| • 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. |
| • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. |
| • Compare and order unit fractions and fractions with the same denominators |
| • Recognise and show, using diagrams, families of common equivalent fractions. |
| • Recognise and write decimal equivalents of any number of tenths or hundredths. |
| • Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$. |
| • Add and subtract fractions with the same denominator within one whole. |
| • Solve problems involving increasingly harder fractions. |
| • 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. |
| • 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. |
| • Solve simple measure and money problems involving fractions and decimals to two decimal places. |
| • 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 pairs of perpendicular and parallel lines. |
| • 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. |
| • Recognise angles as a property of shape and as an amount of rotation. |
| • Identify right angles, recognise that 2 right angles make a half turn and 4 make a whole turn. |
| • Identify angles that are greater than a right angle. |
| • 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. |
| • Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). |
| • Measure the perimeter of simple 2-D shapes. |

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| • Add and subtract amounts of money to give change. (£ and p) |
| • 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 appropriate vocabulary. |
| • Know the number of seconds in a minute and the number of days in each month, year and leap year. |
| • Compare durations of events. |
| • 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. |
| • 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, pictograms and tables. |
| • 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. |
| • Solve addition and subtraction, multiplication and division problems that involve missing numbers. |

Science

- Ask relevant questions.
- Set up simple, practical enquiries and comparative and fair tests.
- Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers.
- Gather, record, classify and present data in a variety of ways to help in answering questions.
- 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.
- Identify differences, similarities or changes related to simple, scientific ideas and processes.
- Use straightforward, scientific evidence to answer questions or to support their findings.
- Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.
- 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.
- Investigate the way in which water is transported within plants.
- Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
- Identify that animals, including humans, need the right types and amounts of nutrition, that they cannot make their own food and they get nutrition from what they eat.
- Construct and interpret a variety of food chains, identifying producers, predators and prey.
- Identify that humans and some animals have skeletons and muscles for support, protection and movement.
- 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.
- Recognise that living things can be grouped in a variety of ways.
- Explore and use classification keys.
- Recognise that environments can change and that this can sometimes pose dangers to specific habitats.
- Identify how plants and animals, including humans, resemble their parents in many features.
- Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.
- Identify how animals and plants are suited to and adapt to their environment in different ways.

Rocks and Soils

- Compare and group together different kinds of rocks on the basis of their simple, physical properties.
- Relate the simple physical properties of some rocks to their formation (igneous or sedimentary).
- Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock.
- Recognise that soils are made from rocks and organic matter.

States of Matter

- 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 the temperature at which this happens in degrees Celsius ($^{\circ}\text{C}$), building on their teaching in mathematics.
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
- Compare how things move on different surfaces.
- Notice that some forces need contact between two objects, but magnetic forces can act at a distance.
- Observe how magnets attract or repel each other and attract some materials and not others.
- 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.
- Describe magnets as having two poles.
- Predict whether two magnets will attract or repel each other, depending on which poles are facing.
- Recognise that they need light in order to see things and that dark is the absence of light.
- Notice that light is reflected from surfaces.
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
- Recognise that shadows are formed when the light from a light source is blocked by a solid object.
- Find patterns in the way that the size of shadows change.
- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sounds travel through a medium to the ear.
- Identify common appliances that run on electricity.
- Construct a simple series electrical circuit, 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.
- Describe the movement of the Earth relative to the Sun in the solar system.
- Describe the movement of the Moon relative to the Earth.

History

- Use evidence to ask questions and find answers to questions about the past.
- Suggest suitable sources of evidence for historical enquiries.
- Use more than one source of evidence for historical enquiry in order to gain a more accurate understanding of history.
- Describe different accounts of a historical event, explaining some of the reasons why the accounts may differ.
- Suggest causes and consequences of some of the main events and changes in history.
- Describe changes that have happened in the locality of the school throughout history.
- Give a broad overview of life in Britain from ancient until medieval times.
- Compare some of the times studied with those of other areas of interest around the world.
- Describe the social, ethnic, cultural or religious diversity of past society.
- Describe the characteristic features of the past, including ideas, beliefs, attitudes and experiences of men, women and children.
- Describe changes that have happened in the locality of the school throughout history.
- Place events, artefacts and historical figures on a time line using dates.
- Understand the concept of change over time, representing this, along with evidence, on a time line.
- Use dates and terms to describe events.
- Use appropriate historical vocabulary to communicate, including:
 - dates
 - time period
 - era
 - change
 - chronology.
- Use literacy, numeracy and computing skills to a good standard in order to communicate information about the past.

Geography

- Ask and answer geographical questions about the physical and human characteristics of a location.
- Explain own views about locations, giving reasons.
- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features.
- Use fieldwork to observe and record the human and physical features in the local area using a range of methods including sketch maps, plans and graphs and digital technologies.
- Use a range of resources to identify the key physical and human features of a location.
- Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, including hills, mountains, cities, rivers, key topographical features and land-use patterns; and understand how some of these aspects have changed over time.
- Name and locate the countries of Europe and identify their main physical and human characteristics.
- Name and locate the Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle and date time zones. Describe some of the characteristics of these geographical areas.
- Describe geographical similarities and differences between countries.
- Describe how the locality of the school has changed over time.
- Describe key aspects of:
 - **physical geography**, including: rivers, mountains, volcanoes and earthquakes and the water cycle.
 - **human geography**, including: settlements and land use.
- Use the eight points of a compass, four-figure grid references, symbols and key to communicate knowledge of the United Kingdom and the wider world.

Religious Education

- Present the key teachings and beliefs of a religion.
- Refer to religious figures and holy books to explain answers.
- Identify religious artefacts and explain how and why they are used.
- Describe religious buildings and explain how they are used.
- Explain some of the religious practices of both clerics and individuals.
- Identify religious symbolism in literature and the arts.
- Show an understanding that personal experiences and feelings influence attitudes and actions.
- Give some reasons why religious figures may have acted as they did.
- Ask questions that have no universally agreed answers.
- Explain how beliefs about right and wrong affect people's behaviour.
- Describe how some of the values held by communities or individuals affect behaviour and actions.
- Discuss and give opinions on stories involving moral dilemmas.

Computing

- Use specified screen coordinates to control movement.
- Set the appearance of objects and create sequences of changes.
- Create and edit sounds. Control when they are heard, their volume, duration and rests.
- Control the shade of pens.
- Specify conditions to trigger events.
- Use IF THEN conditions to control events or objects.
- Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions)
- Use variables to store a value.
- Use the functions define, set, change, show and hide to control the variables.
- Use the Reporter operators

() + ()

() - ()

() * ()

() / ()

to perform calculations.

- Contribute to blogs that are moderated by teachers.
- Give examples of the risks posed by online communications.
- Understand the term 'copyright'.
- Understand that comments made online that are hurtful or offensive are the same as bullying.
- Understand how online services work.
- Use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally.

• Devise and construct databases using applications designed for this purpose in areas across the curriculum.

Personal, Social & Health Education

Can express opinions, for example, about relationships and bullying

Respect other people's viewpoints and beliefs

Recognise their changing emotions with friends and family and be able to express their feelings positively

Can identify adults they can trust and who they can ask for help

Are self-confident in a wide range of situations, such as seeking new friends

Can form opinions that they can articulate to a variety of audiences

Recognise their own worth and identify positive things about themselves

Can balance the stresses of life in order to promote their own mental health and wellbeing and that of others

See things from other people's viewpoints, for example, their parents and carers

Can discuss moral questions

Listen to their friends, support them and manage friendship problems

Can recognise and challenge stereotypes, for example in relation to gender

Can recognise the pressure of unwanted physical contact, and know ways of resisting it Understand the diversity of lifestyles

Know why being different can provoke bullying and why this is unacceptable

Know when it is appropriate to take a risk and when to say no and seek help

Understand the diversity of values and customs in the school and in the community

Understand the need for trust and love in established relationships

Physical Education

- Throw and catch with control and accuracy.
- Strike a ball and field with control.
- Choose appropriate tactics to cause problems for the opposition.
- Follow the rules of the game and play fairly.
- Maintain possession of a ball (with, e.g. feet, a hockey stick or hands).
- Pass to team mates at appropriate times.
- Lead others and act as a respectful team member.
- Plan, perform and repeat sequences.
- Move in a clear, fluent and expressive manner.
- Refine movements into sequences.
- Create dances and movements that convey a definite idea.
- Change speed and levels within a performance.
- Develop physical strength and suppleness by practising moves and stretching.
- Plan, perform and repeat sequences.
- Move in a clear, fluent and expressive manner.
- Refine movements into sequences.
- Show changes of direction, speed and level during a performance.
- Travel in a variety of ways, including flight, by transferring weight to generate power in movements.
- Show a kinesthetic sense in order to improve the placement and alignment of body parts (e.g. in balances experiment to find out how to get the centre of gravity successfully over base and organise body parts to create an interesting body shape).
- Swing and hang from equipment safely (using hands).
- Swim between 25 and 50 metres unaided.
- Use more than one stroke and coordinate breathing as appropriate for the stroke being used.
- Coordinate leg and arm movements.
- Swim at the surface and below the water.
- Sprint over a short distance up to 60 metres.
- Run over a longer distance, conserving energy in order to sustain performance.

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| • Use a range of throwing techniques (such as under arm, over arm). |
| • Throw with accuracy to hit a target or cover a distance. |
| • Jump in a number of ways, using a run up where appropriate. |
| • Compete with others and aim to improve personal best performances. |
| • Arrive properly equipped for outdoor and adventurous activity. |
| • Understand the need to show accomplishment in managing risks. |
| • Show an ability to both lead and form part of a team. |
| • Support others and seek support if required when the situation dictates. |
| • Show resilience when plans do not work and initiative to try new ways of working. |
| • Use maps, compasses and digital devices to orientate themselves. |
| • Remain aware of changing conditions and change plans if necessary. |

Design and Technology

- Prepare ingredients hygienically using appropriate utensils.
- Measure ingredients to the nearest gram accurately.
- Follow a recipe.
- Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).
- Cut materials accurately and safely by selecting appropriate tools.
- Measure and mark out to the nearest millimetre.
- Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).
- Select appropriate joining techniques.
- Understand the need for a seam allowance.
- Join textiles with appropriate stitching.
- Select the most appropriate techniques to decorate textiles.
- Create series and parallel circuits
- Control and monitor models using software designed for this purpose.
- Choose suitable techniques to construct products or to repair items.
- Strengthen materials using suitable techniques.
- Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).
- Design with purpose by identifying opportunities to design.
- Make products by working efficiently (such as by carefully selecting materials).
- Refine work and techniques as work progresses, continually evaluating the product design.
- Use software to design and represent product designs.
- Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.
- Improve upon existing designs, giving reasons for choices.
- Disassemble products to understand how they work.

Art & Design

- Develop ideas from starting points throughout the curriculum.
- Collect information, sketches and resources.
- Adapt and refine ideas as they progress.
- Comment on artworks using visual language.
- Use a number of brush techniques using thick and thin brushes to produce shapes, textures, patterns and lines.
- Mix colours effectively.
- Use watercolour paint to produce washes for backgrounds then add detail.
- Experiment with creating mood with colour.
- Select and arrange materials for a striking effect.
- Ensure work is precise.
- Use coiling, overlapping, tessellation, mosaic and montage.
- Create and combine shapes to create recognisable forms (e.g. shapes made from nets or solid materials).
- Include texture that conveys feelings, expression or movement.
- Use clay and other mouldable materials.
- Add materials to provide interesting detail.
- Use different hardnesses of pencils to show line, tone and texture.
- Annotate sketches to explain and elaborate ideas.
- Sketch lightly (no need to use a rubber to correct mistakes).
- Use shading to show light and shadow.
- Use layers of two or more colours.
- Replicate patterns observed in natural or built environments.
- Make printing blocks (e.g. from coiled string glued to a block).
- Make precise repeating patterns.
- Shape and stitch materials.
- Use basic cross stitch and back stitch.

• Colour fabric.

• Create weavings.

• Create images, video and sound recordings and explain why they were created.

• Replicate some of the techniques used by notable artists, artisans and designers.

• Create original pieces that are influenced by studies of others.

Music

- Sing from memory with accurate pitch.
- Sing in tune.
- Maintain a simple part within a group.
- Pronounce words within a song clearly.
- Show control of voice.
- Play notes on an instrument with care so that they are clear.
- Perform with control and awareness of others
- Compose and perform melodic songs.
- Use sound to create abstract effects.
- Create repeated patterns with a range of instruments.
- Create accompaniments for tunes.
- Use drones as accompaniments.
- Choose, order, combine and control sounds to create an effect.
- Use digital technologies to compose pieces of music.
- Devise non-standard symbols to indicate when to play and rest.
- Recognise the notes EGBDF and FACE on the musical stave.
- Recognise the symbols for a minim, crotchet and semibreve and say how many beats they represent.
- Use the terms: duration, timbre, pitch, beat, tempo, texture and use of silence to describe music.
- Evaluate music using musical vocabulary to identify areas of likes and dislikes.
- Understand layers of sounds and discuss their effect on mood and feelings.

