

Ickniel Walk First School
Year 3 Long Term Planning - Autumn Term

Topics	<ul style="list-style-type: none"> • Prehistoric Britain - Stone Age • Bronze Age to Iron Age Celts • The Roman Empire 	
English	<p><u>Writing focus: Poetry</u> Using vocabulary to build Calligrams (shape poems) based on the season Autumn and Remembrance Day (poppies)</p> <p><u>Writing focus: Non-Fiction</u> Writing a non-fiction piece of writing about our school using paragraphs</p> <p><u>Writing focus:</u> Expanding simple sentences and writing dialogue based on the story '5 Minutes Peace'</p> <p><u>Writing focus: Non-Fiction</u> Create a step-by-step guide (using pictures and labels) explaining the smelting process used in making Bronze</p> <p><u>Writing focus: Narrative</u> Writing a diary entry about 'My Stone Age Day'</p> <p><u>SPAG:</u> Use of paragraphs and subheadings Using inverted commas to punctuate direct speech</p>	<p><u>Writing focus: Narrative</u> Write letters as Roman soldiers in Britain to home (Rome), by using the structure of letter writing</p> <p><u>Writing focus: Narrative</u> Write a story with a theme - 'When the Romans invaded the Celts'</p> <p><u>Writing Focus: Persuasive writing</u> Plan, write and perform a Rallying Speech in the style of Boudicca's Rallying Speech</p> <p><u>Writing focus: Non-Fiction</u> Use research to write a non-fiction piece of writing about the Romans by using paragraphs and sub headings</p> <p><u>Spoken Language Progression:</u> Listen to a variety of sources and key information, in order to comment, build their own understanding, or ask for an explanation - children to take notes on Stone Age, Bronze Age, Iron Age and The Romans.</p> <p>Oral rehearsing/ presenting - Boudicca/ Roman soldier rally speeches</p>
	<p><u>SPAG:</u> Sentence level - adverbs (then, next, soon) and using conjunctions (for example, when, before, after, while)</p>	
Maths	Essential Maths Planning	

	Also, see end of document for the National Curriculum overview of Maths in Year 3	
Science	<p>Plants: Identify and describe the functions of different parts of flowering plants (roots, stem/trunk, leaves, seeds, fruit and flowers)</p> <p>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</p> <p>Investigate the way in which water is transported within plants - celery investigation</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>	
Science-enquiry and investigation	<p>Investigation into the role leaves play in the growth of a flowering plant- observe the difference in growth between 2 plants when the leaves of one plant have been removed</p> <p>Investigation into how water is transported within plants - use blue dye in water to observe how water moves through a celery stick.</p>	
Computing	<p>Connecting computers During this unit, learners develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. They also compare digital and non-digital devices. Following this, learners are introduced to computer networks, including devices that make up a network's infrastructure, such as wireless access points and switches. The unit concludes with learners discovering the benefits of connecting devices in a network.</p>	<p>Animation During this unit, learners will use a range of techniques to create a stop frame animation using tablets. Next, they will apply those skills to create a story-based animation. This unit will conclude with learners adding other types of media to their animation, such as music and text.</p>

History	<p><u>Changes in Britain from the Stone Age to the Iron Age Celts:</u></p> <ul style="list-style-type: none"> • Imagine what life would have been like for early settlers, by comparing 'then' to 'now' • Late Neolithic hunter-gatherers and early farmers. For example, Skara Brae • Understanding that cave paintings tell us about life in that time • Bronze Age religion, technology and travel. For example, Stonehenge and how and why it may have been built (The secrets of Stonehenge. By Mick Manning) • Iron Age hillforts - tribal kingdoms, farming, art and culture, daily life • Celts - Boudicca and Iron Age resistance of Roman rule 	<p><u>The Roman Empire:</u></p> <p>The Roman Empire by AD 42 and the power of its army</p> <p>The successful invasion by Claudius and conquest, including Hadrian's Wall</p> <ul style="list-style-type: none"> • Life as a Roman soldier • British resistance • 'Romanisation' of Britain: the impact of technology (roads, buildings, bridges), culture and beliefs, including early Christianity
Geography	<p>Opportunities for map work linked with Celts and Romans, looking at where invaders came from and where they settled.</p> <p>Revision of countries and continents from KS1.</p> <p>Fieldwork- linked with Science topic (Plants) and Celts (farming) - Looking for an ideal location around the school for an allotment -Use Bird's Eye View map of school grounds and discuss what plants need for growth and natural resources.</p>	
Art	<p><u>Self-portraits - Drawing and collage</u></p> <ul style="list-style-type: none"> • Explore the skills to produce a collage by overlapping and overlaying to create effects and use appropriate materials/ colours <p>Cave drawings</p>	<p><u>Roman soldier sketch</u></p> <ul style="list-style-type: none"> • Experiment with different grades of pencil to create lines, marks, form and shape. • Begin to apply tone in a drawing (in a simple way) • Experiment with ways in which surface detail can be added to drawings

	<ul style="list-style-type: none"> • Learn how Prehistoric man made art. • Make marks and lines using charcoal and chalk to create cave paintings <p>Stone age necklaces- sculpt clay into the shape of bones, animal teeth and thread onto string.</p> <p>Celtic jewellery (torcs) - Copy/ use similar patterns from pictures to draw initial sketches as a preparation for painting.</p>	<p><u>Roman helmets</u></p> <ul style="list-style-type: none"> • Look at examples of Roman helmets and draw a sketch in preparation for creating a Papier Mache helmet. • Use Papier Mache to create a simple 3D model of a Roman helmet. • Cut helmet to the shape and paint. • Create different textures and effects with paint.
D&T	<p><u>Christmas cards (levers and linkages)</u></p> <p><u>Design, make and evaluate:</u></p> <ul style="list-style-type: none"> • Review a range of levers and linkages used in pop up books, cards etc. in terms of function and design. • Apply their understanding to design and make their own Christmas card. Link to Maths: Accurate measuring. Link to RE: Celebrations 	
PE	<p><u>Tennis:</u> (Sports partnership) professional coach. Develop technique, control and agility, leading up to playing competitive games</p> <p><u>Invasion games:</u> Develop a range of skills, such as running, jumping, throwing and catching in isolation and combination</p>	<p><u>Gymnastics:</u></p> <ul style="list-style-type: none"> • Variation in level, speed and control • Developing the children's movement • Developing flexibility and timing • Working as a group and in pairs • Use a variety of apparatus
RE	<p><u>Autumn A - Christianity and Islam:</u></p> <p><u>Beliefs and practices</u> Comparing Christianity and Islam</p> <p><u>Prayer, worship and reflection</u> Investigating the role of a place or worship and why it plays a significant part in a religious community Exploring Christian prayer</p>	<p><u>Autumn B - Christianity and Islam:</u></p> <p><u>Beliefs and Practices</u> Comparing the Christian celebration of Christmas and the Islamic celebration of Eid Understanding what Advent means in the Christian church Advent celebrations around the world (Mexico).</p>

	<p><u>Sources of wisdom</u> Exploring the beliefs about the origin of a religious sacred text and how it should be treated</p> <p><u>Symbols and actions</u> To understand humility in religion</p>	
PSHE	<p><u>Health and Wellbeing - Growing and Changing:</u></p> <ul style="list-style-type: none"> • Personal strengths and achievements; managing and reframing setbacks <p><u>Relationships:</u></p> <ul style="list-style-type: none"> • What makes a family; features of family life • Personal boundaries; safely responding to others; the impact of hurtful behaviour • Recognising respectful behaviour; the importance of self-respect; courtesy and being polite <p><u>Say no to bullying</u></p>	

Music	<u>Animal Magic:</u> <ul style="list-style-type: none"> • Exploring descriptive sounds 	Christmas production preparation and performance
French	<u>Oral rehearsal:</u> Read sounds, words and phrases in French to develop pronunciation <ul style="list-style-type: none"> • Greetings and goodbyes • Asking people how they are • What's your name? • The alphabet • My family • Happy Christmas 	
Events	Celtic Harmony school trip	Christmas performance

Ickniel Walk First School
Year 3 Long Term Planning - Spring Term

Topics	<ul style="list-style-type: none"> • The human body: Skeleton and muscles • Nutrition (Animals including humans) 	<ul style="list-style-type: none"> • Where in the World: Canada • Where in the World: Italy
English	<p><u>Writing focus: Non-Fiction</u> Writing a set of instructions using steps - how to make a healthy, well-balanced sandwich</p> <p><u>Writing focus: Poetry</u> Create their own poems (for example, humorous) by using the theme of food groups</p> <p><u>SPAG:</u> Use of imperative verbs to command and give instructions</p>	<p><u>Writing focus: Narratives</u> Act, retell and rewrite some carefully selected Aesop's fables</p> <p><u>Writing focus: Narratives</u> Writing a story with a theme (Canadian animal fables)</p> <p><u>Writing focus: Non-Fiction</u> Create a step-by-step guide (using pictures and labels) explaining the process of how maple syrup is made</p> <p><u>Writing focus: Non-Fiction</u> Researching information on Canada and Italy to write a report then present their findings</p> <p><u>Writing focus: Narratives</u> Writing a story with a theme - 'Escaping from Pompeii'</p> <p><u>SPAG:</u> Use of paragraphs and subheadings Using inverted commas to punctuate direct speech</p> <p><u>Spoken Language Progression:</u> Listening and responding/questioning - Research and writing reports on Canada/ Italy. Learning about nutrition/ skeletons and muscles. Oral rehearsing/ presenting - reads aloud and performs poems and reports on Canada/ Italy research.</p>

	SPAG: Sentence level- conjunctions (when, before, after) and prepositions	
Maths	Essential Maths Planning Also, see end of document for the National Curriculum overview of Maths in Year 3	
Science	<p><u>Animals including humans:</u> 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</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement</p>	<p><u>Rocks:</u> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>Describe in simple terms how fossils are formed when things that have lived and are trapped within rock</p> <p>Recognise that soils are made from rocks and organic matter</p>
Science- enquiry and investigation	<p>(Linked with DT) Research the nutritional value of different foods using the NHS Eatwell Guide and Change For Life. HFL Task- Model skeletons - Make a model of what they think the human skeleton is like. Use secondary sources to find out about the human skeleton and add to/change their model to reflect what they find out. HFL Task- Researching Skeletons- Ask relevant questions about skeletons from two different animals to make a comparison. Use a secondary source to find answers to questions.</p>	<p>Compare and group rocks on the basis of their durability and permeability. HFL Task - Investigate the permeability of soil. Make a whole class compost bin and observe changes over time.</p>
Computing	<p>Desktop publishing During this unit, learners will become familiar with the terms 'text' and 'images' and understand that they can be used to communicate messages. They will use desktop publishing software and consider careful choices of font</p>	<p>Branching databases During this unit, learners will develop their understanding of what a branching database is and how to create one. They will gain an understanding of what attributes are and how to use them to sort groups of objects by using yes/no</p>

	<p>size, colour and type to edit and improve premade documents. Learners will be introduced to the terms 'templates', 'orientation', and 'placeholders' and begin to understand how these can support them in making their own template for a magazine front cover. They will start to add text and images to create their own pieces of work using desktop publishing software. Learners will look at a range of page layouts thinking carefully about the purpose of these and evaluate how and why desktop publishing is used in the real world.</p>	<p>questions. The learners will create physical and on-screen branching databases. Finally, they will evaluate the effectiveness of branching databases and will decide what types of data should be presented as a branching database.</p>
History	N/A	
Geography	<p><u>Geographical skills:</u> Using maps, atlases, globes and internet resources to focus on the countries within Europe, major cities and environmental regions.</p> <p><u>Place knowledge:</u> Understand geographical similarities and differences through the study of human and physical geography of a region in Italy and Canada, looking at the key geographical features and how they impact lifestyle and trade.</p> <p><u>Human and physical geography:</u> Describe and understand the key aspects of physical geography, including: climate zones, rivers, mountains, volcanoes and earthquakes Describe and understand the key aspects of 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</p> <p><u>Locational knowledge:</u> 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)</p>	

Art

Art and Design techniques - Watercolour paintings and Totem poles linked with Canada:

Watercolour paintings

- Make initial sketches as a preparation for painting
- Mix colours to create different colour combinations of paint and apply a range of colours
- Use a range of different brushes for detail and precision
- Use colour mixing and watercolour paper/ brushes to create a water colour painting of the Rockies scenery in Canada

Totem Poles

- Research and discuss ideas for designing a clay sculpture of a totem pole looking at existing examples.
- Use sketch books to plan and draw ideas including important features of a Totem Pole.
- Join and manipulate clay adequately and construct a simple base for extending and modelling further shapes
- Create surface patterns and textures in malleable materials (carve shapes and details to create animals that can be stacked).

Great artists:

Giovanni Antonio Canal (Canaletto) - linked with Italy

- Look at work of Canaletto in particular his paintings of Venice.
- Use knowledge of his style of painting to create own pencil sketches.
- Begin to show an awareness of objects having a third dimension by looking at perspective.
- Experiment with different grades of pencil shades to explore different tones.

Guiseppe Arcimboldo - Food collage

- To look at the work of artists and discuss their techniques, how it makes us feel and what we see when we look at it
- Use a variation of mediums (sketching pencils and oil pastels) to follow the style of the artists work to support their own work

D&T	<p><u>Food - Healthy & varied diet:</u></p> <ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet • prepare and cook a variety of predominantly savoury dishes by using a range of cooking techniques • learn to chop, grate, slice and spread ingredients to make a sandwich • understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed 	
PE	<p><u>Dance:</u></p> <ul style="list-style-type: none"> • Perform dances using a range of movement patterns 	<p><u>Circuit training:</u> Noticing changes in our bodies</p> <p><u>Golf:</u> Delivered from external agency</p>
RE	<p><u>Spring A: Christianity and Islam</u></p> <p><u>Identity and Belonging</u> Belonging to a family, a community, challenges and religious leadership 'The story of Muhammad' Five Pillars of Islam</p> <p><u>Ultimate Questions</u> Different ideas about God and gods, creation and ultimate questions</p>	<p><u>Spring B: Christianity and Islam</u></p> <p><u>Ultimate questions</u> Christian creation story</p> <p><u>Beliefs and practices</u> Lent, Easter and Easter celebrations around the world</p>
PSHE	<p><u>Health and Wellbeing:</u></p> <ul style="list-style-type: none"> • Health choices and habits; what affects feelings; expressing feelings • Personal strengths and achievements; managing and reframing setbacks • Risks and hazards; safety in the local environment and unfamiliar places <p><u>Relationships:</u></p> <ul style="list-style-type: none"> • What makes a family; features of family life • Personal boundaries; safely responding to others; the impact of hurtful behaviour • Recognising respectful behaviour; the importance of self-respect; courtesy and being polite 	
Music	<p><u>Class Orchestra:</u> Exploring arrangements</p>	<p><u>Dragon scales:</u> Exploring pentatonic scales</p>

French	<p><u>Oral rehearsal:</u> Read sounds, words and phrases in French to develop pronunciation</p> <ul style="list-style-type: none"> • Numbers 0-12 • How old are you? • Brothers and sisters • Pets • First 6 colours and 5 more • Months of the year
Events	<p><i>Geography morning: A visitor to school (Canada)</i></p>

Icknield Walk First School
Year 3 Long Term Planning - Summer Term

Topic	Anglo Saxon Britain	Roald Dahl
English	<p><u>Writing focus: Persuasive writing</u> Writing letters to the Head teacher, applying for 'SPOT' jobs</p> <p><u>Writing focus: Narrative</u> Diary writing as an Anglo Saxon travelling to Britain</p> <p><u>Writing focus: Non-Fiction</u> Describing the roles of different classes within an Anglo Saxon society</p> <p><u>SPAG:</u> Use of inverted commas to punctuate direct speech</p>	<p><u>Writing focus: Non-Fiction</u> Write a biography about Roald Dahl</p> <p><u>Writing focus: Narrative</u> Focus work on 'The MinPins' by Roald Dahl; including writing a letter as Little Billy to the MinPins (ideas to escape the Gruncher)</p> <p><u>SPAG:</u> Use of inverted commas to punctuate direct speech</p> <p><u>Spoken Language Progression:</u> Listening and responding/questioning - History topic on Anglo Saxons (research to support diary writing) and 'The MinPins' topic. Give reasons for their views or choices - persuasive writing letters (SPOT jobs) Oral rehearsal/ presenting - focusing on feelings/ emotions and senses as the character Little Billy from the MinPins Oral rehearsing/ presenting - Perform a poem - selection of revolting rhymes by Roald Dahl</p>
	<p><u>SPAG:</u> Text level - Use of the present perfect form of verbs instead of the simple past, paragraphs, headings and subheadings. <u>SPAG:</u> Sentence level- conjunctions, adverbs, prepositions</p>	
Maths	<p style="text-align: center;">Essential Maths Planning</p> <p style="text-align: center;">Also, see end of document for the National Curriculum overview of Maths in Year 3</p>	
Science	<p>Light:</p> <ul style="list-style-type: none"> • recognise that they need light in order to see things and that dark is the absence of light 	<p>Forces & Magnets:</p> <ul style="list-style-type: none"> • compare how things move on different surfaces • notice that some forces need

	<ul style="list-style-type: none"> • notice that light is reflected from surfaces • recognise that light from the sun can be dangerous and that there are ways to protect their eyes • recognise that shadows are formed when the light from a light source is blocked by a solid object • find patterns in the way that the size of shadows changes. 	<p>contact between two objects, but magnetic forces can act at a distance</p> <ul style="list-style-type: none"> • observe how magnets attract or repel each other and attract some materials and not others • compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials • describe magnets as having two poles • predict whether two magnets will attract or repel each other, depending on which poles are facing.
Science-enquiry and investigation	<p>Test the reflectivity of different materials- Investigate which material would be best for the reflective strip on a new book bag. What do all reflective materials have in common?</p> <p>Investigation into how shadows change when the distance between the object and the light source changes.</p> <p>Explore how shadows change throughout the day- Draw around a pupil's shadow at different times in the day and observe any changes.</p>	<p>Friction Investigation- Measuring the force needed to pull a weight across different surfaces e.g. carpet, grass.</p> <p>Investigation into magnetic materials- Answering questions: What materials are magnetic? Are all metals magnetic?</p> <p>Build on previous learning about magnets from KS1</p>
Computing	<p>Programming A - Sequence in music</p> <p>This unit explores the concept of sequencing in programming through Scratch. It begins with an introduction to the programming environment, which will be new to most learners. They will be introduced to a selection of motion, sound, and event blocks which they will use to create their own programs, featuring sequences. The final project is to make a</p>	<p>Programming B - Events and actions</p> <p>This unit explores the links between events and actions, whilst consolidating prior learning relating to sequencing. Learners will begin by moving a sprite in four directions (up, down, left and right). They will then explore movement within the context of a maze, using design to choose an appropriately sized sprite. This unit also introduces programming extensions, through</p>

	<p>representation of a piano. The unit is paced to focus on all aspects of sequences, and make sure that knowledge is built in a structured manner. Learners also apply stages of program design through this unit.</p>	<p>the use of pen blocks. Learners are given the opportunity to draw lines with sprites and change the size and colour of lines. The unit concludes with learners designing and coding their own maze tracing program.</p>
History	<p><u>Britain's settlement by Anglo-Saxons:</u></p> <ul style="list-style-type: none"> • Roman withdrawal from Britain in AD 410 and the fall of the Western Roman Empire • Scots invasions from Ireland to North Britain (now Scotland) and its impact on the need for enforcements from Northern Europe • Anglo-Saxon invasions, settlements and kingdoms: place names and village life • Anglo-Saxon art, culture and paganism • The Sutton Hoo burial • Christian conversion - Canterbury, Iona and Lindisfarne. The life of early monks and their impact on education. 	
Geography	<p>Opportunities for map work linked with Anglo-Saxons</p> <p><u>Locational knowledge:</u> Name and locate counties and cities of the United Kingdom...and land-use patterns; and understand how some of these aspects have changed over time</p> <p>Fieldwork- Linked with Anglo-Saxons- Orienteering school grounds to find next clues by solving riddles.</p>	
Art	<p><u>Art and Design techniques - Saxon illuminated letters:</u></p> <ul style="list-style-type: none"> • To look at a range of illuminated letters to use as inspiration in planning their own illuminated letter (first letter of their name) • To use bold colours and metallic colours to decorate their own illuminated letter • Use fine pens to develop more intricate detail <p><u>Great artists: Quentin Blake</u></p> <ul style="list-style-type: none"> • To look at the work of Quentin Blake and discuss their techniques, how it makes us feel and what we see when we look at it • Use a variation of mediums (sketching pencils, colouring pencils and watercolours) to create their own familiar drawings in the style of the artists work 	

D&T	<p><u>Making Bread</u></p> <ul style="list-style-type: none"> • Prepare and bake a bread roll in the context of preparing for an Anglo Saxon feast. • Select from and use a wide variety of equipment for measuring and baking. • Think about ingredients and nutritional value. • Developing skills- knead, prove and bake bread rolls. <p><u>3D boxes:</u> (Confectionary packaging) <u>Design, make and evaluate:</u></p> <ul style="list-style-type: none"> • Review a range of packaging in terms of function and design. <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Link to Maths: Accurate measuring. Link to English: Logos and slogans</p>	
PE	<p><u>Outdoor games:</u></p> <ul style="list-style-type: none"> • Striking / Fielding • Bat and ball skills and games <p><u>Swimming:</u> Half of the year group swim for 6 weeks</p>	<p><u>Outdoor games:</u></p> <ul style="list-style-type: none"> • Striking / Fielding • Bat and ball skills and games <p><u>Athletics:</u></p> <ul style="list-style-type: none"> • Running, throwing and jumping progression <p><u>Swimming:</u> Other half of the year group swim for 6 weeks</p>
RE	<p><u>Summer A - Christianity and Islam:</u></p> <p>Sources of wisdom Sacred texts and stories, their guidance and impact 'The Good Samaritan' 'The story of Muhammad' Human responsibility and values Taking responsibility for living together, values and respect</p>	<p><u>Summer B - Christianity and Islam:</u></p> <p>Justice and Fairness Right and wrong, just and fair 'Zaccheus the Tax Collector' Ultimate questions Who would God want to meet or maybe share a meal with?</p>
PSHE	<p><u>Living in the wider world:</u></p> <ul style="list-style-type: none"> • The value of rules and laws; rights, freedoms and responsibilities • How the internet is used; assessing information online • Different jobs and skills; job stereotypes; setting personal goals 	
Music	<p><u>Painting with sound:</u> Exploring sound colours</p>	<p><u>Salt, pepper, vinegar, mustard:</u> Exploring singing games</p>

French	<p><u>Oral rehearsal:</u> Read sounds, words and phrases in French to develop pronunciation</p> <ul style="list-style-type: none"> • Numbers 13-31 • When is your birthday? • Days of the week • What's today's date? • Weather • Review
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Role Play	Roald Dahl writing activities
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Events	Sports day Roald Dahl Event
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Spelling, Punctuation and Grammar (SPAG)

Where this will be incorporated as part of a literacy unit it is indicated in the termly plans above.

In addition, this year we will cover in specific grammar lessons the following:

- Formation of nouns using a range of prefixes [for example super-, anti-, auto-]
- Use of the forms a or an according to whether the next word begins with a consonant or a vowel [for example, a rock, an open box]
- Word families based on common words, showing how words are related in form and meaning [for example, solve, solution, solver, dissolve, insoluble]
- Use of the present perfect form of verbs instead of the simple past [for example, He has gone out to play contrasted with He went out to play]
- Terminology the children will learn: preposition, conjunction, word family, prefix, clause, subordinate clause, direct speech, consonant, consonant letter, vowel, vowel letter, inverted commas (or 'speech marks')

Working mathematically

By the end of year 3, children will talk about their mathematics using the numbers they are familiar with, applying their understanding of number, measures and shape to a greater range of problems. They will make decisions about calculations and information that is needed to solve problems, for example when a recipe for two people needs to be doubled to make a recipe for four. Children will be expected to prove their thinking through pictures, jottings and conversations. They will be encouraged to pose their own questions, working in an organised way to solve them which will help pupils to identify common patterns or any errors more easily.

Number

- **Counting and understanding numbers**

Children will be very familiar with numbers that have 3 digits and will have experienced many opportunities to order, compare and show them in different ways using apparatus such as a tape measure, a 100 grid or money. Using their understanding of place value (how the value of each digit changes depending on its position in the number), children will be able to partition (break and make) numbers in different ways e.g. $234 = 200$ and 30 and 4 ; 100 and 100 and 20 and 10 and 4 ; or 200 and 20 and 14 . They will develop a secure understanding of numbers up to 1000 and will count beyond it in 1s, 10s and 100s. They will use this counting to help find 10 or 100 more than any given number.

Children will be introduced to numbers with one decimal place and will count up and down in tenths; share groups of objects or shapes into tenths and represent these in pictures and using hands-on resources.

Children will count forwards and backwards from 0 in steps of 4, 8, 50 and 100 and link this to multiplication and division. They will also count in 3s to help maintain their fluency from Year 2.

- **Calculating**

Children will continue to develop their mental calculation skills to add and subtract combinations of three-digit numbers e.g. 248 ± 8 ; 319 ± 40 ; 428 ± 200 . They will develop their range of strategies using jottings (sketches and notes to help them remember the steps) and number lines to help them understand how each calculation works. Children will share their methods with others to help them see which work best, are quickest and most accurate. Children will understand the importance of estimation when calculating to see if their answer is reasonable or not. They will recall their multiplication and division facts for 3, 4 and 8x tables and be supported to see the links between the 2, 4 and 8x tables. They explore patterns and rules for the times tables they learn and will use pictures and objects

to support their understanding. They will also learn that multiplication can be done in any order e.g. $3 \times 4 \times 2 = 2 \times 3 \times 4$.

Children will be introduced to more formal methods of recording addition and subtraction, including column methods. They will use hands-on resources to secure their understanding of these methods. This will be applied to numbers up to three digits. Children who become very adept at these calculations will be stretched through problems such as those involving missing numbers so that they know when, if and why they need to use these methods.

Children will develop their understanding of multiplication and division and apply their times table knowledge to multiply 2-digit by 1-digit numbers using the skills of partitioning (breaking and making numbers). For example, 43×5 can also be thought of as 40×5 and 3×5 or $(4 \times 5 \times 10) + (3 \times 5)$. They will move from informal methods of calculating multiplication and division to formal written methods i.e. short column multiplication and be supported by using hands-on resources.

Fractions

Children will develop their understanding of fractions and decimals and will be introduced to tenths. They will count and understand tenths as ten equal parts as well as through dividing sets of objects into ten equal parts / groups. They will find and write fractions of objects using their multiplication tables knowledge, e.g. $\frac{1}{5}$ of a group of 20 buttons can be solved by $20 \div 5 = 4$, and will continue to explore equivalent fractions using diagrams to explain their understanding e.g. $\frac{2}{4}$ is equivalent to or of equal value to $\frac{4}{8}$. They will also begin to add and subtract fractions where the denominator is the same e.g. $\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$.

Measurement

Children will continue to measure, compare, add and subtract measurements and progress to mixed units e.g. expressing amounts as litres and millilitres - 2 litres 400ml. They will measure the perimeter of 2-D shapes and will continue to add and subtract amounts of money including giving change. Children will estimate and read time to the nearest minute on analogue and digital clock faces. They will be introduced to the Roman numerals I to XII to help with this. Problem solving and calculating with time will involve comparing the duration of events such as the length of favourite television programme or journeys to school. They will use language with increasing accuracy, such as seconds, minutes and hours; o'clock, a.m. / p.m., morning, afternoon, noon and midnight. They will need to recall the number of seconds in a minute and the number of days in each month, year and leap year.

Geometry

Children will accurately draw 2-D shapes with rulers measuring sides accurately. They will make 3-D shapes to help them understand how they are composed and will recognise 3-D shapes in a range of places and contexts (e.g. buildings, packages) and use correct mathematical vocabulary to describe them. They will learn what a

right angle is and know that two right angles make a half-turn, three make three quarters of a turn and four a complete turn as well as identify whether angles are greater than or less than a right angle . They will also be able to identify horizontal and vertical lines and pairs of perpendicular (\perp) and parallel lines (\parallel).

Statistics

Children will collect, organise, answer and pose questions about information using bar charts, pictograms and tables to answer questions such as 'how many more children prefer football to cricket?'.