



National Curriculum 2014

*A Guide for Parents*

# The National Curriculum in England

## Aims

The national curriculum provides pupils with an introduction to the essential knowledge that they need to be educated citizens. It introduces pupils to the best that has been thought and said; and helps engender an appreciation of human creativity and achievement.

The national curriculum is just one element in the education of every child. There is time and space in the school day and in each week, term and year to range beyond the national curriculum specifications. The national curriculum provides an outline of core knowledge around which teachers can develop exciting and stimulating lessons to promote the development of pupils' knowledge, understanding and skills as part of the wider school curriculum.

## Structure

Pupils of compulsory school age in community and foundation schools, including community special schools and foundation special schools, and in voluntary aided and voluntary controlled schools, must follow the national curriculum. It is organised on the basis of four key stages and twelve subjects, classified in legal terms as 'core' and 'other foundation' subjects.

The Secretary of State for Education is required to publish programmes of study for each national curriculum subject, setting out the 'matters, skills and processes' to be taught at each key stage. Schools are free to choose how they organise their school day, as long as the content of the national curriculum programmes of study is taught to all pupils.

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## The structure of the National Curriculum

The structure of the national curriculum, in terms of which subjects are compulsory at each key stage, is set out in the table below:

	Key Stage 1	Key Stage 2	Key Stage 3	Key Stage 4
<b>Age</b>	5-7	7-11	11-14	14-16
<b>Year groups</b>	1-2	3-6	7-9	10-11
<b>Core subjects</b>				
English	✓	✓	✓	✓
Mathematics	✓	✓	✓	✓
Science	✓	✓	✓	✓
<b>Foundation subjects</b>				
Art & Design	✓	✓	✓	
Citizenship	✓	✓	✓	✓
Computing	✓	✓	✓	✓
Design & Technology	✓	✓	✓	
Languages	✓	✓	✓	
Geography	✓	✓	✓	
History	✓	✓	✓	
Music	✓	✓	✓	
Physical Education	✓	✓	✓	✓

All schools are also required to teach Religious Education at all key stages.  
Secondary schools must provide Sex and Relationship Education.

	Key Stage 1	Key Stage 2	Key Stage 3	Key Stage 4
<b>Age</b>	5-7	7-11	11-14	14-16
<b>Year groups</b>	1-2	3-6	7-9	10-11
Religious Education	✓	✓	✓	✓
Sex & Relationship Education			✓	✓

## Programmes of study and attainment targets

The following pages set out the statutory programmes of study and attainment targets for all subjects taught at key stages 1 & 2. Schools are not required by law to teach the example content in [square brackets] or the content indicated as being 'non-statutory'.

### English

#### Purpose of study

English has a pre-eminent place in education and in society. A high-quality education in English will teach pupils to speak and write fluently so that they can communicate their ideas and emotions to others and through their reading and listening, others can communicate with them. Through reading in particular, pupils have a chance to develop culturally, emotionally, intellectually, socially and spiritually. Literature, especially, plays a key role in such development. Reading also enables pupils both to acquire knowledge and to build on what they already know. All the skills of language are essential to participating fully as a member of society; pupils, therefore, who do not learn to speak, read and write fluently and confidently are effectively disenfranchised.

#### Aims

The overarching aim for English in the national curriculum is to promote high standards of language and literacy by equipping pupils with a strong command of the spoken and written word, and to develop their love of literature through widespread reading for enjoyment. The national curriculum for English aims to ensure that all pupils:

- read easily, fluently and with good understanding
- develop the habit of reading widely and often, for both pleasure and information
- acquire a wide vocabulary, an understanding of grammar and knowledge of linguistic conventions for reading, writing and spoken language
- appreciate our rich and varied literary heritage
- write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences
- use discussion in order to learn; they should be able to elaborate and explain clearly their understanding and ideas
- are competent in the arts of speaking and listening, making formal presentations, demonstrating to others and participating in debate.

Year Group	Word Reading	Comprehension
Y1	<p>All EYFS and:</p> <ul style="list-style-type: none"> <li>Letters and Sounds Phases 4 to 5</li> <li>Respond speedily with the correct sound to grapheme for the 44 phonemes</li> <li>Recognise and use the different ways of pronouncing the same grapheme; e.g. <i>ow</i> in <i>snow</i> and <i>cow</i></li> <li>Read accurately by blending sounds in unfamiliar words</li> <li>Read words containing <i>-s, -es, -ing, -ed, -er, -est</i> endings</li> <li>Split two and three syllable words into the separate syllables to support blending for reading</li> <li>Read words with contractions e.g. <i>I'm, I'll, we'll</i> and understand that the apostrophe represents the omitted letter</li> <li>Automatically recognise approximately 150 high frequency</li> <li>Apply phonic knowledge for reading</li> <li>Read aloud accurately books that are consistent with their developing phonic knowledge</li> <li>Develop fluency, accuracy and confidence by re-reading books</li> <li>Read more challenging texts using phonics and high frequency word recognition</li> </ul>	<p>EYFS and:</p> <p>Develop pleasure in reading, motivation to read, vocabulary and understanding by:</p> <ul style="list-style-type: none"> <li>Listening to a range of texts at a level beyond that at which they can read independently including stories, non-fiction and poems</li> <li>Identifying and discuss the main events in stories</li> <li>Identifying and discuss the main characters in stories</li> <li>Recalling specific information in texts</li> <li>Recognising and join in with language patterns and repetition</li> <li>Use patterns and repetition to support oral retelling</li> <li>Reciting rhymes and poems by heart</li> <li>Relating texts to own experiences</li> <li>Re-telling familiar stories in a range of contexts e.g. <i>small world, role play, storytelling</i></li> <li>Make personal reading choices and explain reasons for choices</li> </ul> <p>Understand both the books they can already read accurately and fluently and those that they listen to by:</p> <ul style="list-style-type: none"> <li>Introducing and discussing key vocabulary</li> <li>Activating prior knowledge e.g. <i>what do you know about minibeasts?</i></li> <li>Checking that texts make sense while reading and self-correct</li> <li>Making predictions based on what has been read so far</li> <li>Make basic inferences about what is being said and done</li> <li>Discussing the title and how it relates to the events in the whole story e.g. <i>Peace at Last</i> by Jill Murphy</li> </ul> <p>Participating in discussion about what is read to them, taking turns and listening to what others say</p> <ul style="list-style-type: none"> <li>Listening to what others say</li> <li>Taking turns</li> <li>Giving opinions and supporting with reasons e.g. <i>Hansel was clever when he put stones in his pocket.</i></li> <li>Explaining clearly their understanding of what is read to them</li> <li>Demonstrating understanding of texts by answering questions related to who, what, where, when, why, how</li> </ul>

Year Group	Composition		Transcription	
	Vocabulary, grammar and punctuation	Composition	Spelling	Handwriting
Y1	<ul style="list-style-type: none"> <li>Say, and hold in memory whilst writing, simple <b>sentences</b> which make sense</li> <li>Write simple <b>sentences</b> that can be read by themselves and others</li> <li>Separate <b>words</b> with finger spaces</li> <li>Punctuate simple <b>sentences</b> with <b>capital letters</b> and <b>full stops</b></li> <li>Use capital <b>letter</b> for the personal pronoun <b>I</b></li> <li>Use <b>capital letters</b> for names of people, places and days of the week</li> <li>Identify and use <b>question marks</b> and <b>exclamation marks</b></li> <li>Use simple connectives to link ideas e.g. <i>and</i></li> <li><b>Pluralise</b> nouns using 's' and 'es' e.g. <i>dog, dogs; wish, wishes</i></li> <li>Add suffixes to verbs <b>where no spelling change is needed</b> to the root <b>word</b> e.g. <i>helping, helped, helper</i></li> <li>Add the prefix 'un' to verbs and adjectives to change the meaning e.g. <i>untie, unkind</i></li> </ul>	<ul style="list-style-type: none"> <li>Orally compose every <b>sentence</b> before writing</li> <li>Re-read every <b>sentence</b> to check it makes sense</li> <li>Orally plan and rehearse ideas</li> <li>Sequence ideas/events in order</li> <li>Use formulaic phrases to open and close texts</li> <li>Use familiar plots for structuring the opening, middle and end of their stories</li> <li>Write in different forms with simple text type features e.g. <i>instructions, narratives, recounts, poems, information texts</i></li> <li>Discuss their writing with adults and peers</li> <li>Read aloud their writing clearly enough to be heard by adults and peers</li> </ul>	<ul style="list-style-type: none"> <li>Name the <b>letters</b> of the alphabet in order</li> <li>Use <b>letter</b> names to distinguish between alternative spellings of the same sound</li> <li>Spell <b>words</b> containing each of the phonemes already taught</li> <li>Be able to encode the sounds they hear in <b>words</b></li> <li>Be able to read back <b>words</b> they have spelt</li> <li>Use their phonic knowledge when spelling unfamiliar words (<i>i.e. produce phonically plausible spellings</i>)</li> <li>Spell common exception <b>words</b></li> <li>Spell the days of the week</li> <li>Use the spelling rule for adding -s or -es (<i>i.e. when the <b>word</b> has a /ɪz/ sound</i>)</li> <li>Use the prefix <i>un-</i> for <b>words</b> without any change to the spelling of the root <b>word</b></li> <li>Use suffixes <i>-ing, -ed, -er</i> and <i>-est</i> where no change is needed in the spelling of root <b>words</b></li> <li>Apply simple spelling rules and guidelines</li> <li>Write from memory simple <b>sentences</b> dictated by the teacher that include <b>words</b> taught so far</li> </ul>	<ul style="list-style-type: none"> <li>Hold a pencil with an effective grip</li> <li>Form lower-case <b>letters</b> correctly - <i>starting and finishing in the right place, going the right way round, correctly oriented</i></li> <li>Have clear ascenders ('<b>tall letters</b>') and descenders ('<b>tails</b>')</li> <li>Form <b>capital letters</b> correctly</li> </ul>

Year Group	Word Reading	Comprehension
Y2	<p>As above and: Letters and Sounds Phase 6</p> <ul style="list-style-type: none"> <li>▪ Apply phonic knowledge and skills to read words until automatic decoding has become embedded and reading is fluent</li> <li>▪ Read accurately by blending the sounds in words, especially recognising alternative sounds for graphemes</li> <li>▪ Read accurately words of two or more syllables that contain alternative sounds for grapheme e.g. <i>shoulder, roundabout, grouping</i></li> <li>▪ Read words containing common suffixes e.g. <i>-ness, -ment, -ful, -ly</i></li> <li>▪ Read further common exception words, noting tricky parts</li> <li>▪ Read frequently encountered words quickly and accurately without overt sounding and blending</li> <li>▪ Read aloud books closely matched to their improving phonic knowledge, sounding out unfamiliar words accurately, automatically and without undue hesitation</li> <li>▪ Re-read these books to build up their fluency and confidence in word</li> <li>▪ reading</li> <li>▪ Uses tone and intonation when reading aloud</li> <li>▪ Read longer and less familiar texts independently</li> </ul>	<p>As above and: Develop pleasure in reading, motivation to read, vocabulary and understanding by:</p> <ul style="list-style-type: none"> <li>▪ Listening to a range of texts at a level beyond that at which they can read independently including stories, non-fiction, and contemporary and classic poetry</li> <li>▪ Sequencing and discussing the main events in stories</li> <li>▪ Learning and reciting a range of poems using appropriate intonation</li> <li>▪ Retelling a wider range of stories, fairy tales and traditional tales</li> <li>▪ Read a range of non-fiction texts including information, explanations, instructions, recounts, reports</li> <li>▪ Discussing how specific information is organised within a non-fiction text e.g. <i>text boxes, sub-headings, contents, bullet points, glossary, diagrams</i></li> <li>▪ Identifying, discussing and collecting favourite words and phrases</li> <li>▪ Recognising use of repetitive language within a text or poem e.g. <i>run, run as fast as you can and across texts e.g. long, long ago in a land far away...</i></li> <li>▪ Make personal reading choices and explain reasons for choices</li> </ul> <p>Understand both the books they can already read accurately and fluently and those that they listen to by:</p> <ul style="list-style-type: none"> <li>▪ Introducing and discussing key vocabulary within the context of a text</li> <li>▪ Use morphology to work out the meaning of unfamiliar words e.g. <i>terror, terrorised</i></li> <li>▪ Activating prior knowledge and raising questions e.g. <i>What do we know?</i></li> <li>▪ <i>What do we want to know? What have we learned?</i></li> <li>▪ Checking that texts make sense while reading and self-correct</li> <li>▪ Making predictions using evidence from the text</li> <li>▪ Making inferences about characters and events using evidence from the text e.g. <i>what is a character thinking, saying and feeling?</i></li> </ul> <p>Participating in discussion about what is read to them, taking turns and listening to what others say</p> <ul style="list-style-type: none"> <li>▪ Making contributions in whole class and group discussion</li> <li>▪ Listening and responding to contributions from others</li> <li>▪ Giving opinions and supporting with reasons e.g. <i>Was Goldilocks a good or bad character?</i></li> <li>▪ Considering other points of view</li> </ul>



		<p>Explaining clearly their understanding of what they read themselves and what is read to them.</p> <ul style="list-style-type: none"> <li>Demonstrating understanding of texts by asking and answering questions related to who, what, where, when, why, how</li> </ul>
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Year Group	Composition		Transcription	
	Vocabulary, grammar and punctuation	Composition	Spelling	Handwriting
Y2	<p>As above and:</p> <ul style="list-style-type: none"> <li>Say, write and punctuate simple and <b>compound</b> sentences using the connectives <i>and, but</i> and <i>or</i></li> <li>Use sentences with different forms: statement, question, command, exclamation</li> <li>Use <b>commas</b> to separate items in a list</li> <li>Use <b>apostrophes</b> for contracted forms e.g. <i>don't, can't, wouldn't, you're, I'll</i></li> <li>Use subordination for time e.g. <i>When we had finished our writing, we went out to play. We went out to play when we had finished our writing.</i> Other time connectives: <i>while, as, before, after</i></li> <li>Use subordination for reason e.g. <i>I put my coat on because it was raining. Because it was raining, I put on my coat.</i> Other reason connectives: <i>so, if, then, for, unless</i></li> <li>Select, generate and effectively</li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>Plan and discuss what to write about e.g. <i>story mapping, collecting new vocabulary, key words and ideas</i></li> <li>Use specific text type features to write for a range of audiences and purposes e.g. <i>to instruct, inform, entertain, explain, discuss, persuade</i></li> <li>Write about real and fictional events</li> <li>Write simple poems based on models</li> <li>Edit and improve their own writing in relation to audience and purpose</li> <li>Evaluate their writing with adults and peers</li> <li>Proofread to check for errors in spelling, grammar and punctuation</li> <li>Read aloud their writing with intonation to make the meaning clear</li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>Segment spoken words into phonemes and represent these by graphemes, spelling many correctly</li> <li>Learn new ways of spelling phonemes for which one or more spellings are already known</li> <li>Learn some words with each spelling, including a few common homophones</li> <li>Learn to spell common exception words</li> <li>Learn to spell more words with contracted forms</li> <li>Distinguish between homophones and near homophone</li> <li>Add <b>suffixes</b> <i>ness</i> and <i>er</i> to create <b>nouns</b> e.g. <i>happiness, sadness, teacher, baker</i></li> <li>Select, generate and effectively use adjectives.</li> <li>Add <b>suffixes</b> <i>ful</i> or <i>less</i> to create <b>adjectives</b> e.g. <i>playful, careful, careless, hopeless</i></li> <li>Use <b>suffixes</b> <i>er</i> and <i>est</i> to create</li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>Form lower-case letters of the correct size relative to one another</li> <li>Use upper case letters appropriately e.g. <i>not always writing A as a capital, not using capitals within words</i></li> <li>Write upper case letters of the correct size relative to lower case letters</li> <li>Start using some of the diagonal and horizontal strokes needed to join letters</li> </ul>

	<p>use <b>verbs</b></p> <ul style="list-style-type: none"> <li>▪ Use <b>past tense</b> for narrative, recount (<i>e.g. diary, newspaper report, biography</i>) and historical reports</li> <li>▪ Use <b>present tense</b> for non-chronological reports and persuasive adverts</li> <li>▪ Select, generate and effectively use <b>nouns</b></li> <li>▪ Add <b>suffixes</b> <i>ness</i> and <i>er</i> to create <b>nouns</b> <i>e.g. happiness, sadness, teacher, baker</i></li> <li>▪ Select, generate and effectively use <b>adjectives</b></li> <li>▪ Add <b>suffixes</b> <i>ful</i> or <i>less</i> to create <b>adjectives</b> <i>e.g. playful, careful, careless, hopeless</i></li> <li>▪ Use <b>suffixes</b> <i>er</i> and <i>est</i> to create <b>adjectives</b> <i>e.g. faster, fastest, smaller, smallest</i></li> <li>▪ Use <b>suffix</b> <i>ly</i> to turn adjective into <b>adverbs</b> <i>e.g. slowly, gently, carefully</i></li> </ul>		<p><b>adjectives</b> <i>e.g. faster, fastest, smaller, smallest</i></p> <ul style="list-style-type: none"> <li>▪ Use <b>suffix</b> <i>ly</i> to turn <b>adjectives</b> into <b>adverbs</b> <i>e.g. slowly, gently, carefully</i></li> <li>▪ Write from memory simple sentences dictated by the teacher that include words and punctuation taught so far</li> </ul>	
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Year Group	Word Reading	Comprehension
Y3	<p>As above and:</p> <ul style="list-style-type: none"> <li>Use knowledge of root words to understand meanings of words</li> <li>Use prefixes to understand meanings e.g. <i>un-, dis-, -mis-, re-</i></li> <li>Use suffixes to understand meanings e.g. <i>-ation, -ous</i></li> <li>Read and understand meaning of words on Y3/4 word list</li> <li>Use intonation, tone and volume when reading aloud</li> </ul> <p>Take note of punctuation when reading aloud</p>	<p>As above and:</p> <p>Develop pleasure in reading, motivation to read, vocabulary and understanding by:</p> <ul style="list-style-type: none"> <li>Listening to and discussing a range of fiction, poetry, plays, non-fiction</li> <li>Regularly listening to whole novels read aloud by the teacher</li> <li>Reading a range of non-fiction texts including information, explanations, instructions, recounts, reports, persuasion</li> <li>Analysing and evaluate texts looking at language, structure and presentation e.g. <i>newspaper reports, recipes, etc.</i></li> <li>Recognising some different forms of poetry e.g. <i>narrative, free verse</i></li> <li>Reading books and texts for a range of purposes e.g. <i>enjoyment, research, skills development, reference</i></li> <li>Using dictionaries to check meanings of words they have read</li> <li>Sequencing and discussing the main events in stories</li> <li>Retelling a range of stories, including less familiar fairy stories, fables and folk tales e.g. <i>Grimm's Fairy Tales, Rudyard Kipling Just So Stories</i></li> <li>Identifying and discussing themes e.g. <i>good over evil, weak and strong, wise and foolish, mean and generous, rich and poor</i></li> <li>Identifying and discussing conventions e.g. <i>numbers three and seven in fairy tales, magical sentence repeated several times</i></li> <li>Identifying, discussing and collecting favourite words and phrases which capture the reader's interest and imagination</li> <li>Preparing poems and playscripts to read aloud, showing understanding through intonation, tone, volume and action</li> </ul> <p>Understand what they read independently by:</p> <ul style="list-style-type: none"> <li>Discussing their understanding of the text</li> <li>Explaining the meaning of unfamiliar words by using the context</li> <li>Making predictions based on details stated</li> <li>Raising questions during the reading process to deepen understanding e.g. <i>I wonder why the character ...</i></li> <li>Drawing inferences around characters thoughts, feelings and actions, and justify with evidence from the text</li> <li>Using point and evidence to structure and justify responses</li> <li>Discussing the purpose of paragraphs</li> <li>Identifying a key idea in a paragraph</li> </ul>

		<p>Retrieve and record information from non-fiction</p> <ul style="list-style-type: none"> <li>Evaluating how specific information is organised within a non-fiction text e.g. <i>text boxes, sub headings, contents, bullet points, glossary, diagrams</i></li> <li>Quickly appraising a text to evaluate usefulness</li> <li>Navigating texts in print and on screen</li> </ul> <p>Participating in discussion about what is read to them and books they have read independently, taking turns and listening to what others say</p> <ul style="list-style-type: none"> <li>Developing and agreeing on rules for effective discussion</li> <li>Making and responding to contributions in a variety of group situations e.g. <i>whole class, pairs, guided groups, book circles</i></li> </ul>
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Year Group	Composition		Transcription	
	Vocabulary, grammar and punctuation	Composition	Spelling	Handwriting
Y3	<p>As above and:</p> <ul style="list-style-type: none"> <li>Explore and identify main and <b>subordinate clauses</b> in complex sentences</li> <li>Explore, identify and create complex sentences using a range of <b>conjunctions</b> e.g. <i>if, while, since, after, before, so, although, until, in case</i></li> <li>Identify, select, generate and effectively use <b>prepositions</b> for where e.g. <i>above, below, beneath, within, outside, beyond</i></li> <li>Select, generate and effectively use adverbs e.g. <i>suddenly, silently, soon, eventually</i></li> <li>Use <b>inverted commas</b> to punctuate <b>direct speech (speech marks)</b></li> <li>Use perfect form of verbs using</li> </ul>	<p>As above and:</p> <p>Plan their writing by:</p> <ul style="list-style-type: none"> <li>Reading and analysing narrative, non-fiction and poetry in order to plan and write their own versions</li> <li>Identifying and discussing the purpose, audience, language and structures of narrative, non-fiction and poetry for writing</li> <li>Discussing and recording ideas for planning</li> <li>Creating and developing settings for narratives</li> <li>Creating and developing characters for narrative</li> <li>Creating and developing plots based on a model</li> <li>Generating and selecting from vocabulary banks e.g. <i>noun phrases, powerful verbs,</i></li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>Use further <b>prefixes</b> and <b>suffixes</b> and understand how to add them</li> <li>Spell further homophones</li> <li>Spell words that are often misspelt</li> <li>Use the first two letters of a word to check its spelling in a dictionary</li> <li>Write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far.</li> <li>Learn to spell new words correctly and have plenty of practice in spelling them.</li> <li>Understand how to place the apostrophe in words with regular plurals (e.g. <i>girls', boys'</i>)</li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>Form and use the four basic handwriting joins</li> <li>Write legibly</li> </ul>

	<p>have and had to indicate a completed action e.g. <i>I have washed my hands. We will have eaten our lunch by the time Dad arrives. Jack had watched TV for over two hours!</i></p> <ul style="list-style-type: none"> <li>▪ Use the determiner <b>a</b> or <b>an</b> according to whether the next word begins with a <b>consonant</b> or <b>vowel</b> e.g. <i>a rock, an open box</i></li> <li>▪ Explore and collect <b>word families</b> e.g. <i>medical, medicine, medicinal, medic, paramedic, medically</i> to extend vocabulary</li> <li>▪ Explore and collect words with <b>prefixes</b> <i>super, anti, auto</i></li> </ul>	<p><i>technical language, synonyms for said</i> appropriate to text type</p> <ul style="list-style-type: none"> <li>▪ Grouping related material into paragraphs</li> <li>▪ Using headings and sub headings to organise information</li> </ul> <p>Evaluate, and edit by:</p> <ul style="list-style-type: none"> <li>▪ Proofreading to check for errors in spelling, grammar and punctuation in own and others' writing</li> <li>▪ Discussing and proposing changes with partners and in small groups</li> <li>▪ Improving writing in the light of evaluation</li> </ul> <p>Perform their own compositions by:</p> <ul style="list-style-type: none"> <li>▪ Using appropriate intonation, tone and volume to present their writing to a group or class</li> </ul>	<ul style="list-style-type: none"> <li>▪ Spell words as accurately as possible using their phonic knowledge and other knowledge of spelling, such as morphology and etymology.</li> </ul>	
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Year Group	Word Reading	Comprehension
Y4	<p>As above and:</p> <ul style="list-style-type: none"> <li>Use knowledge of root words to understand meanings of words Use prefixes to understand meanings e.g. <i>sub-</i>, <i>inter-</i>, <i>anti-</i>, <i>auto-</i></li> <li>Use suffixes to understand meanings e.g. <i>-ation</i>, <i>-ous</i>, <i>-tion</i>, <i>-sion</i>, <i>-ssion</i>, <i>-cian</i></li> <li>Read and understand meaning of words on Y3/4 word list</li> <li>Use punctuation to determine intonation and expression when reading aloud to a range of audiences</li> </ul>	<p>As above and:</p> <p>Develop pleasure in reading, motivation to read, vocabulary and understanding by:</p> <ul style="list-style-type: none"> <li>Listening to, reading and discussing a range of fiction, poetry, plays and non-fiction in different forms e.g. advertisements, formal speeches, leaflets, magazines, electronic texts</li> <li>Regularly listening to whole novels read aloud by the teacher</li> <li>Analysing and evaluate texts looking at language, structure and presentation</li> <li>Analysing different forms of poetry e.g. haiku, limericks, kennings</li> <li>Reading books and texts for a range of purposes and responding in a variety of ways</li> <li>Analysing and comparing a range of plot structures</li> <li>Retelling a range of stories, including less familiar fairy stories, myths and legends</li> <li>Identifying, analysing and discussing themes e.g. safe and dangerous, just and unjust, origins of the earth, its people and animals</li> <li>Identifying, discussing and collecting effective words and phrases which capture the reader's interest and imagination e.g. metaphors, similes</li> <li>Learning a range of poems by heart and rehearsing for performance</li> <li>Preparing poems and playscripts to read aloud, showing understanding through intonation, tone, volume and action</li> </ul> <p>Discussing their understanding of the text</p> <ul style="list-style-type: none"> <li>Explaining the meaning of key vocabulary within the context of the text</li> <li>Making predictions based on information stated and implied</li> <li>Demonstrating active reading strategies e.g. generating questions, finding answers, refining thinking, modifying questions, constructing images</li> <li>Drawing inferences around characters' thoughts, feelings, actions and motives, and justify with evidence from the text using point and evidence</li> <li>Identifying main ideas drawn from more than one paragraph and summarising these e.g. character is evil because...1/2/3 reasons, Clitheroe Castle is a worthwhile place to visit because 1/2/3 reasons across a text</li> </ul> <p>Retrieve and record information from non-fiction</p> <ul style="list-style-type: none"> <li>Analysing and evaluating how specific information is organised within a non-fiction</li> </ul>

		<p>text e.g. text boxes, sub-headings, contents, bullet points, glossary, diagrams</p> <ul style="list-style-type: none"> <li>▪ Scanning for dates, numbers and names</li> <li>▪ Explaining how paragraphs are used to order or build up ideas, and how they are linked</li> <li>▪ Navigating texts to locate and retrieve information in print and on screen</li> </ul> <p>Participate in discussion about what is read to them and books they have read independently, taking turns and listening to what others say</p> <ul style="list-style-type: none"> <li>▪ Develop, agree on and evaluate rules for effective discussion</li> <li>▪ Making and responding to contributions in a variety of group situations e.g. whole class, independent reading groups, book circles</li> </ul>
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Year Group	Composition		Transcription	
	Vocabulary, grammar and punctuation	Composition	Spelling	Handwriting
Y4	<p>As above and:</p> <ul style="list-style-type: none"> <li>▪ Create complex sentences with adverb starters e.g. <i>Silently trudging through the snow, Sam made his way up the mountain.</i></li> <li>▪ Create sentences with fronted <b>adverbials</b> for when e.g. <i>As the clock struck twelve, the soldiers sprang into action.</i></li> <li>▪ Create sentences with fronted <b>adverbials</b> for where e.g. <i>In the distance, a lone wolf howled.</i></li> <li>▪ Use commas to mark clauses in complex sentences</li> <li>▪ Use inverted commas and other punctuation to indicate direct speech e.g. <i>The tour guide announced, "Be back here at four o'clock."</i></li> <li>▪ Identify, select and effectively use <b>pronouns</b></li> </ul>	<p>As above and:</p> <p>Plan their writing by:</p> <ul style="list-style-type: none"> <li>▪ Reading and analysing narrative, non-fiction and poetry in order to plan and write their own versions</li> <li>▪ Identifying and discussing the purpose, audience, language and structures of narrative, non-fiction and poetry for writing</li> <li>▪ Discussing and recording ideas for planning e.g. <i>story mountain, story map, text map, non-fiction bridge, story board, boxing-up text types to create a plan</i></li> </ul> <p>Draft and write by:</p> <ul style="list-style-type: none"> <li>▪ Developing settings and characterisation using vocabulary to create emphasis, humour, atmosphere, suspense</li> <li>▪ Planning and writing an opening</li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>▪ Use further prefixes and suffixes and understand how to add them</li> <li>▪ Spell further homophones</li> <li>▪ Spell words that are often misspelt</li> <li>▪ Use the first three letters of a word to check its spelling in a dictionary</li> <li>▪ Write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far.</li> <li>▪ Learn to spell new words correctly and have plenty of practice in spelling them.</li> <li>▪ Understand how to place the apostrophe in words with irregular plurals (e.g. children's).</li> <li>▪ Spell words as accurately as</li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>▪ Write with consistency in size and proportion of letters, e.g. 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</li> </ul>

	<ul style="list-style-type: none"> <li>Explore, identify, collect and use noun phrases e.g. <i>The crumbly cookie with tasty marshmallow pieces melted in my mouth.</i></li> <li>Explore, identify and use Standard English verb inflections for writing e.g. <i>We were</i> instead of <i>we was</i>. <i>I was</i> instead of <i>I were</i>, <i>I did</i> instead of <i>I done</i>. <i>She saw it</i> instead of <i>she seen it</i>.</li> <li>Use apostrophes for singular and plural possession e.g. <i>the dog's bone</i> and <i>the dogs' bones</i></li> </ul>	<p>paragraph which combines the introduction of a setting and character/s</p> <ul style="list-style-type: none"> <li>Organising paragraphs in narrative and non-fiction</li> <li>Linking ideas within paragraphs e.g. fronted <b>adverbials</b> for <i>when</i> and <i>where</i></li> <li>Generating and select from vocabulary banks e.g. <i>powerful adverbs, adverbial phrases, technical language, persuasive phrases, alliteration</i> appropriate to text type</li> </ul> <p>Evaluate and edit by:</p> <ul style="list-style-type: none"> <li>Proofreading to check for errors in spelling, grammar and punctuation in own and others' writing</li> <li>Discussing and proposing changes with partners and in small groups</li> <li>Improving writing in light of evaluation</li> </ul> <p>Perform own compositions for different audiences</p> <ul style="list-style-type: none"> <li>Use appropriate intonation, tone and volume to present their writing to a range of audiences.</li> </ul>	<p>possible using their phonic knowledge and other knowledge of spelling, such as morphology and etymology</p>	
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Year Group	Word Reading	Comprehension
Y5	<p>As above and:</p> <ul style="list-style-type: none"> <li>▪ Use knowledge of root words to understand meanings of words</li> <li>▪ Apply knowledge of prefixes to understand meaning of new words</li> <li>▪ Use suffixes to understand meanings e.g. <i>-ant, -ance, -ancy, -ent, -ence, -ency, -ible, -able, -ibly, -ably</i>,</li> <li>▪ Read and understand meaning of words on Y5/6 word list</li> <li>▪ Use punctuation to determine intonation and expression when reading aloud to a range of audiences</li> </ul>	<p>As above and:</p> <p>Maintain positive attitudes to reading and understanding what they read by:</p> <ul style="list-style-type: none"> <li>▪ Listening to and discussing a range of fiction, poetry, plays and nonfiction which they might not choose to read themselves</li> <li>▪ Regularly listening to whole novels read aloud by the teacher from an increasing range of authors</li> <li>▪ Exploring themes within and across texts e.g. loss, heroism, friendship</li> <li>▪ Making comparisons within a text e.g. characters' viewpoints of same events</li> <li>▪ Analysing the conventions of different types of writing e.g. <i>use of first person in autobiographies and diaries</i></li> <li>▪ Recommending books to their peers with reasons for choices</li> <li>▪ Reading books and texts that are structured in different ways for a range of purposes</li> <li>▪ Expressing preferences about a wider range of books including modern fiction, traditional stories and myths and legends</li> <li>▪ Learning a wider range of poems by heart</li> <li>▪ Preparing poems and playscripts to read aloud and perform, showing understanding through intonation, tone, volume and action so the meaning is clear to an audience</li> </ul> <p>Understand what they read by:</p> <ul style="list-style-type: none"> <li>▪ Checking that the book makes sense to them and demonstrating understanding e.g. <i>through discussion, use of reading journals</i></li> <li>▪ Exploring meaning of words in context</li> <li>▪ Demonstrating active reading strategies e.g. <i>generating questions to refine thinking, noting thoughts in a reading journal</i></li> <li>▪ Inferring characters feelings, thoughts and motives from their actions and justifying inferences with evidence</li> <li>▪ Predicting what might happen from information stated and implied</li> <li>▪ Re-read and reads ahead to locate clues to support understanding</li> <li>▪ Scanning for key words and text marking to locate key information</li> <li>▪ Summarising main ideas drawn from more than one paragraph and identifying key details which support this</li> <li>▪ Identifying how language, structure and presentation contribute to meaning e.g. <i>formal letter, informal diary, persuasive speech</i></li> </ul>

		<p>Discuss and evaluate how authors use language including figurative language, considering the impact on the reader</p> <ul style="list-style-type: none"> <li>▪ Exploring, recognising and using the terms metaphor, simile, imagery</li> <li>▪ Explaining the effect on the reader of the authors' choice of language</li> </ul> <p>Distinguish between statements of fact or opinion within a text</p> <p>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</p> <p>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</p> <ul style="list-style-type: none"> <li>▪ Preparing formal presentations individually or in groups</li> <li>▪ Using notes to support presentation of information</li> <li>▪ Responding to questions generated by a presentation</li> <li>▪ Participating in debates on an issue related to reading (fiction or nonfiction)</li> </ul> <p>Provide reasoned justifications for their views</p> <ul style="list-style-type: none"> <li>▪ Justifying opinions and elaborating by referring to the text. (Point + Evidence + Explanation)</li> </ul>
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Year Group	Composition		Transcription	
	Vocabulary, grammar and punctuation	Composition	Spelling	Handwriting
Y5	<p>As above and:</p> <ul style="list-style-type: none"> <li>▪ Create complex sentences by using relative clauses with pronouns <i>who, which, where, whose, when, that</i> e.g. <i>Sam, who had remembered his wellies, was first to jump in the river. The robberies, which had taken place over the past month, remained</i></li> </ul>	<p>As above and:</p> <p>Plan their writing by:</p> <ul style="list-style-type: none"> <li>▪ Identifying the audience and purpose</li> <li>▪ Selecting the appropriate language and structures</li> <li>▪ Using similar writing models</li> <li>▪ Noting and developing ideas</li> <li>▪ Drawing on reading and research</li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>▪ Spell words that they have not yet been taught by using what they have learnt about how spelling works in English.</li> <li>▪ Use further prefixes and suffixes and understand the guidelines for adding them</li> <li>▪ Spell some words with 'silent'</li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>▪ Write fluently</li> <li>▪ Choose when it is appropriate to print or join writing e.g. <i>printing for labelling a scientific diagram</i></li> </ul>

	<p><i>unsolved.</i></p> <ul style="list-style-type: none"> <li>Create and punctuate complex sentences using <i>ed</i> openers</li> <li>Create and punctuate complex sentences using <i>ing</i> openers</li> <li>Create and punctuate complex sentences using simile starters</li> <li>Demarcate complex sentences using commas and explore <b>ambiguity</b> of meaning</li> <li>Explore, collect and use <b>modal verbs</b> to indicate degrees of possibility e.g. <i>might, could, shall, will, must</i></li> <li>Use devices to build cohesion within a paragraph e.g. <i>firstly, then, presently, subsequently</i></li> <li>Link ideas across paragraphs using adverbials for time, place and numbers e.g. <i>later, nearby, secondly</i></li> <li>Identify and use <b>brackets</b> and <b>Dashes</b></li> <li>Use suffixes <i>-ate, -ise, -ify</i> to convert nouns and adjectives into verbs</li> <li>Investigate verb prefixes e.g. <i>dis-, re-, pre-, mis-, over-</i></li> </ul>	<ul style="list-style-type: none"> <li>Thinking how authors develop characters and settings (in books, films and performances)</li> </ul> <p>Draft and write by:</p> <ul style="list-style-type: none"> <li>Selecting <i>appropriate</i> grammar and vocabulary</li> <li>Blending action, dialogue and description within and across paragraphs</li> <li>Using devices to build cohesion see VGP column</li> <li>Using organisation and presentational devices e.g. <i>headings, sub headings, bullet points, diagrams, text boxes</i></li> </ul> <p>Evaluate and edit by:</p> <ul style="list-style-type: none"> <li>Assessing the effectiveness of own and others' writing in relation to audience and purpose</li> <li>Suggesting changes to grammar, vocabulary and punctuation to enhance effects and clarify meaning</li> <li>Ensuring consistent and correct use of tense throughout a piece of writing</li> <li>Ensuring consistent subject and verb agreement</li> <li>Proofreading for spelling and punctuation errors</li> </ul> <p>Perform own compositions for different audiences:</p> <ul style="list-style-type: none"> <li>Using appropriate intonation and volume</li> <li>Adding movement</li> <li>Ensuring meaning is clear</li> </ul>	<p>letters, e.g. <i>knight, psalm, solemn</i></p> <ul style="list-style-type: none"> <li>Continue to distinguish between homophones and other words which are often confused</li> <li>Use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically</li> <li>Use dictionaries to check the spelling and meaning of words</li> <li>Use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary</li> <li>Use a thesaurus</li> <li>Use suffixes <i>-ate, -ise, -ify</i> to convert nouns and adjectives into verbs</li> <li>Investigate verb prefixes e.g. <i>dis-, re-, pre-, mis-, over-</i></li> </ul>	
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Year Group	Word Reading	Comprehension
Y6	<p>As above and:</p> <ul style="list-style-type: none"> <li>Use knowledge of root words, prefixes and suffixes to investigate how the meanings of words change e.g. <i>un+happy+ness</i>, <i>dis+repute+able</i>, <i>dis+respect+ful</i>, <i>re+engage+ment</i></li> <li>Use suffixes to understand meanings e.g. <i>-cious</i>, <i>-tious</i>, <i>-tial</i>, <i>-cial</i></li> <li>Read and understand meaning of words on Y5/6 word list</li> <li>Use etymology to help the pronunciation of new words e.g. <i>chef</i>, <i>chalet</i>, <i>machine</i>, <i>brochure</i> - <i>French in origin</i></li> <li>Employ dramatic effect to engage listeners whilst reading aloud</li> <li>Read extensively for pleasure</li> <li>Skim texts to ascertain the gist</li> <li>Use a combination of scanning and close reading to locate information</li> </ul> <p>As above and:</p> <ul style="list-style-type: none"> <li>Evaluate texts quickly in order to determine their usefulness or appeal</li> <li>Understand underlying themes, causes and consequences within whole texts</li> <li>Understand the structures writers use to achieve coherence; (headings; links within and between paragraphs; connectives)</li> <li>Recognise authors' techniques to influence and manipulate the reader</li> </ul>	<p>As above and:</p> <p>Maintain positive attitudes to reading and understanding what they read by:</p> <ul style="list-style-type: none"> <li>Listening to, reading and discussing an increasingly wide range of fiction, poetry, plays and non-fiction.</li> <li>Regularly listening to whole novels read aloud by the teacher from an increasing range of authors, which they may not choose themselves.</li> <li>Recognising themes within and across texts e.g. <i>hope</i>, <i>peace</i>, <i>fortune</i>, <i>survival</i></li> <li>Making comparisons within and across texts e.g. similar events in different books, such as being an evacuee in <i>Carrie's War</i> and <i>Goodnight Mr Tom</i></li> <li>Comparing texts written in different periods</li> <li>Analysing the conventions of different types of writing e.g. <i>use of dialogue to indicate geographical and/or historical settings for a story</i></li> <li>Independently read longer texts with sustained stamina and interest</li> <li>Recommending books to their peers with detailed reasons for their opinions</li> <li>Expressing preferences about a wider range of books including modern fiction, traditional stories, fiction from our literary heritage and books from other cultures and traditions</li> <li>Learning a wider range of poems by heart</li> <li>Preparing poems and playscripts to read aloud and perform using dramatic effects</li> </ul> <p>Understand what they read by:</p> <ul style="list-style-type: none"> <li>Using a reading journal to record on-going reflections and responses to personal reading</li> <li>Exploring texts in groups and deepening comprehension through discussion</li> <li>Exploring new vocabulary in context</li> <li>Demonstrating active reading strategies e.g. <i>challenging peers with questions</i>, <i>justifying opinions</i>, <i>responding to different viewpoints within a group</i></li> <li>Inferring characters feelings, thoughts and motives from their actions, justifying inferences with evidence e.g. <i>Point + Evidence + Explanation</i></li> <li>Predicting what might happen from information stated and implied</li> <li>Re-read and reads ahead to locate clues to support understanding and justifying with evidence from the text</li> <li>Scanning for key information e.g. looking for descriptive words associated with a setting</li> </ul>

		<ul style="list-style-type: none"> <li>▪ Skimming for gist</li> <li>▪ Using a combination of skimming, scanning and close reading across a text to locate specific detail</li> <li>▪ Identifying how language, structure and presentation contribute to meaning e.g. <i>persuasive leaflet, balanced argument</i></li> </ul> <p>Discuss and evaluate how authors use language including figurative language, considering the impact on the reader</p> <ul style="list-style-type: none"> <li>▪ Exploring, recognising and using the terms personification, analogy, style and effect</li> <li>▪ Explaining the effect on the reader of the authors' choice of language and reasons why the author may have selected these</li> </ul> <p>Distinguish between statements of fact or opinion across a range of texts e.g. <i>first-hand account of an event compared with a reported example such as Samuel Pepys' diary and a history textbook</i></p> <p>Participate in discussions about books building on their own and others' ideas and challenging views courteously</p> <p>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</p> <ul style="list-style-type: none"> <li>▪ Preparing formal presentations individually or in groups</li> <li>▪ Using notes to support presentation of information</li> <li>▪ Responding to questions generated by a presentation</li> <li>▪ Participating in debates on issues related to reading (fiction/non-fiction)</li> </ul> <p>Provide reasoned justifications for their views</p> <ul style="list-style-type: none"> <li>▪ Justifying opinions and elaborating by referring to the text e.g. <i>Point + Evidence + Explanation</i></li> </ul>
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Year Group	Composition		Transcription	
	Vocabulary, grammar and punctuation	Composition	Spelling	Handwriting
Y6	<p>As above and:</p> <ul style="list-style-type: none"> <li>Manipulate sentences to create particular effects</li> <li>Use devices to build cohesion between paragraphs in persuasive, discursive and explanatory texts e.g. <i>on the other hand, the opposing view, similarly, in contrast, although, additionally, another possibility, alternatively, as a consequence</i></li> <li>Use devices to build cohesion between paragraphs in narrative e.g. <i>in the meantime, meanwhile, in due course, until then</i></li> <li>Use <b>ellipsis</b> to link ideas between paragraphs</li> <li>Identify and use <b>colons</b> to introduce a list</li> <li>Identify and use <b>semi-colons</b> to mark the boundary between independent clauses e.g. <i>It is raining; I am fed up.</i></li> <li>Investigate and collect a range of <b>synonyms</b> and <b>antonyms</b> e.g. <i>mischievous, wicked, evil, impish, spiteful, well-behaved</i></li> <li>Explore how <b>hyphens</b> can be used to avoid ambiguity e.g. <i>man eating shark</i> versus <i>man-eating shark</i></li> <li>Punctuate <b>bullet points</b> consistently</li> <li>Explore and collect vocabulary typical of formal and informal speech and writing e.g. find out -</li> </ul>	<p>As above and:</p> <p>Plan their writing by:</p> <ul style="list-style-type: none"> <li>Identifying audience and purpose</li> <li>Choose appropriate text-form and type for all writing</li> <li>Selecting the appropriate language and structures</li> <li>Drawing on similar writing models, reading and research</li> <li>Using a range of planning approaches e.g. <i>storyboard, story mountain, discussion group, post-it notes, ICT story planning</i></li> </ul> <p>Draft and write by:</p> <ul style="list-style-type: none"> <li>Selecting appropriate vocabulary and language effects, appropriate to task, audience and purpose, for precision and impact</li> <li>Introducing and developing characters through blending action, dialogue and description within sentences and paragraphs e.g. <i>Tom stomped into the room, flung down his grubby, school bag and announced, through gritted teeth, "It's not fair!"</i></li> <li>Using devices to build cohesion</li> <li>Deviating narrative from linear or chronological sequence e.g. <i>flashbacks, simultaneous actions, time-shifts</i></li> <li>Combining text-types to create hybrid texts e.g. <i>persuasive speech</i></li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>Be secure with all spelling rules previously taught</li> <li>Write increasingly confidently, accurately and fluently, spelling with automaticity</li> <li>Use a number of different strategies interactively in order to spell correctly</li> <li>Develop self-checking and proofchecking strategies</li> <li>Use independent spelling strategies for spelling unfamiliar words</li> </ul>	<p>As above and:</p> <ul style="list-style-type: none"> <li>Write with increasing speed</li> <li>Choosing the writing implement that is best suited for a task (e.g. <i>quick notes, letters</i>)</li> </ul>

	<p>discover, ask for - request, go in - request</p> <ul style="list-style-type: none"> <li>Identify the <b>subject</b> and <b>object</b> of a sentence</li> <li>Explore and investigate <b>active</b> and <b>passive</b> e.g. <i>I broke the window in the greenhouse</i> versus <i>the window in the greenhouse was broken</i></li> </ul>	<ul style="list-style-type: none"> <li>Evaluating, selecting and using a range of organisation and presentational devices for different purposes and audiences</li> <li>Finding examples of where authors have broken conventions to achieve specific effects and using similar techniques in own writing - e.g. <i>repeated use of 'and' to convey tedium, one word sentence.</i></li> <li>Make conscious choices about techniques to engage the reader including appropriate tone and style e.g. <i>rhetorical questions, direct address to the reader</i></li> <li>Use <b>active</b> and <b>passive</b> voice to achieve intended effects e.g. <i>in formal reports, explanations and mystery narrative</i></li> </ul> <p>Evaluate and edit by:</p> <ul style="list-style-type: none"> <li>Reflecting upon the effectiveness of writing in relation to audience and purpose, suggesting and making changes to enhance effects and clarify meaning</li> <li>Proofreading for grammatical, spelling and punctuation errors</li> </ul> <p>Evaluate and improve performances of compositions focusing on:</p> <ul style="list-style-type: none"> <li>Intonation and volume</li> <li>Gesture and movement</li> <li>Audience engagement</li> </ul>		
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### Word List Y3/4

Accident (ally)	Circle	Famous	Island	Peculiar	Sentence
Actual(ly)	Complete	Favourite	Knowledge	Perhaps	Separate
Address	Consider	February	Learn	Popular	Special
Answer	Continue	Forward(s)	Length	Position	Straight
Appear	Decide	Fruit	Library	Possess (ion)	Strange
Arrive	Describe	Grammar	Material	Possible	Strength
Believe	Different	Group	Medicine	Potatoes	Suppose
Bicycle	Difficult	Guard	Mention	Pressure	Surprise
Breath	Disappear	Guide	Minute	Probably	Therefore
Breathe	Early	Heard	Natural	Promise	Though/although
Build	Earth	Heart	Naughty	Purpose	Thought
Busy/business	Eight/eighth	Height	Notice	Quarter	Through
Calendar	Enough	History	Occasional(ly)	Question	Various
Caught	Exercise	Imagine	Often	Recent	Weight
Centre	Experience	Increase	Opposite	Regular	Woman/women
Century	Experiment	Important	Ordinary	Reign	
Certain	Extreme	Interest	Particular	Remember	



## Word List Y5/6

Accommodate	Communicate	Environment	Individual	Prejudice	Stomach
Accompany	Community	Equip(ped)	Interfere	Privilege	Sufficient
According	Competition	Equip(ment)	Interrupt	Profession	Suggest
Achieve	Conscience*	Especially	Language	Programme	Symbol
Aggressive	Conscious*	Exaggerate	Leisure	Pronunciation	System
Amateur	Controversy	Excellent	Lightning	Queue	Temperature
Ancient	Convenience	Existence	Marvellous	Recognise	Thorough
Apparent	Correspond	Explanation	Mischievous	Recommend	Twelfth
Appreciate	Criticise	Familiar	Muscle	Relevant	Variety
Attached	(critic + ise)	Foreign	Necessary	Restaurant	Vegetable
Available	Curiosity	Forty	Neighbour	Rhyme	Vehicle
Average	Definite	Frequently	Nuisance	Rhythm	Yacht
Awkward	Desperate	Government	Occupy	Sacrifice	
Bargain	Determined	Guarantee	Occur	Secretary	
Bruise	Develop	Harass	Opportunity	Shoulder	
Category	Dictionary	Hindrance	Parliament	Signature	
Cemetery	Disastrous	Identify	Persuade	Sincere(ly)	
Committee	Embarrass	Immediate(ly)	Physical	Soldier	

# Mathematics

## Purpose of study

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

## Aims

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

- Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

## Key Learning in Mathematics – Year 1

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> <li>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</li> <li>Count in multiples of twos, fives and tens</li> <li>Read and write numbers to 100 in numerals</li> <li>Read and write numbers from 1 to 20 in numerals and words</li> <li><i>Begin to recognise the place value of numbers beyond 20 (tens and ones)</i></li> <li>Identify and represent numbers using objects and pictorial representations including the number line</li> <li>Use the language of: equal to, more than, less than (fewer), most, least</li> <li>Given a number, identify one more and one less</li> <li><i>Recognise and create repeating patterns with numbers, objects and shapes</i></li> <li><i>Identify odd and even numbers linked to counting in twos from 0 and 1</i></li> <li><i>Solve problems and practical problems involving all of the above</i></li> </ul>	<ul style="list-style-type: none"> <li>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</li> <li>Represent and use number bonds and related subtraction facts within 20</li> <li>Add and subtract one-digit and two-digit numbers to 20, including zero (<i>using concrete objects and pictorial representations</i>)</li> <li>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = \square - 9</math></li> </ul>	<ul style="list-style-type: none"> <li><i>Recall and use doubles of all numbers to 10 and corresponding halves</i></li> <li>Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher</li> </ul>
Number – fractions	Geometry – properties of shapes	Measurement
<ul style="list-style-type: none"> <li><i>Understand that a fraction can describe part of a whole</i></li> <li><i>Understand that a unit fraction represents one equal part of a whole</i></li> <li>Recognise, find and name a half as one of two equal parts of an object shape or quantity (<i>including measure</i>)</li> <li>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (<i>including measure</i>)</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles</li> <li>Recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres</li> </ul>	<ul style="list-style-type: none"> <li>Measure and begin to record: <ul style="list-style-type: none"> <li>lengths and heights, <i>using non-standard and then manageable standard units (m/cm)</i></li> <li>mass/weight, <i>using non-standard and then manageable standard units (kg/g)</i></li> <li>capacity and volume <i>using non-standard and then manageable standard units (litres/ml)</i></li> <li>time (hours/minutes/seconds)</li> </ul> <i>within children's range of counting competence</i> </li> <li>Compare, describe and solve practical problems for: <ul style="list-style-type: none"> <li>lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)</li> <li>mass/weight (for example, heavy/light, heavier than, lighter than)</li> <li>capacity and volume (for example, full/empty, more than, less than, half, half full, quarter)</li> <li>time (for example, quicker, slower, earlier, later)</li> </ul> </li> <li>Recognise and use language relating to dates, including days of the week, weeks, months and years</li> <li>Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)</li> <li>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times</li> <li>Recognise and know the value of different denominations of coins and notes</li> </ul>
	Geometry – position and direction	
	<ul style="list-style-type: none"> <li>Describe movement, including whole, half, quarter and three-quarter turns</li> <li><i>Recognise and create repeating patterns with objects and shapes</i></li> <li>Describe position and direction</li> </ul>	
	Statistics	
	<ul style="list-style-type: none"> <li><i>Sort objects, numbers and shapes to a given criterion and their own</i></li> <li><i>Present and interpret data in block diagrams using practical equipment</i></li> <li><i>Ask and answer simple questions by counting the number of objects in each category</i></li> <li><i>Ask and answer questions by comparing categorical data</i></li> </ul>	

## Key Learning in Mathematics – Year 2

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> <li>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</li> <li>Read and write numbers to at least 100 in numerals and in words</li> <li>Recognise the place value of each digit in a two-digit number (tens, ones)</li> <li>Identify, represent and estimate numbers using different representations, including the number line</li> <li>Partition numbers in different ways (e.g. <math>23 = 20 + 3</math> and <math>23 = 10 + 13</math>)</li> <li>Compare and order numbers from 0 up to 100; use <math>&lt;</math>, <math>&gt;</math> and <math>=</math> signs</li> <li>Find 1 or 10 more or less than a given number</li> <li>Round numbers to at least 100 to the nearest 10</li> <li>Understand the connection between the 10 multiplication table and place value</li> <li>Describe and extend simple sequences involving counting on or back in different steps</li> <li>Use place value and number facts to solve problems</li> </ul>	<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting)</li> <li>Select a mental strategy appropriate for the numbers involved in the calculation</li> <li>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</li> <li>Understand subtraction as take away and difference (how many more, how many less/fewer)</li> <li>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</li> <li>Recall and use number bonds for multiples of 5 totalling 60 (to support telling time to nearest 5 minutes)</li> <li>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:               <ul style="list-style-type: none"> <li>a two-digit number and ones</li> <li>a two-digit number and tens</li> <li>two two-digit numbers</li> <li>adding three one-digit numbers</li> </ul> </li> <li>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems</li> <li>Solve problems with addition and subtraction including with missing numbers:</li> </ul>	<ul style="list-style-type: none"> <li>Understand multiplication as repeated addition</li> <li>Understand division as sharing and grouping and that a division calculation can have a remainder</li> <li>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</li> <li>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</li> <li>Derive and use doubles of simple two-digit numbers (numbers in which the ones total less than 10)</li> <li>Derive and use halves of simple two-digit even numbers (numbers in which the tens are even)</li> <li>Calculate mathematical statements for multiplication using repeated addition) and division within the multiplication tables and write them using the multiplication (<math>\times</math>), division (<math>\div</math>) and equals (<math>=</math>) signs</li> <li>Solve problems involving multiplication and division (including those with remainders), using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</li> </ul>
Number – fractions	Geometry – properties of shapes	Measurement
<ul style="list-style-type: none"> <li>Understand and use the terms numerator and denominator</li> <li>Understand that a fraction can describe part of a set</li> <li>Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be</li> <li>Recognise, find, name and write fractions <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity</li> <li>Write simple fractions for example, <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math></li> <li>Count on and back in steps of <math>\frac{1}{2}</math> and <math>\frac{1}{4}</math></li> </ul>	<ul style="list-style-type: none"> <li>Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</li> <li>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</li> <li>Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</li> </ul>	<ul style="list-style-type: none"> <li>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (<math>^{\circ}\text{C}</math>); capacity and volume (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</li> <li>Compare and order lengths, mass, volume/capacity and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math></li> <li>Recognise and use symbols for pounds (£) and pence (p)</li> <li>Combine amounts to make a particular value</li> <li>Find different combinations of coins that equal the same amounts of money</li> <li>Compare and sequence intervals of time</li> <li>Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times</li> <li>Know the number of minutes in an hour and the number of hours in a day</li> <li>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change and measures (including time)</li> </ul>
	Geometry – position and direction	
	<ul style="list-style-type: none"> <li>Order/arrange combinations of mathematical objects in patterns/sequences</li> <li>Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)</li> </ul>	
	Statistics	
	<ul style="list-style-type: none"> <li>Compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects</li> <li>Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</li> <li>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</li> <li>Ask and answer questions about totalling and comparing categorical data</li> </ul>	

## Key Learning in Mathematics – Year 3

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> <li>Count from 0 in multiples of 4, 8, 50 and 100</li> <li>Count up and down in tenths</li> <li>Read and write numbers up to 1000 in numerals and in words</li> <li>Read and write numbers with one decimal place</li> <li>Identify, represent and estimate numbers using different representations (including the number line)</li> <li>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</li> <li>Identify the value of each digit to one decimal place</li> <li>Partition numbers in different ways (e.g. <math>146 = 100 + 40 + 6</math> and <math>146 = 130 + 16</math>)</li> <li>Compare and order numbers up to 1000</li> <li>Compare and order numbers with one decimal place</li> <li>Find 1, 10 or 100 more or less than a given number</li> <li>Round numbers to at least 1000 to the nearest 10 or 100</li> <li>Find the effect of multiplying a one- or two-digit number by 10 and 100, identify the value of the digits in the answer</li> <li>Describe and extend number sequences involving counting on or back in different steps</li> <li>Read Roman numerals from I to XII</li> <li>Solve number problems and practical problems involving these ideas</li> </ul>	<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>Select a mental strategy appropriate for the numbers involved in the calculation</li> <li>Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context</li> <li>Recall/use addition/subtraction facts for 100 (multiples of 5 and 10)</li> <li>Derive and use addition and subtraction facts for 100</li> <li>Derive and use addition and subtraction facts for multiples of 100 totalling 1000</li> <li>Add and subtract numbers mentally, including:               <ul style="list-style-type: none"> <li>a three-digit number and ones</li> <li>a three-digit number and tens</li> <li>a three-digit number and hundreds</li> </ul> </li> <li>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</li> <li>Estimate the answer to a calculation and use inverse operations to check answers</li> <li>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</li> </ul>	<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>Understand that division is the inverse of multiplication and vice versa</li> <li>Understand how multiplication and division statements can be represented using arrays</li> <li>Understand division as sharing and grouping and use each appropriately</li> <li>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>Derive and use doubles of all numbers to 100 and corresponding halves</li> <li>Derive and use doubles of all multiples of 50 to 500</li> <li>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</li> <li>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Solve problems, including missing number problems, involving multiplication and division (and interpreting remainders), including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</li> </ul>
Number – fractions	Geometry – properties of shapes	Measures
<ul style="list-style-type: none"> <li>Show practically or pictorially that a fraction is one whole number divided by another (e.g. <math>\frac{3}{4}</math> can be interpreted as <math>3 \div 4</math>)</li> <li>Understand that finding a fraction of an amount relates to division</li> <li>Recognise that tenths arise from dividing objects into 10 equal parts and in dividing one-digit numbers or quantities by 10</li> <li>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</li> <li>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</li> <li>Recognise and show, using diagrams, equivalent fractions with small denominators</li> <li>Add and subtract fractions with the same denominator within one whole [for example, <math>\frac{1}{7} + \frac{2}{7} = \frac{3}{7}</math>]</li> <li>Compare and order unit fractions, and fractions with the same denominators (including on a number line)</li> <li>Count on and back in steps of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math> and <math>\frac{1}{10}</math></li> <li>Solve problems that involve all of the above</li> </ul>	<ul style="list-style-type: none"> <li>Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</li> <li>Recognise angles as a property of shape or a description of a turn</li> <li>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</li> <li>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines</li> </ul>	<ul style="list-style-type: none"> <li>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> <li>Continue to estimate and measure temperature to the nearest degree (<math>^{\circ}\text{C}</math>) using thermometers</li> <li>Understand perimeter is a measure of distance around the boundary of a shape</li> <li>Measure the perimeter of simple 2-D shapes</li> <li>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</li> <li>Estimate/read time with increasing accuracy to the nearest minute</li> <li>Record/compare time in terms of seconds, minutes, hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon, midnight</li> <li>Know the number of seconds in a minute and the number of days in each month, year and leap year</li> <li>Compare durations of events [for example to calculate the time taken by particular events or tasks]</li> <li>Continue to recognise and use the symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds/pence</li> <li>Recognise that ten 10p coins equal £1 and that each coin is <math>\frac{1}{10}</math> of £1</li> <li>Add and subtract amounts of money to give change, using both £ and p in practical contexts</li> <li>Solve problems involving money and measures and simple problems involving passage of time</li> </ul>
	<b>Geometry – position and direction</b>	
	<ul style="list-style-type: none"> <li>Describe positions on a square grid labelled with letters and numbers</li> </ul>	
	<b>Statistics</b>	
	<ul style="list-style-type: none"> <li>Use sorting diagrams to compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects</li> <li>Interpret and present data using bar charts, pictograms and tables</li> <li>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</li> </ul>	

## Key Learning in Mathematics – Year 4

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> <li>Count in multiples of 6, 7, 9, 25 and 1000</li> <li>Count backwards through zero to include negative numbers</li> <li>Count up and down in hundredths</li> <li>Read and write numbers to at least 10 000</li> <li>Read and write numbers with up to two decimal places</li> <li>Recognise the place value of each digit in a four-digit number</li> <li>Identify the value of each digit to two decimal places</li> <li>Partition numbers in different ways (e.g. <math>2.3 = 2 + 0.3</math> &amp; <math>1 + 1.3</math>)</li> <li>Identify, represent and estimate numbers using different representations (including the number line)</li> <li>Order and compare numbers beyond 1000</li> <li>Order and compare numbers with the same number of decimal places up to two decimal places</li> <li>Find 0.1, 1, 10, 100 or 1000 more or less than a given number</li> <li>Round any number to the nearest 10, 100 or 1000</li> <li>Round decimals (one decimal place) to the nearest whole number</li> <li>Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer</li> <li>Describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps</li> <li>Read Roman numerals to 100 and know that over time, the numeral system changed to include the concept of zero and place value</li> <li>Solve number and practical problems that involve all of the above and with increasingly large positive numbers</li> </ul>	<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>Select a mental strategy appropriate for the numbers involved in the calculation</li> <li>Recall and use addition and subtraction facts for 100</li> <li>Recall and use <math>+/ -</math> facts for multiples of 100 totalling 1000</li> <li>Derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)</li> <li>Add and subtract mentally combinations of two and three digit numbers and decimals to one decimal place</li> <li>Add and subtract numbers with up to 4 digits and decimals with one decimal place using the formal written methods of columnar addition and subtraction where appropriate</li> <li>Estimate; use inverse operations to check answers to a calculation</li> <li>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</li> <li>Solve addition and subtraction problems involving missing numbers</li> </ul>	<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>Recognise and use factor pairs and commutativity in mental calculations</li> <li>Recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li> <li>Use partitioning to double or halve any number, including decimals to one decimal place</li> <li>Use place value, known and derived facts to multiply and divide mentally, including: <ul style="list-style-type: none"> <li>- multiplying by 0 and 1</li> <li>- dividing by 1</li> <li>- multiplying together three numbers</li> </ul> </li> <li>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li> <li>Divide numbers up to 3 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</li> <li>Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, division (including interpreting remainders), integer scaling problems and harder correspondence problems such as n objects are connected to m objects</li> </ul>
Number – fractions and decimals	Geometry – properties of shapes	Measurement
<ul style="list-style-type: none"> <li>Understand that a fraction is one whole number divided by another (e.g. <math>\frac{3}{4}</math> can be interpreted as <math>3 \div 4</math>)</li> <li>Recognise, find and write fractions of a discrete set of objects including those with a range of numerators and denominators</li> <li>Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten</li> <li>Count on and back in steps of unit fractions</li> <li>Compare and order unit fractions and fractions with the same denominators (including on a number line)</li> <li>Recognise and show, using diagrams, families of common equivalent fractions</li> <li>Recognise and write decimal equivalents of any number of tenths or hundredths</li> <li>Recognise and write decimal equivalents to <math>\frac{1}{10}, \frac{1}{100}, \frac{1}{1000}</math></li> <li>Add and subtract fractions with the same denominator (using diagrams)</li> <li>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</li> <li>Solve simple measure and money problems involving fractions and decimals to two decimal places</li> </ul>	<ul style="list-style-type: none"> <li>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</li> <li>Identify lines of symmetry in 2-D shapes presented in different orientations</li> <li>Complete a simple symmetric figure with respect to a specific line of symmetry</li> <li>Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines</li> <li>Identify acute and obtuse angles and compare and order angles up to two right angles by size</li> </ul>	<ul style="list-style-type: none"> <li>Estimate, compare and calculate different measures, including money in pounds and pence</li> <li>Order temperatures including those below <math>0^{\circ}\text{C}</math></li> <li>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</li> <li>Know area is a measure of surface within a given boundary</li> <li>Find the area of rectilinear shapes by counting squares</li> <li>Convert between different units of measure [e.g. kilometre to metre; hour to minute]</li> <li>Read, write and convert time between analogue and digital 12- and 24-hour clocks</li> <li>Write amounts of money using decimal notation</li> <li>Recognise that one hundred 1p coins equal £1 and that each coin is <math>\frac{1}{100}</math> of £1</li> <li>Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures</li> </ul>
	Geometry – position and direction	
	<ul style="list-style-type: none"> <li>Describe positions on a 2-D grid as coordinates in the first quadrant</li> <li>Plot specified points and draw sides to complete a given polygon</li> <li>Describe movements between positions as translations of a given unit to the left/right and up/down</li> </ul>	
	Statistics	
	<ul style="list-style-type: none"> <li>Use a variety of sorting diagrams to compare and classify numbers and geometric shapes based on their properties and sizes</li> <li>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts, time graphs</li> <li>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</li> </ul>	



## Key Learning in Mathematics – Year 5

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> <li>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</li> <li>Count forwards and backwards in decimal steps</li> <li>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</li> <li>Read, write, order and compare numbers with up to 3 decimal places</li> <li>Identify the value of each digit to three decimal places</li> <li>Identify represent and estimate numbers using the number line</li> <li>Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number</li> <li>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> <li>Round decimals with two decimal places to the nearest whole number and to one decimal place</li> <li>Multiply/divide whole numbers and decimals by 10, 100 and 1000</li> <li>Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero</li> <li>Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal</li> <li>Read Roman numerals to 1000 (M); recognise years written as such</li> <li>Solve number and practical problems that involve all of the above</li> </ul>	<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>Select a mental strategy appropriate for the numbers involved in the calculation</li> <li>Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)</li> <li>Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places)</li> <li>Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places</li> <li>Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction)</li> <li>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>Solve addition and subtraction problems involving missing numbers</li> </ul>	<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</li> <li>Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</li> <li>Establish whether a number up to 100 is prime and recall prime numbers up to 19</li> <li>Recognise and use square (<math>^2</math>) and cube (<math>^3</math>) numbers, and notation</li> <li>Use partitioning to double or halve any number, including decimals to two decimal places</li> <li>Multiply and divide numbers mentally drawing upon known facts</li> <li>Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>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</li> <li>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</li> <li>Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</li> <li>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</li> </ul>
Number – fractions, decimals and percentages	Geometry – properties of shapes	Measurement
<ul style="list-style-type: none"> <li>Recognise mixed numbers and improper fractions and convert from one form to the other</li> <li>Read and write decimal numbers as fractions (e.g. <math>0.71 = \frac{71}{100}</math>)</li> <li>Count on and back in mixed number steps such as <math>1\frac{1}{2}</math></li> <li>Compare and order fractions whose denominators are all multiples of the same number (including on a number line)</li> <li>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>Add and subtract fractions with denominators that are the same and that are multiples of the same number (using diagrams)</li> <li>Write statements <math>&gt; 1</math> as a mixed number (e.g. <math>\frac{3}{2} + \frac{4}{2} = \frac{7}{2} = 1\frac{5}{2}</math>)</li> <li>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li> <li>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</li> <li>Solve problems involving fractions and decimals to three places</li> <li>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{3}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{5}</math>, <math>\frac{4}{5}</math> and fractions with a denominator of a multiple of 10 or 25</li> </ul>	<ul style="list-style-type: none"> <li>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</li> <li>Use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>Identify 3-D shapes from 2-D representations</li> <li>Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</li> <li>Draw given angles, and measure them in degrees (<math>^{\circ}</math>)</li> <li>Identify: <ul style="list-style-type: none"> <li>angles at a point and one whole turn (total <math>360^{\circ}</math>)</li> <li>angles at a point on a straight line and half a turn (total <math>180^{\circ}</math>)</li> <li>other multiples of <math>90^{\circ}</math></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Use, read and write standard units of length and mass</li> <li>Estimate (and calculate) volume ((e.g., using <math>1\text{ cm}^3</math> blocks to build cuboids (including cubes)) and capacity (e.g. using water)</li> <li>Understand the difference between liquid volume and solid volume</li> <li>Continue to order temperatures including those below <math>0^{\circ}\text{C}</math></li> <li>Convert between different units of metric measure</li> <li>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</li> <li>Measure/calculate the perimeter of composite rectilinear shapes</li> <li>Calculate and compare the area of rectangle, use standard units square centimetres (<math>\text{cm}^2</math>) and square metres (<math>\text{m}^2</math>) and estimate the area of irregular shapes</li> <li>Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks</li> <li>Solve problems involving converting between units of time</li> <li>Use all four operations to solve problems involving measure using decimal notation, including scaling</li> </ul>
	Geometry – position and direction	
	<ul style="list-style-type: none"> <li>Describe positions on the first quadrant of a coordinate grid</li> <li>Plot specified points and complete shapes</li> <li>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</li> </ul>	
	Statistics	
	<ul style="list-style-type: none"> <li>Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes)</li> <li>Complete, read and interpret information in tables and timetables</li> <li>Solve comparison, sum and difference problems using information presented in all types of graph including a line graph</li> <li>Calculate and interpret the mode, median and range</li> </ul>	

## Key Learning in Mathematics – Year 6

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> <li>Count forwards or backwards in steps of integers, decimals, powers of 10</li> <li>Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</li> <li>Identify the value of each digit to three decimal places</li> <li>Identify, represent and estimate numbers using the number line</li> <li>Order and compare numbers including integers, decimals and negative numbers</li> <li>Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more/less than a given number</li> <li>Round any whole number to a required degree of accuracy</li> <li>Round decimals with three decimal places to the nearest whole number or one or two decimal places</li> <li>Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places</li> <li>Use negative numbers in context, and calculate intervals across zero</li> <li>Describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and those where the step size is a decimal</li> <li>Solve number and practical problems that involve all of the above</li> </ul>	<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>Select a mental strategy appropriate for the numbers in the calculation</li> <li>Recall and use addition and subtraction facts for 1 (with decimals to two decimal places)</li> <li>Perform mental calculations including with mixed operations and large numbers and decimals</li> <li>Add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction)</li> <li>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Use knowledge of the order of operations to carry out calculations</li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>Solve problems involving all four operations, including those with missing numbers</li> </ul>	<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>Identify common factors, common multiples and prime numbers</li> <li>Use partitioning to double or halve any number</li> <li>Perform mental calculations, including with mixed operations and large numbers</li> <li>Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>Multiply one-digit numbers with up to two decimal places by whole numbers</li> <li>Divide numbers up to 4 digits by a two-digit whole number using the formal written methods of short or long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</li> <li>Use written division methods in cases where the answer has up to two decimal places</li> <li>Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Use knowledge of the order of operations to carry out calculations</li> <li>Solve problems involving all four operations, including those with missing numbers</li> </ul>
Number – fractions, decimals and percentages	Geometry – properties of shapes	Measurement
<ul style="list-style-type: none"> <li>Compare and order fractions, including fractions <math>&gt; 1</math> (including on a number line)</li> <li>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</li> <li>Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375 and <math>\frac{3}{8}</math>)</li> <li>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. <math>\frac{3}{4} \times \frac{2}{3} = \frac{1}{2}</math>)</li> <li>Divide proper fractions by whole numbers (e.g. <math>\frac{3}{4} \div 2 = \frac{3}{8}</math>)</li> <li>Find simple percentages of amounts</li> <li>Solve problems involving fractions</li> <li>Solve problems which require answers to be rounded to specified degrees of accuracy</li> <li>Solve problems involving the calculation of percentages (e.g. of measures and such as 15% of 260) and the use of percentages for comparison</li> </ul>	<ul style="list-style-type: none"> <li>Compare/classify geometric shapes based on the properties and sizes</li> <li>Draw 2-D shapes using given dimensions and angles</li> <li>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> <li>Recognise, describe and build simple 3-D shapes, including making nets</li> <li>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> <li>Find unknown angles in any triangles, quadrilaterals, regular polygons</li> </ul>	<ul style="list-style-type: none"> <li>Use, read and write standard units of length, mass, volume and time using decimal notation to three dec pls</li> <li>Convert between standard units of length, mass, volume and time using decimal notation to three decimal places</li> <li>Convert between miles and kilometres</li> <li>Recognise that shapes with the same areas can have different perimeters and vice versa</li> <li>Calculate the area of parallelograms and triangles</li> <li>Recognise when it is possible to use formulae for area and volume of shapes</li> <li>Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units (e.g. mm<sup>3</sup> and km<sup>3</sup>)</li> <li>Calculate differences in temperature, including those that involved a positive and negative temperature</li> <li>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</li> </ul>
Ratio and proportion	Geometry – position and direction	
<ul style="list-style-type: none"> <li>Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication/division facts</li> <li>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</li> <li>Solve problems involving similar shapes where the scale factor is known or can be found</li> </ul>	<ul style="list-style-type: none"> <li>Describe positions on the full coordinate grid (all four quadrants)</li> <li>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes</li> </ul>	
	Statistics	
	<ul style="list-style-type: none"> <li>Continue to complete and interpret information in a variety of sorting diagrams (including sorting properties of numbers and shapes)</li> <li>Interpret and construct pie charts and line graphs and use these to solve problems</li> <li>Solve comparison, sum and difference problems using information presented in all types of graph</li> <li>Calculate and interpret the mean as an average</li> </ul>	
	Algebra	
	<ul style="list-style-type: none"> <li>Use simple formulae</li> <li>Generate and describe linear number sequences</li> <li>Express missing number problems algebraically</li> <li>Find pairs of numbers that satisfy an equation with two unknowns</li> <li>Enumerate possibilities of combinations of two variables</li> </ul>	



# Science

## Purpose of study

A high-quality science education provides the foundations for understanding the world through specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

## Aims

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

- develop a **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future

Year group	Working Scientifically	Plants	Animals	Everyday Materials	Seasons Changes
<b>Y1</b>	<ul style="list-style-type: none"> <li>Asking simple questions and recognising that they can be answered in different ways.</li> <li>Observing closely, using simple equipment.</li> <li>Performing simple tests.</li> <li>Identifying and classifying.</li> <li>Using their observations and ideas to suggest answers to questions.</li> <li>Gathering and recording data to help in answering questions.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.-</li> <li>Identify and describe the basic structure of a variety of common flowering plants, including trees.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</li> <li>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</li> <li>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).-</li> <li>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</li> </ul>	<ul style="list-style-type: none"> <li>Distinguish between an object and the material from which it is made.</li> <li>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</li> <li>Describe the simple physical properties of a variety of everyday materials.</li> <li>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</li> </ul>	<ul style="list-style-type: none"> <li>Observe changes across the four seasons.</li> <li>Observe and describe weather associated with the seasons and how day length varies.</li> </ul>

Year group	Working Scientifically	Plants	Animals	Everyday Materials	Living things Habitats
<b>Y2</b>	<ul style="list-style-type: none"> <li>Asking simple questions and recognising that they can be answered in different ways.</li> <li>Observing closely, using simple equipment.</li> <li>Performing simple tests.</li> <li>Identifying and classifying.</li> <li>Using their observations and ideas to suggest answers to questions.</li> <li>Gathering and recording data to help in answering questions.</li> </ul>	<ul style="list-style-type: none"> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> </ul>	<ul style="list-style-type: none"> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</li> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul>	<ul style="list-style-type: none"> <li>Explore &amp; compare the differences between things that are living, dead, and things that have never been alive.</li> <li>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</li> <li>Identify and name a variety of plants and animals in their habitats, including micro-habitats.</li> <li>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</li> </ul>

Year group	Working Scientifically
Y3/4	<ul style="list-style-type: none"> <li>Asking relevant questions and using different types of scientific enquiries to answer them.</li> <li>Setting up simple practical enquiries, comparative and fair tests.</li> <li>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</li> <li>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</li> <li>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</li> <li>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</li> <li>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</li> <li>Identifying differences, similarities or changes related to simple scientific ideas and processes.</li> <li>Using straightforward scientific evidence to answer questions or to support their findings.</li> </ul>

Year group	Forces	Plants	Animals	Rocks	Light
Y3	<ul style="list-style-type: none"> <li>Compare how things move on different surfaces.</li> <li>Notice that some forces need contact between two objects, but magnetic forces can act at a distance.</li> <li>Observe how magnets attract or repel each other and attract some materials and not others.</li> <li>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.</li> <li>Describe magnets as having two poles.</li> <li>Predict whether two magnets will attract or repel each other, depending on which poles are facing.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</li> <li>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.</li> <li>Investigate the way in which water is transported within plants.</li> <li>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</li> </ul>	<ul style="list-style-type: none"> <li>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</li> <li>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</li> <li>Recognise that soils are made from rocks and organic matter.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that they need light in order to see things and that dark is the absence of light.</li> <li>Notice that light is reflected from surfaces.</li> <li>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</li> <li>Recognise that shadows are formed when the light from a light source is blocked by a solid object.</li> <li>Find patterns in the way that the size of shadows change.</li> </ul>

Y4	Electricity	States of Matter	Animals	Sound	Living things Habitats
	<ul style="list-style-type: none"> <li>Identify common appliances that run on electricity.</li> <li>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</li> <li>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.</li> <li>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</li> <li>Recognise some common conductors and insulators, and associate metals with being good conductors.</li> </ul>	<ul style="list-style-type: none"> <li>Compare and group materials together, according to whether they are solids, liquids or gases.</li> <li>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).</li> <li>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</li> </ul>	<ul style="list-style-type: none"> <li>Describe the simple functions of the basic parts of the digestive system in humans.</li> <li>Identify the different types of teeth in humans and their simple functions.</li> <li>Construct and interpret a variety of food chains, identifying producers, predators and prey.</li> </ul>	<ul style="list-style-type: none"> <li>Identify how sounds are made, associating some of them with something vibrating.</li> <li>Recognise that vibrations from sounds travel through a medium to the ear.</li> <li>Find patterns between the pitch of a sound and features of the object that produced it.</li> <li>Find patterns between the volume of a sound and the strength of the vibrations that produced it.</li> <li>Recognise that sounds get fainter as the distance from the sound source increases.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that living things can be grouped in a variety of ways.</li> <li>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</li> <li>Recognise that environments can change and that this can sometimes pose dangers to living things.</li> </ul>

<b>Year group</b>	<b>Working Scientifically</b>
<b>Y5/6</b>	<ul style="list-style-type: none"> <li>▪ Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> <li>▪ Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</li> <li>▪ Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</li> <li>▪ Using test results to make predictions to set up further comparative and fair tests.</li> <li>▪ Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> <li>▪ Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul>

<b>Y5</b>	<b>Earth Space</b>	<b>Forces</b>	<b>Animals</b>	<b>Living things Habitats</b>	<b>Properties of Materials</b>
	<ul style="list-style-type: none"> <li>▪ Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</li> <li>▪ Describe the movement of the Moon relative to the Earth.</li> <li>▪ Describe the Sun, Earth and Moon as approximately spherical bodies.</li> <li>▪ Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</li> <li>▪ Identify the effects of air resistance, water resistance and friction that act between moving surfaces.</li> <li>▪ Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Describe the changes as humans develop to old age.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</li> <li>▪ Describe the life process of reproduction in some plants and animals.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</li> <li>▪ Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</li> <li>▪ Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</li> <li>▪ Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</li> <li>▪ Demonstrate that dissolving, mixing and changes of state are reversible changes.</li> <li>▪ 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.</li> </ul>

Y6	Evolution	Light	Animals	Living things Habitats	Electricity
	<ul style="list-style-type: none"> <li>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</li> <li>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</li> <li>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that light appears to travel in straight lines.</li> <li>Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.</li> <li>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</li> <li>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</li> <li>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</li> <li>Describe the ways in which nutrients and water are transported within animals, including humans.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Give reasons for classifying plants and animals based on specific characteristics.</li> </ul>	<ul style="list-style-type: none"> <li>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</li> <li>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.</li> <li>Use recognised symbols when representing a simple circuit in a diagram</li> </ul>

# Art & Design

## Purpose of study

Art, craft and design embody some of the highest forms of human creativity. A high-quality art and design education should engage, inspire and challenge pupils, equipping them with the knowledge and skills to experiment, invent and create their own works of art, craft and design. As pupils progress, they should be able to think critically and develop a more rigorous understanding of art and design. They should also know how art and design both reflect and shape our history, and contribute to the culture, creativity and wealth of our nation.

## Aims

The national curriculum for art and design aims to ensure that all pupils:

- Produce creative work, exploring their ideas and recording their experiences
- Become proficient in drawing, painting, sculpture and other art, craft and design techniques
- Evaluate and analyse creative works using the language of art, craft and design
- Know about great artists, craft makers and designers, and understand the historical and cultural development of their art forms.

## Key Stage One

Pupils at Blakedown CE Primary will be taught:

- To use a range of materials creatively to design and make products
- To use drawing, painting and sculpture to develop and share their ideas, experiences and imagination
- To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space
- About the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.

## Key Stage Two

Pupils at Blakedown CE Primary will be taught:

- To develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.
- 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.

# Computing

## Purpose of study

A high quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and

technology and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate - able to use, and express themselves and develop their ideas through, information and communication technology - at a level suitable for the future workplace and as active participants in a digital world.

## Aims

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

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- Are responsible, competent, confident and creative users of information and communication technology.

## Key Stage One

Pupils at Blakedown CE Primary will be taught to:

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Recognise common uses of information technology beyond school
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

## Key Stage Two

Pupils at Blakedown CE Primary will 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 variable 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.

# Design and Technology

## Purpose of study

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

## Aims

The national curriculum for design and technology aims to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- Critique, evaluate and test their ideas and products and the work of others
- Understand and apply the principles of nutrition and learn how to cook.

## Key Stage One

When designing and making, pupils at Blakedown CE Primary will be taught to:

### Design

- Design purposeful, functional, appealing products for themselves and other users based on design criteria
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

### Make

- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

### Evaluate

- Explore and evaluate a range of existing products
- Evaluate their ideas and products against design criteria

### Technical knowledge

- Build structures, exploring how they can be made stronger, stiffer and more stable
- Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

## Key Stage Two

When designing and making, pupils at Blakedown CE Primary will be taught to:

### Design

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individual 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

### 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.

## Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

## Key Stage One

When designing and making, pupils at Blakedown CE Primary will be taught to:

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from.

## Key Stage Two

When designing and making, pupils at Blakedown CE Primary will be taught to:

- 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.

# 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.

## 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.

## Key Stage One

Pupils at Blakedown CE Primary will be taught to:

### Location knowledge

- Name and locate the world's seven continents and five oceans
- Name, locate and identify characteristics of the four countries and capital cities of the United Kingdom and its surrounding seas

### Place knowledge

- Understand geographical similarities and differences through studying the human and physical geography of a small area of the United Kingdom, and of a small area in a contrasting non-European country

### Human and physical geography

- Identify seasonal and daily weather patterns in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles
- Use basic geographical vocabulary to refer to:
  - Key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather
  - Key human features, including: city, town, village, factory, farm, house, office, port, harbour and shop

### Geographical skills and fieldwork

- Use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage
- Use simple compass directions (North, South, East and West) and locational and directional language [for example, near and far; left and right], to describe the location of features and routes on a map
- Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features; devise a simple map; and use and construct basic symbols in a key
- 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

## Key Stage Two

Pupils at Blakedown CE Primary will be taught to:

### Locational knowledge

- Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries and major cities
- 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
- 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)

### Place knowledge

- Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America

### Human and physical geography

- Describe and understand key aspects of:
  - Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle
  - Human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water

### Geographical skills and fieldwork

- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- 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
- 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 technologies.

# History

## Purpose of study

A high-quality history education will help pupils gain a coherent knowledge and understanding of Britain's past and that of the wider world. It should inspire pupils' curiosity to know more about the past. Teaching should equip pupils to ask perceptive questions, think critically, weigh evidence, sift arguments, and develop perspective and judgement. History helps pupils to understand the complexity of people's lives, the process of change, the diversity of societies and relationships between different groups, as well as their own identity and the challenges of their time.

## Aims

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

- Know and understand the history of these islands as a coherent, chronological narrative, from the earliest times to the present day: how people's lives have shaped this nation and how Britain has influenced and been influenced by the wider world
- Know and understand significant aspects of the history of the wider world: the nature of ancient civilisations; the expansion and dissolution of empires; characteristic features of past non-European societies; achievements and follies of mankind
- Gain and deploy a historically grounded understanding of abstract terms such as 'empire', 'civilisation', 'parliament' and 'peasantry'
- Understand historical concepts such as continuity and change, cause and consequence similarity, difference and significance, and use them to make connections, draw contrasts, analyse trends, frame historically-valid questions and create their own structured accounts, including written narratives and analyses
- Understand the methods of historical enquiry, including how evidence is used rigorously to make historical claims, and discern how and why contrasting arguments and interpretations of the past have been constructed
- Gain historical perspective by placing their growing knowledge into different contexts, understanding the connections between local, regional, national and international history; between cultural, economic, military, political, religious and social history; and between short- and long-term timescales.

## Key Stage One

Pupils at Blakedown CE Primary will learn about:

- Changes within living memory. Where appropriate, these should be used to reveal aspects of change in national life
- Events beyond living memory that are significant nationally or globally [for example, the Great Fire of London, the first aeroplane flight or events commemorated through festivals or anniversaries]
- The lives of significant individuals in the past who have contributed to national and international achievements. Some should be used to compare aspects of life in different periods [for example, Elizabeth I and Queen Victoria, Christopher Columbus and Neil Armstrong, William Caxton and Tim Berners-Lee, Pieter Bruegel the Elder and LS Lowry, Rosa Parks and Emily Davison, Mary Seacole and/or Florence Nightingale and Edith Cavell]
- Significant historical events, people and places in their own locality.

## Key Stage Two

Pupils at Blakedown CE Primary will be taught about:

- Changes in Britain from the Stone Age to the Iron Age
- The Roman Empire and its impact on Britain
- Britain's settlement by Anglo-Saxons and Scots
- The Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the Confessor
- A local history study
- A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066
- The achievements of the earliest civilisations - an overview of where and when the first civilisations appeared and a depth study of one of the following: Ancient Sumer; The Indus Valley; Ancient Egypt; The Shang Dynasty of Ancient China
- Ancient Greece - a study of Greek life and achievements and their influence on the western world
- A non-European society that provides contrasts with British history - one study chosen from: early Islamic civilization, including a study of Baghdad c. AD 900; Mayan civilization c. AD 900; Benin (West Africa) c. AD 900-1300.

# Languages

## Purpose of study

Learning a foreign language is a liberation from insularity and provides an opening to other cultures. A high-quality languages education should foster pupils' curiosity and deepen their understanding of the world. The teaching should enable pupils to express their ideas and thoughts in another language and to understand the respond to its speakers, both in speech and in writing. It should also provide opportunities for them to communicate for practical purposes, learn new ways of thinking and read great literature in the original language. Language teaching should provide the foundation for learning further languages, equipping pupils to study and work in other countries.

## Aims

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

- Understand and respond to spoken and written language from a variety of authentic sources
- Speak with increasing confidence, fluency and spontaneity, finding ways of communicating what they want to say, including through discussion and asking questions, and continually improving the accuracy of their pronunciation and intonation
- Can write at varying length, for different purposes and audiences, using the variety of grammatical structures that they have learnt
- Discover and develop an appreciation of a range of writing in the language studied.

## Key Stage Two

Pupils at Blakedown CE Primary will 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.

## Music

### Purpose of study

Music is a universal language that embodies one of the highest forms of creativity. A high-quality music education should engage and inspire pupils to develop a love of music and their talent as musicians, and so increase their self-confidence, creativity and sense of achievement. As pupils progress, they should develop a critical engagement with music, allowing them to compose, and to listen with discrimination to the best in the musical canon.

### Aims

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

- Perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions, including the works of the great composers and musicians
- Learn to sing and to use their voices, to create and compose music on their own and with others, have the opportunity to learn a musical instrument, use technology appropriately and have the opportunity to progress to the next level of musical excellence
- Understand and explore how music is created, produced and communicated, including through the inter-related dimensions: pitch, duration, dynamics, tempo, timbre, structure and appropriate musical notations.

### Key Stage One

Pupils at Blakedown CE Primary will be taught to:

- Use their voices expressively and creatively by singing songs and speaking chants and rhymes
- Play tuned and untuned instruments musically
- Listen with concentration and understanding to a range of high quality live and recorded music
- Experiment with, create, select and combine sounds using the inter-related dimensions of music.

## Key Stage Two

Pupils at Blakedown CE Primary will be taught to:

- 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.

# Physical Education

## Purpose of study

A high-quality physical education curriculum inspires all pupils to succeed and excel in competitive sport and other physically-demanding activities. It should provide opportunities for pupils to become physically confident in a way which supports their health and fitness. Opportunities to compete in sport and other activities build character and help to embed values such as fairness and respect.

## Aims

The national curriculum for physical education aims to ensure that all pupils:

- Develop competence to excel in a broad range of physical activities
- Are physically active for sustained periods of time
- Engage in competitive sports and activities
- Lead healthy, active lives.

## Key Stage One

Pupils at Blakedown CE Primary will be taught to:

- Master basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities
- Participate in team games, developing simple tactics for attacking and defending
- Perform dances using simple movement patterns.

## Key Stage Two

Pupils at Blakedown CE Primary will 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

All schools must provide swimming instruction either in Key Stage 1 or Key Stage 2.

In particular, pupils should be taught to:

- Swim competently, confidently and proficiently over a distance of at least 25 metres
- Use a range of strokes effectively [for example, front crawl, backstroke and breaststroke]
- Perform safe self-rescue in different water-based situations