Maths Policy (updated September 2026



Intent

Vision

Mathematics is an essential skill in everyday life. It provides children with a way of viewing and making sense of the world in which they live. Building on their own experience, it encourages thinking and reasoning skills, embraces natural curiosity and develops the confidence to tackle problems which arise, not only in mathematics, but also in other areas of the curriculum. At West Earlham Infant and Nursery School (WEINS) we endeavour to make maths a practical subject where challenges are accepted and solved, and mistakes are recognised as part of the learning journey. We aim to foster an environment where all children reach their full potential and develop resilience to problem solving. We teach mathematics through a mastery approach, ensuring all children move through learning at broadly the same pace, with depth before acceleration.

Aims

1. To promote a positive attitude to mathematics for all children, enabling them to approach mathematical activities with confidence, understanding and pleasure.
2. To develop confidence and mental fluency with whole numbers, counting and place value.
3. To offer varied and frequent practice of problem solving, increasing in complexity over time.
4. To develop reasoning skills and independence in problem solving.
5. To provide a unique creative curriculum which meets the needs of The Early Years Foundation Stage and Key Stage 1 National Curriculum.
6. To provide clear methods and strategies for children to use to solve problems.
7. To enjoy the fascination of mathematics and develop an appreciation of numbers, patterns and relationships within mathematics and links to other curriculum areas.
8. To build upon and extend children's previous experiences and ensure progression in the development of their understanding, knowledge and use of mathematical language.
9. To accurately assess children's progress in mathematics using formative assessment to ensure we provide the appropriate next steps and support in their learning.
10. To engage families with the maths taught in school so that they can share in, and support, their children's learning journey.
11. To see children master each step of maths in their learning journeys.
12. To ensure all children develop deep, secure understanding through a mastery curriculum built on small steps, representation and structure.

Implementation

Teaching and Learning: Early Years Foundation Stage

Mathematics is a specific area of learning in the Foundation Stage, divided into three categories:

1. Number
2. Patterns and connections
3. Spatial reasoning

In the Early Years, children are taught mathematics through short inputs, songs, stories, routines, games and play. They have the opportunity to develop their understanding of number, measurement, pattern, shape and space. In reception, an explicit maths input is taught at least four times a week, with carefully planned linked activities and resources provided in the environment for the children to explore, and to support their mathematical development. The classroom environment is enhanced in a way which allows children to consolidate their learning and practice their mathematical skills. Children experience mathematical concepts through hands-on, concrete exploration before moving towards pictorial and early abstract representations.

Teaching and Learning: Key Stage 1

In Years 1 and 2 lessons are focused on developing basic mathematical skills, fluency, reasoning, and problem solving, and providing opportunities for children to develop a deep understanding of mathematical concepts. Lessons are taught daily during the morning.

- All lessons begin with a 'Flashback 4' or a consolidation activity. This allows children to develop problem solving skills and mental maths/fact recall as they explore maths questions linked to prior learning.
- Each term, year one and year two have a different multiplication to focus on. E.g. when we count the children, perhaps it is done in that multiplication.
- Adults introduce relevant maths vocabulary and refer to this. It is the expectation that the current maths vocabulary focus is displayed in the KS1 classes on the maths working wall. Staff will make reference to this wall each session to highlight that it is an interactive space and a tool to use.
- All lessons follow a CPA structure, beginning with concrete manipulatives, moving to pictorial representations, and finally abstract recording.
- STEM sentences are displayed alongside the key vocabulary for that week. Again, staff will make reference to this and expect children to use these key sentences through My Turn Your Turn, and then eventually independently as they deepen their understanding.
- Key vocabulary and STEM sentences will be in all planning throughout the school.
- Children understand the focus of their learning. This might be through a shared learning objective, success criteria or an outcome. There will be a plenary at the end of each adult directed input which can take the form of a final problem to solve, a true or false, a recap or addressing a misconception.
- Throughout the lesson children are encouraged to talk to each other and develop their understanding and higher-order skills through activities. In KS1, children explore 2 challenges with their peers. They are encouraged to be collaborative and verbalise their working out / thought processes.
- During maths lessons children work as a whole class, in groups, in pairs or independently depending on the concepts being taught.
- In KS1, maths Mon-Thurs is planned with 2 activities. One that is collaborative and hands-on, and another which is independent. This is so we can see children solve problems in a variety of ways and also learn from their peers, prior to independent application.
- On a Friday, Year One and Year Two have a problem solving input, with a focus on the week's small steps. Each table will have an activity linked to the unit's learning objectives and children will rotate through this space, engaging in different focussed activities.
- Each classroom has a specific maths area where the children can practise maths skills in the continuous provision. Activities are planned in accordance with the National Curriculum objectives being taught.

- Children have opportunities to use concrete objects to deepen their understanding and to avoid misconceptions.
- Plenaries come at the end of every maths input to allow adults to check children's understanding of the small steps. This allows for any gaps and misconceptions to be addressed in the moment.
- Teachers plan for children who complete the learning, to deepen their understanding (fast finishers).

Planning

Below is an example of how maths is planned in KS1. EYFS follow a similar, but simpler, structure.

L/O:	I can read and write numbers from 1 to 20 in numerals and words (Y1) . I can read and write numbers to at least 100 in numerals and in words (Numbers to 20)
STEM Vocab	• There is 1 ten and _____ ones. The number is _____ • The number after _____ is _____ • The number before _____ is _____ • _____ in words is _____ • _____ in numerals is _____
Misconceptions	• Numbers such as 11, 12, 13 and 15 can often be sticking points for children as the word does not make specific reference to the number of ones as it does later in the number system. • Children may write, for example, 12 as "ten-two" in words rather than "twelve". • Children may mix up the tens and ones digits when writing 2-digit numbers.
Starter	Autumn Block 1: Flashback 4 - Week 1 Day 1
Input	• Show children how we use a rekenrek and abacus'. What is the starting position? • Think of a number 0-20, and make this on the rekenrek. • Model making the number in different ways, and then writing the number down as numerals and in words.
Q1 (concrete and pictorial) 	Use a Rekenrek in the ready position. Ask children to show a number on their Rekenrek. Can they write the number in numerals? Can they write the number in words? Can they say the number out loud? Get children to work with a partner to make numbers and write them in both numerals and words. Encourage them to talk about how they have made the number, for example to make 13, they need to push 1 whole ten and then 3 more. Make each number in three different ways 19, fifteen, 16 & eleven. FF: Explore other numbers
Q2 (abstract)	• Writing numbers 0-20 in books. Focus on how we use the squares in our books, and on formation.
Plenary	Alex and Jack have made the same number. 
Mastering number	Week 1 Slides 1-5

Displays

In Key Stage One, classes have maths working walls where current learning is shown. It is expected that all teaching staff make reference to these working walls whilst teaching to make them interactive. In these spaces, each time the children learn something new in a unit, it is represented on the wall. We also expect adults to display current vocabulary which is the focus of the learning, and STEM sentences we are working on too. The purpose of these words and phrases being on display is to support the children in knowing what our current focus is, as well as for the adults, so the same language is being used and embedded.
In EYFS, there are also dedicated spaces on walls for maths. These are used as a part of the continuous provision, and enhance children's exploration through links to counting songs, counting beads, numicon etc.

Oracy in Mathematics

At West Earlham Infant and Nursery School, oracy is a central part of mathematical learning. We explicitly teach children to speak mathematically so they can think mathematically. New vocabulary and concepts are introduced through dedicated Word Kapow sessions, where children learn definitions, explore examples, and build a shared word bank that supports deep understanding. Teachers model precise mathematical language at all times, and children are encouraged to use full sentences, STEM sentences and correct terminology when explaining their thinking. Key vocabulary is added to the maths working wall and revisited daily so that children can draw upon it during reasoning, discussion and problem solving. Through My Turn, Your

Turn, partner talk and whole-class dialogue, children develop confidence articulating their ideas, justifying their methods and engaging in rich mathematical conversation.

Weekly Structure

Monday - Thursday	● Children follow small-step mastery lessons. ● Each lesson builds upon the last. ● Each session begins with retrieval practice, and ends with a plenary. ● Each lesson has elements of "I do, We do, You do". ● The children learn through a CPA approach (concrete and pictorial representations first, then more abstract problems). ● We want our children to have daily opportunities to work collaboratively and boost their maths reasoning.
Fridays	● Children are able to consolidate the small steps of the week, through a carousel of activities. ● Some activities are adult led, where others promote independent application of prior knowledge. ● Children are presented with problems, questions, resources, and explore them with the week's learning in mind.

Mastering Number: Fluency and Confidence

In Reception and Key Stage 1, children take part in regular NCETM Mastering Number sessions to develop deep number sense, fluency and confidence with early calculation. In Reception, children explore Mastering Number several times each week through short, structured activities that build subitising, composition of number and early additive reasoning. In KS1, every maths session ends with a Mastering Number input, allowing children to revisit key facts, strengthen mental strategies and secure the small steps that underpin later calculation. These sessions complement our CPA approach and provide consistent opportunities for children to verbalise their thinking, use precise mathematical language and apply taught representations such as tens frames, rekenreks and number lines. Mastering Number supports our whole-school commitment to fluency, reasoning and problem solving within a mastery curriculum.

Resources

Each class has well organised concrete maths resources, which are 'real' where possible. Teachers use consistent representations (tens frames, part-part-whole, bar models, number lines) to build deep conceptual understanding and support progression from concrete to abstract. These include:

- 100 number squares (KS1)
- Bead strings (KS1)
- Clocks
- Coins
- Counters
- Dice
- Diennes / Base 10 (KS1)
- Dominoes
- Maths Challenge Mats (KS1)
- Maths games
- Multi-link
- Number cards
- Number lines
- Number fans (KS1)
- Number stick (one per class)
- Numicon
- Place value / arrow cards
- Rekenreks

- Rulers
- Shapes (2D, 3D)
- Tens frames
- Vocabulary display (KS1)
- Watches (KS1)

Children are encouraged to access these independently and look after resources appropriately. There is a centrally based selection of resources (e.g. scales, weights and capacity containers), which are available in the maths cupboard.

Feedback, Next Steps and Targets

Feedback is given to children orally and in the moment. In KS1, books are live marked which allows for adults to sit alongside children and comment on their learning, highlighting what has gone well and if there have been any "magical mistakes". Adults are encouraged to use the term "magical mistakes" as it allows for misconceptions to be highlighted and errors to be corrected in a positive manner. We know good practice is modelling errors and misconceptions ourselves, and showing children how we problem solve these.
Our feedback and marking policy was updated in Summer 2023 and this included a section dedicated to maths marking and feedback. A consistent use of code and terms allows for children to become familiar with what has been written in their books. We underline numbers formed incorrectly and model the correct formation on the page. We ask the children to copy this 5 times. 'NS' is used for Next Steps (what can a child do to take their learning further and continue to make progress i.e count forward in 2s to 20) and 'OF' is written when Oral Feedback has been given (what can children do in the moment). These act as targets for the children.
Some children will be set additional targets, depending on their current assessments and/or if they're on the SEND register for Cognition & Learning. We use the NAP's (Norfolk Assessment Pathways) to map out these targets so small step progress is achievable.
In the EYFS, next steps and small step targets are identified for children through assessments, observations and interactions. These progress steps are shared with parents in a short and specific target sheet during learning review meetings. When somebody is a focus child, their families/carers are given their child's next steps which includes information about their child's current maths learning, on Tapestry. It is encouraged for all early years families to have Tapestry on their mobile devices, so they can see observations and targets as they are created.

Culture, Diversity, Inclusion, Differentiation and Pupils with SEND

At West Earlham Infant and Nursery School we are committed to ensuring the active participation and progress of all children in their learning. All children are given equal opportunities to achieve the best possible outcome. regardless of their current attainment and irrespective of gender, ethnic, social or cultural background, religion, home language, or any other aspect that could affect their participation or the progress of which they are capable.
The mastery supports differentiation through the support and intervention provided to different children, not in the topics taught. This means that the content taught is largely the same, but the questioning and scaffolding individual children receive in class as they work through problems will differ. In exceptional circumstances, if a child's needs are best met by adapting independent tasks, including coverage of the content from a previous year, specific arrangements for the provision of children with SEND are shared with relevant staff and are communicated to families at SEND reviews and parent review meetings.
Children are not grouped according to their attainment in maths. Differentiation can be seen in planning, through questions and support given, through use of practical activities and different ways of recording by the children. It is led by the needs of the children as identified by their targets or School Support Plans. Adults in the classroom are deployed by the class teacher to support or extend children.
Some children sometimes need further support to grasp certain mathematical concepts. We work with all children at varying times in the day to make sure they have a chance to catch up on concepts they find challenging. This is done with an adult and can be on a 1:1 basis or small group work.
With interventions, teachers plan activities to help bridge gaps in children's learning, further develop their understanding of current concepts, and give children a solid foundational knowledge of number to build upon. Math's interventions happen weekly in KS1, and in EYFS, focus children engage in inputs to support their progress and development.
At WEINS, we share with staff three key areas to focus on when teaching and planning whole class maths. That children learn in mixed ability groups (so children can work positively with their peers), that maths is exciting for boys and girls (so everyone must be represented in their maths learning) and maths if for us all! (how maths is useful outside of school).

Home Links

Parents are informed about their child's targets and next steps in their learning and supported to help their child at home. In Key Stage 1 parents are invited into class termly to look through their child's books and children are encouraged to talk about what they have learnt and what they are working towards (next steps). At parent review meetings, parents are given a sheet with their child's targets, as well as resources to support their child at home (for example number lines and number cards).
Parents are invited to Maths Cafes where they can enjoy maths-linked opportunities with their children in classes across the school. We know that maths anxiety can mean that parents disengage from school when maths is mentioned, so we endeavour to show maths as a collection of fun and useful skills. Information on how to manage maths anxiety and support our families is available for staff to read in the staffroom, as well as information being shared directly with parents on how to manage these feelings in themselves and in their children.
Once every half term children are given a Whole School Maths Challenge. This is a fun, practical activity the children can enjoy at home which helps to develop children's mathematical fluency, reasoning and problem solving. Each Maths Challenge is introduced on Class Dojo to highlight the event. Stickers are given to the children as an acknowledgement of their participation.
All classes have a Maths Monkey. Children all get a chance to take Maths Monkey home and do an activity of their choosing, which they can evidence in the accompanying book.
On Maths Monkey's birthday (February) the children celebrate with a maths-themed day with activities to promote a love of maths from Nursery to Year 2. It is a non-uniform day where children have the opportunity to wear something maths related. They attend a whole school maths birthday assembly and enjoy maths throughout the day.

Maths Coordinator's Role and Responsibilities

The maths lead attends regular training with other subject coordinators from the county and shares updates, new resources and strategies with the rest of the staff. In addition, it is their job to:

- Act as an advocate for maths through best practice by modelling lessons, as appropriate, to new staff, ECTs and peers, to support continued professional development.
- Ensure classroom environments are conducive to learning, through effective displays, vocabulary, and the accessibility and availability of resources.
- Review the maths policy and monitor its implementation. To support and guide in the successful implementation of changes and improvements for maths school wide (mastery).
- Develop a focused and achievable action plan for mathematics for the school and monitor its progress.
- To work with staff to think of ways to support and challenge children, to deepen their understanding of mathematical concepts.
- Audit centrally held resources, and purchase additional resources when necessary.
- Monitor progression and continuity of maths learning across the school through regular learning walks, 'book looks' and phase meetings, when appropriate.
- Work collaboratively with staff to promote continuity and progression.
- Attend relevant inset courses, and disseminate developments.
- Continually reflect on the SIDP and SEF to ensure we continue to develop as a mastery school.
- To address maths anxiety in staff and families through shared resources, conversations and support in person and electronically.
- Organise, and if necessary deliver, staff training.
- Develop enthusiasm for maths through Maths Monkey, by providing a Maths Monkey for each class and a Whole School Maths Challenge each half term.
- Report to parents, governors and others when appropriate.

Impact

The children at West Earlham Infant and Nursery School enjoy maths. It is a practical subject taught through the direct use of shared manipulatives and with a continual development in understanding of Concrete, Pictorial and Abstract examples and resources. Teaching emphasis is on problem solving to ensure pupils have the confidence to independently reason through acquired knowledge and established fluency. We can see that children know more, remember more and that feedback is effective, with children understanding their next steps. We ensure that assessments are meaningful and informative, ongoing and responsive. We want teachers to adapt their lessons in real time based on children's reasoning and misconceptions.

Assessment: Early Years Foundation Stage

On entry to Reception, children have a baseline assessment using the government Reception Baseline Assessment, as well as teachers conducting their own baseline alongside.. At the end of the Reception year children are assessed against the Early Learning Goal in Mathematics.
Teaching sequences ensure that children know how to be successful in their independent work and address common misconceptions. Children in the EYFS are assessed against an online tracking system from on Insight. The statements on insight are from Development Matters. During the year, in Reception and Nursery, practitioners continually assess and plan informally and in-the-moment to support children's next steps and challenges in mathematics during continuous provision.

Assessment: Key Stage 1

At the start of the year children are assessed in our school baseline assessment. This identifies children who require intervention on basic mathematical concepts and skills. The baseline assessment is reviewed at the end of the year. Children are assessed against the learning objective labels in their books using the marking policy. Learning Objectives are taken directly from the National Curriculum. Children are given time to revisit errors and misconceptions during class time and during Friday problem solving lessons. Formative assessment is used throughout lessons to support children's next steps in learning and to focus on the impact made; this might be through observations, conversations, use of resources or questioning.
Children in year one and year two are assessed each half term, and this data is uploaded onto the Insight tracker. Children can be assessed to be pre-key stage, below, working towards, expected or greater depth. Assessments are made to reflect a child's current level of understanding, so assessments may fluctuate throughout the year. At times, teachers in KS1 may provide a form of summative assessment to check independent understanding of topics and independent application of the associated learning. At the end of the year both Year 1 and Year 2 children's progress is reported to families using the assessment terms outlined above.

Other policies and documents to refer to:

a. Marking and Feedback Policy
b. SIDP and SEF

Approval

This policy has been reviewed in line with the 2010 Equality Act and Public Sector Equality Act. Due regard has been given to equality. This policy will be adopted in ***January 2024***. The date of the next formal review will be ***September 2028*** and every three years thereafter, unless statutory legislation changes.

Policy approved by the Head Teacher of West Earlham Infant and Nursery School.

Calculation Policy

Rationale

As stated in our Maths Policy, at West Earlham Infant and Nursery School we consider mathematics an essential skill in everyday life. Therefore it is vital that children understand how to perform each of the four operations: addition, subtraction, multiplication and division. Our calculation progression is built on CPA, small steps, and secure understanding of place value. Children move from concrete to pictorial to abstract methods, with an emphasis on efficiency and reasoning. The Calculation Policy ensures consistency in teaching throughout the school.

Aims

- To provide a consistent approach to performing the four operations across the school.

- To offer opportunities for rigorous use of mental maths methods to develop fluency.
- To develop the presentation of number sentences, working out and problem solving.
- To practise and secure efficient written methods which have a firm grounding in learning and reasoning.
- At West Earlham Infant and Nursery school communication skills are very important. We believe that children need to be able to speak mathematically in order to think mathematically. We teach children the mathematical vocabulary they need to enable them to talk about, and explain, their mathematics to others. We have maths words of the week in all Key Stage 1 classes and these words are then displayed on the maths working wall. We want our children to effectively access this language in their maths learning.
- All who work with children in their maths are expected to use STEM sentences in their teaching. Teachers display these STEM sentences in their classrooms (maths working wall or for EYFS in their planning) and also use these in their maths lessons. MTYT can be an effective tool. Children will use these sentences to answer mathematical questions.
- For each mathematical operation, teachers support and guide children through the following important stages:

  1. Pre-calculation skills:
  - Counting objects (including solving simple concrete problems)
  - Conservation of number
  - Counting as reciting and enumerating
  - Recognition of place value

  2. Calculation skills:
  - Using concrete materials, e.g. counters, Numicon and bead strings to represent numerical activities.
  - Using pictures and a mixture of words and symbols to represent numerical activities.

  3. Using standard symbols and conventions.
  - Children are confident in using a symbol for the 4 operations.
  - Adults model using these symbols effectively and correctly every time.

  4. Using jottings, e.g. empty number lines to aid a mental strategy.
  - Using the identified methods we focus on at our school (number lines, tens frames, bar models, part wholes etc).
  - Highlighting the importance of showing your working out and train of thought when problem solving and reasoning.

  5. Using informal written methods, e.g. expanded horizontal methods.
  - When children are confident and comfortable, explore other written methods.
  - Focusing on the methods identified in the calculations policy below.

- *This policy supports the following progression in the development of calculation skills:*
  - Counting of objects
  - Early stages of mental calculations and learning of number facts
  - Calculating with larger numbers using informal jottings.
  - Calculating informal written methods.
  - Developing efficiency with informal written methods.

Teaching

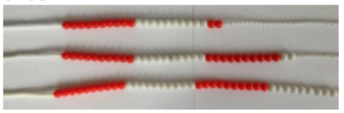
- When teaching place value we read the value of each digit as hundreds, tens and ones.
- We read all numbers written during mathematics lessons out loud correctly, e.g. 2016: "two thousand and sixteen", 100: "one hundred".
- We use the word 'calculation' or 'number sentence', not 'sum', which is a synonym for 'add'.
- Any written calculation is presented horizontally and in a 'complete' way, e.g. use of ? or □ to represent any unknown numbers or values, to reinforce the idea of 'balance'.
- Bar modelling is gradually introduced into maths teaching across the key stages to support children in bridging the gap between concrete, pictorial and abstract mathematical thinking.
- CPA (concrete, pictorial and abstract) modelling and teaching to be consistent cross the school, appropriate to the children's age and stage of development and understanding. We want children to be confident in using resources, drawing to work out and finally use numbers in their mathematics.

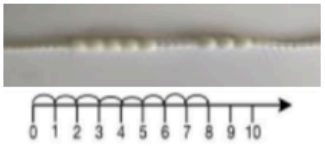
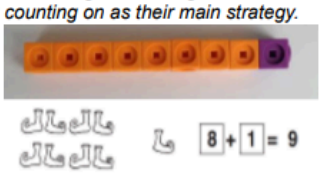
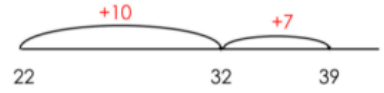
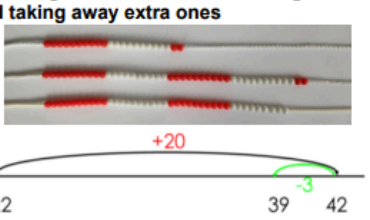
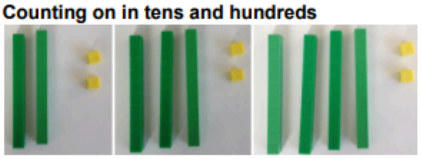
- We read out what we are writing when doing any mathematical recording. Verbalising thought processes and mental maths.
- Children are expected to answer spoken questions in complete sentences and to include a rationale in their answer, e.g. "...because..."
- Teachers use every opportunity to teach and reinforce the understanding of equivalence = as 'equal to' rather than 'the same as' or 'makes'. Strategies to achieve this include presenting calculations in different order, e.g. 30 = 2 + 10, 10 + 20 = 30. This can be demonstrated by providing children with balance scales and Numicon to complete missing number calculations.
- Children are shown how to set out their mathematical recordings clearly and neatly. We expect children to replicate the teacher's presentation in their own work.
- We teach children signs/actions for the four operations +-=×÷.

Importance of vocabulary

The 2014 National Curriculum places great emphasis on the importance of pupils using the correct mathematical language as a central part of their learning. Children will be unable to articulate their mathematical reasoning if they lack the mathematical vocabulary required to do so. It is therefore essential that teaching using the strategies outlined in this policy is accompanied by the use of appropriate mathematical vocabulary. New vocabulary should be introduced in a suitable context (for example with relevant real objects, apparatus, pictures or diagrams) and explained carefully. High expectations of the mathematical language used are essential, with teachers modelling and only accepting what is correct. The progression of the vocabulary through the year groups can be seen in the Maths Progression of Skills document.

ADDITION		
EYFS	**Year 1**	**Year 2**
EYFS Framework Objectives: • Have a deep understanding of number to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	**Curriculum Objectives:** • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. • Represent and use number bonds and related subtraction facts within 20. • Add and subtract one-digit and two-digit numbers to 20, including zero. • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems.	**Curriculum Objectives:** • Solve problems with addition and subtraction: - using concrete objects and pictorial representations (numbers, quantities and measures) - applying their increasing knowledge of mental and written methods. • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers. • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.
Children will: • Sing and respond to nursery rhymes and counting songs – counting on and back. • Through play and using visual prompts around the classroom children will become confident in counting forwards and backwards. • Take part in practical activities discussing and using objects and modelling with a variety of counting objects.	**Children will:** • Know by heart number bonds to 10. • Know how to work systematically and spot patterns to derive number bonds to 20. • Know how to work systematically and spot patterns to derive number bonds for any number within 20. • Use a variety of practical apparatus to represent a calculation: fingers, Numicon, real-life	**Children will:** • Know by heart number bonds to and within 5, 10, 20 and 100. • Recall number facts e.g. If we know 4 + 5 = 9, we also know: 5 + 4 = 9, 14 + 5 = 19, 5 + 14 = 19 etc. • Use mental methods to work out a calculation. • Use the partitioning method to add tens and ones.

ADDITION		
EYFS	**Year 1**	**Year 2**
• Use one-to-one correspondence using moveable objects e.g. - Real-life apparatus (money) - Objects - Multilink • Count sets of objects in play and learn to recognise them. • Practise writing numbers to 10. Teachers will emphasise the order in which a number is written (tens then ones). • Begin to add using fingers, Numicon and objects. • Begin to add using objects by counting on in ones. • Begin to record additions using the written method to 10. • Know by heart number bonds to 5. • Subitise amounts to 5. • *Children who are fluent with addition using objects or Numicon will begin to use number lines (with numbers on) to add by counting in ones, starting with the greatest number and counting on the smaller number.*	apparatus, objects, Dienes, multilink. • Use mental methods to work out an addition. • Know to start with the biggest value in their head and count on when adding. • Recall number facts e.g. If we know 4 + 5 = 9, we also know: 5 + 4 = 9, 14 + 5 = 19, 5 + 14 = 19 etc. • Use number lines and number tracks (with the numbers on) to add by counting in ones, starting with the greatest number and counting on the smaller number (counting more).	• Group into tens and ones. • Use the written method. • *Children who are fluent with previous written methods and place value may be introduced to the expanded addition (column addition).*
Concrete / Pictorial / Abstract: Nursery Before addition can be introduced, children need to have a secure knowledge of number. In Nursery, children are introduced to the concept of counting, number order and number recognition through practical activities and games. This is taught through child-initiated games such as 'hide and seek' and 'I spy'. Children also learn how to count 1:1 (pointing to each object as they count) and that	**Concrete / Pictorial / Abstract:** - **Joining two groups and then recounting all objects using one-to-one correspondence.**  4 + 3 = 7	**Concrete / Pictorial / Abstract:** - **Partitioning one number, then adding tens and ones** 

ADDITION		
EYFS	**Year 1**	**Year 2**
anything can be counted, for example, claps, steps and jumps. This is reinforced by opportunities provided in the outdoor area for the children to count e.g. counting building blocks, twigs etc. Reception Before addition can be introduced, children in Reception build on concepts taught in Nursery by working through the number objectives in the 40 – 60 month band of Development Matters. Children need to have a secure knowledge of number in order to begin addition. Children are then introduced to the concept of addition through practical games and activities. Children act out addition sums to physically add two groups of objects together and use arm gestures to represent the signs + and =. This is reinforced by opportunities provided in the outdoor area for the children to use addition e.g. adding together groups of building blocks, twigs etc. Children build on their previous knowledge of 'more' by learning that adding two groups of objects together gives them a larger number (more objects). Adults model addition vocabulary supported by age-appropriate definitions. An example of this is, "Addition means we add two groups together / we put 2 lots of objects together. Equals means we find out how many we have got altogether. 3 add 2 equals 5. We have got 5 altogether." Adults support children in recording their addition calculations in the written form.	 5 + 3 = 8 - **Counting on** *As a strategy, this should be limited to adding small quantities only (1, 2 or 3) with pupils understanding that counting on from the greater number is more efficient.* *Pupils should be encouraged to rely on number bonds knowledge as time goes on, rather than using counting on as their main strategy.*  8 + 1 = 9  15 = 12 + 3 - **Part-part-whole** *Teach both addition and subtraction alongside each other, as pupils will use this model to*	 22 + 17 = 39 *Pupils can choose themselves which of the numbers they wish to partition. Pupils will begin to see when this method is more efficient than adding tens and taking away the extra ones, as shown.* - **Rounding one number, then adding the tens and taking away extra ones**  22 + 17 = 39 *Pupils will develop a sense of efficiency with this method, beginning to see when rounding and adjusting is more efficient than adding tens and then ones.* - **Counting on in tens and hundreds** 

ADDITION

EYFS



5 + 3 = 8



Use specific maths resources such as multilink, counters and Numicon to show addition as the combining of two amounts.



Two groups of pictures so children are able to see, and count, the total.



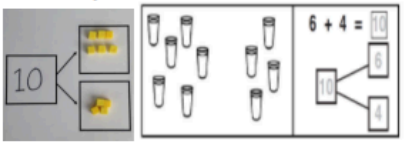
1 more than 4 is 5.



1 more than 6 is 7.

Year 1

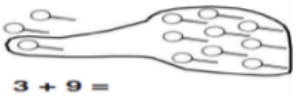
identify the inverse link between them.
Pupils could place ten on top of the whole as well as writing it down. The parts could also be written alongside the concrete representation.
This model begins to develop the understanding of the commutativity of addition, as pupils become aware that the parts will make the whole in any order.



10 = 6 + 4
10 = 4 + 6
10 - 6 = 4
10 - 4 = 6

- **Regrouping ten ones to make ten**

This is an essential skill that will support column addition later on.



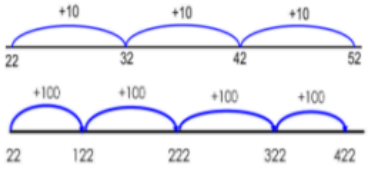
3 + 9 = 12



9 + 3 = 12

- **'Make ten' strategy**

Year 2



- **Partitioning to add without regrouping**



455 + 103 = 558

As in Year 1, this is a mental strategy rather than a formal written method. Pupils use the Dienes cubes (and later, images) to represent 3-digit numbers but do not record a formal written method if there is no regrouping.

- **Column method with regrouping**

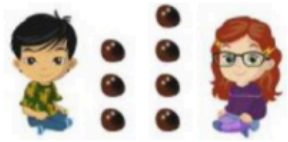
hundreds	tens	ones
3	5	8
	3	7
3	9	5



Dienes cubes should be used alongside the

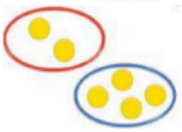
ADDITION

EYFS

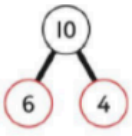


1 more than 3 is 4.





The parts are 2 and 4, the whole is 6.

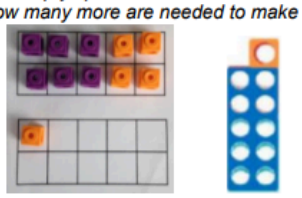


6 + 4 = 10

The parts are 6 and 4, the whole is 10.

Year 1

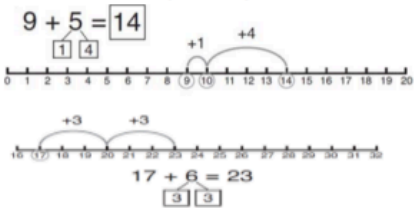
Pupils should be encouraged to start at the bigger number and use the smaller number to make ten.
The colours of the beads on the bead string or rekenrek make it clear how many more need to be added to make ten.
Also, the empty spaces on the ten frame make it clear how many more are needed to make ten.



6 + 5 = 11



9 + 4 = 13

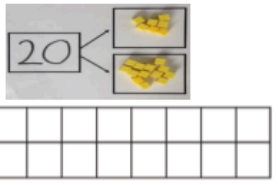


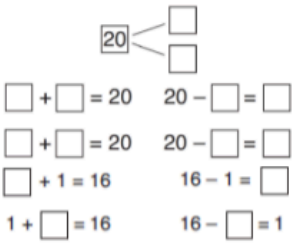
- **Adding 1, 2, 3 more**

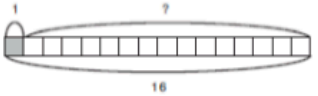
Year 2

pictorial representations; they can be placed on the place value grid before pupils make pictorial representations.
As in Year 1, the focus for the column method is to develop a strong understanding of place value.

- **Part-part-whole**







Pupils explore the different ways of making 20. They can do this with all numbers using the

ADDITION

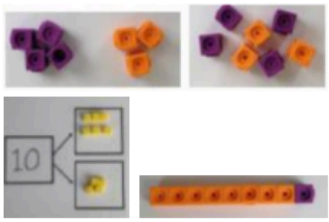
EYFS



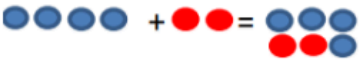
5 + 3 = 8

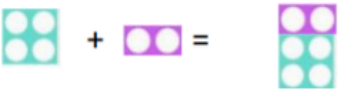


8 + 5



Use cubes to add two numbers together as a group or in a bar.

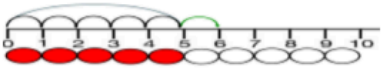




4 + 2 = 6

Year 1

Here the emphasis should be on the language rather than the strategy. As pupils are using the bead string, ensure that they are explaining using language such as;
'1 more than 5 is equal to 6.'
'2 more than 5 is 7.'
'8 is 3 more than 5.'



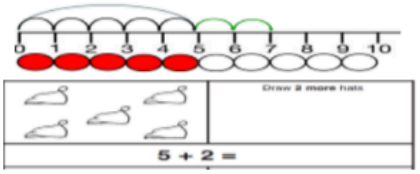
1 more than 5 5 + 1 = 6



2 more than 5 5 + 2 = 7



3 more than 5 5 + 3 = 8

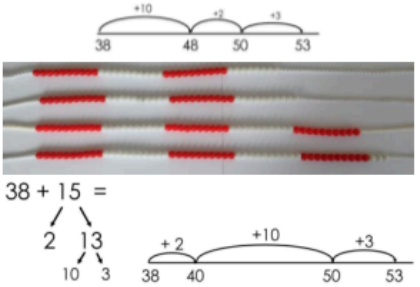


- **Adding three single digit numbers (make ten first)**

Year 2

same representations.
This model develops knowledge of the inverse relationship between addition and subtraction and is used to find the answer to missing number problems.

- **Make ten strategy**



How pupils choose to apply this strategy is up to them, however, the focus should always be on efficiency.

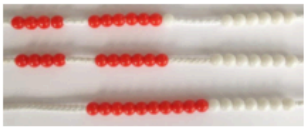
- **Using known facts**

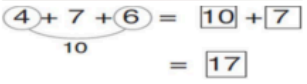
Dienes cubes should be used alongside pictorial and abstract representations when introducing this strategy.

ADDITION

EYFS

Year 1





Pupils may need to try different combinations before they find the two numbers that make 10.
The first bead string shows 4, 7 and 6. The colours of the bead string show that it makes more than ten.
The second bead string shows 4, 6 and then 7.
The final bead string shows how they have now been put together to find the total.

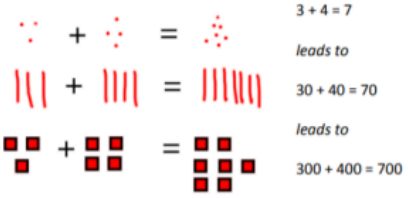
- **Partitioning to add (no regrouping)**

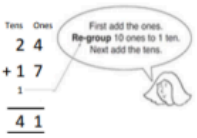


24 + 13 = 37

Place value grids and Dienes cubes should be used as shown in the diagram before moving

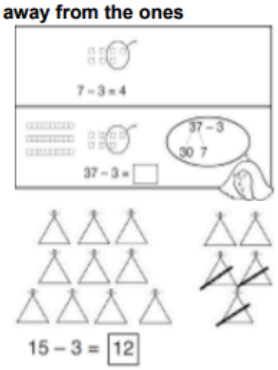
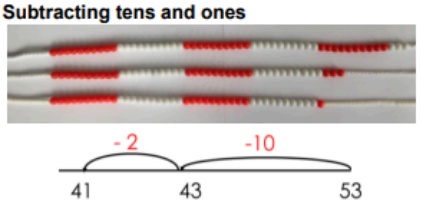
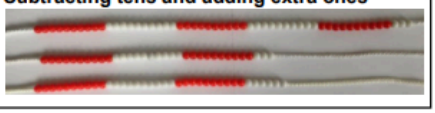
Year 2



ADDITION		
EYFS	**Year 1**	**Year 2**
	onto the pictorial representations. *Dienes cubes should always be available, as the main focus in Year 1 is the concept of place value rather than mastering the procedure.* *When not regrouping, partitioning is a mental strategy and does not need formal recording in columns.* *This representation prepares them for using column addition with formal recording.* - **Introducing column method for addition, regrouping only**   24 + 17 = 41 *Dienes cubes and place value grids should be used as shown in the diagrams. Even when working pictorially, pupils should have access to Dienes cubes.* - **Adding multiples of ten**	

ADDITION		
EYFS	**Year 1**	**Year 2**
	 50 = 30 + 20   36 + 40 = ☐ *Using the vocabulary of 1 ten, 2 tens, 3 tens etc. alongside 10, 20, 30 is important, as pupils need to understand that it is a ten and not a one that is being added.* *It also emphasises the link to known number facts. E.g. '2 + 3 is equal to 5. So 2 tens + 3 tens is equal to 5 tens.'*	

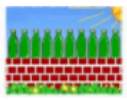
SUBTRACTION		
EYFS	**Year 1**	**Year 2**
EYFS Framework Objectives: • Have a deep understanding of number to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	**Curriculum Objectives:** • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. • Represent and use number bonds and related subtraction facts within 20. • Add and subtract one-digit and two-digit numbers to 20, including zero. • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems.	**Curriculum Objectives:** • Solve problems with addition and subtraction: - using concrete objects and pictorial representations (numbers, quantities and measures) - applying their increasing knowledge of mental and written methods. • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers. • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.
Children will: • Sing and respond to nursery rhymes and counting songs that count back. • Through play, objects, fingers and visual prompts around the classroom children will become confident in counting backwards. • Respond to questions such as 'How many left?' and practise removing objects from a group.	**Children will:** • Know by heart number facts to 20. • Use a variety of practical apparatus to represent a calculation as 'taking away' and as 'finding the difference': fingers, numicon, real-life apparatus, objects, Dienes, multilink. • Use mental methods to work out a subtraction. • Know to start with the biggest value in their	**Children will:** • Know by heart number facts to 20. • Use number facts to 20 to derive number facts to 100. • Use mental methods to work out a subtraction. • Subtract on a number line: 74 – 27 = □. - Put the smallest value at the beginning of the number line (underneath).

SUBTRACTION		
EYFS	**Year 1**	**Year 2**
• Begin to record subtractions using the written method to 10 (as a group / class first). • Know number bonds to 5, including subtraction facts. • *Children who are fluent with subtraction using objects will begin to understand subtraction by counting back on a number line.*	head and count back when subtracting. • Use number lines and number tracks (with the numbers on) to subtract by counting back in ones, starting with the greatest number and counting back the smaller number. • Explore counting back to the second number to find the 'difference between' – emphasise the need to keep track of the number of jumps from 9 to 6, i.e 8, 7, 6 = 3 jumps, so 9 – 6 = 3.	- Put the largest value at the end of the number line (underneath). - Jump in ones until you reach a number in the 10x table. - Jump in tens and ones until you reach the target number. - Finally add up the jumps to find the answer. • Count up to find the difference, 'Mollie has 20p, she spends 11p, what will her change be?' Model counting up from 11p to 20p to find the difference.
Concrete / Pictorial / Abstract: <u>Nursery</u> Before subtraction can be introduced, children need to have a secure knowledge of number. In Nursery, children are introduced to the concept of counting backwards. This is taught through child-initiated games indoors and outdoors such as acting out counting songs and running races (children shouting "5, 4, 3, 2, 1, 0 - GO!"). <u>Reception</u> Before subtraction can be introduced, children in Reception build on concepts taught in Nursery by working through the number objectives in the 40 – 60 month band of Development Matters. Children need to have a secure knowledge of number in order to begin subtraction. Children are then introduced to the concept of subtraction through practical games and activities. Children act out subtractions to physically subtract a number of objects from a group. Children use arm gestures to	**Concrete / Pictorial / Abstract:** - **Taking away from the ones**  	**Concrete / Pictorial / Abstract:** - **Subtracting tens and ones**  53 - 12 = 41 *Pupils must be taught to partition the second number for this strategy.* *Pupils will begin to see when this method is more efficient than subtracting tens and adding the extra ones, as shown.* - **Subtracting tens and adding extra ones** 

SUBTRACTION

EYFS

represent the signs - and =. This is reinforced by opportunities provided in the outdoor area for the children to count e.g. counting building blocks, twigs etc. Children build on their previous knowledge of 'less' by learning that subtracting means taking away a certain number of objects from a group (leaving them with fewer objects). Adults model subtraction vocabulary supported by age appropriate definition. An example of this is, "Subtraction means we take away objects from a group / we have got fewer objects now. Equals means we find out how many we have got left. Wow! We have only got 3 left!" Adults support children in recording their subtractions in the written form.

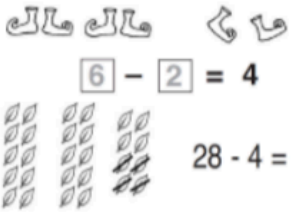




Stories and rhymes where one is removed each time.



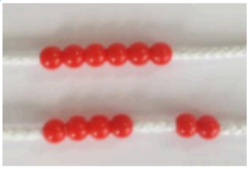
Use specific resources such as multilink, bead strings and Numicon to support the understanding of subtraction as 'taking away'.

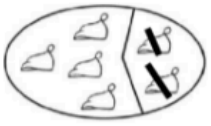
Year 1



When this is first introduced, the concrete representation should be based upon the diagram. Real objects should be placed on top of the images as one-to-one correspondence so that pupils can take them away, progressing to representing the group of ten with a tens rod and ones with ones cubes.

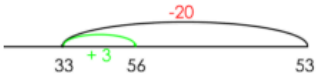
- **Counting back**





4 = 6 - 2

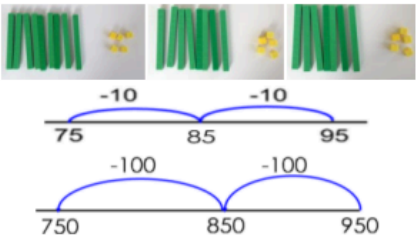
Year 2



53 - 17 = 36

Pupils must be taught to round the number that is being subtracted.
Pupils will develop a sense of efficiency with this method, beginning to identify when this method is more efficient than subtracting tens and then ones.

- **Counting back in multiples of ten and one hundred**



- **Partitioning to subtract without regrouping**

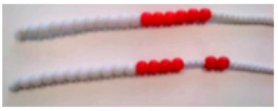
SUBTRACTION

EYFS



Use pictures to cross out 'taking away'.

Year 1

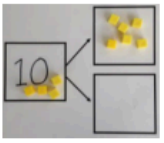




16 - 2 = 14

Subtracting 1, 2, or 3 by counting back. Pupils should be encouraged to rely on number bonds knowledge as time goes on, rather than using counting back as their main strategy.

- **Part-part-whole**

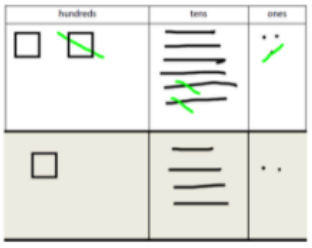


10 - 6 = 4



Teach both addition and subtraction alongside each other, as the pupils will use this model to identify the link between them. Pupils start with ten cubes placed on the whole.
They then remove what is being taken away from the whole and place it on one of the parts.
The remaining cubes are the other part and also the answer. These can be moved into the

Year 2



263 - 121 = 142

As in Year 1, the focus is to develop a strong understanding of place value and pupils should always be using concrete manipulatives alongside the pictorial.
Formal recording in columns is unnecessary for this mental strategy. It prepares them to subtract with 3-digits when regrouping is required.

- **Column method with regrouping**



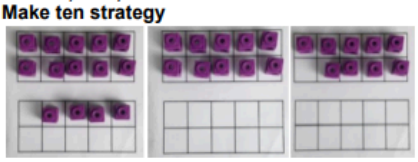
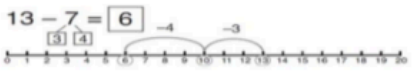
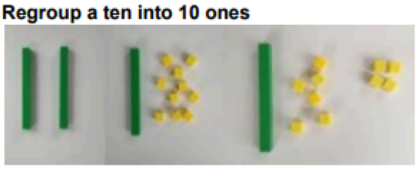
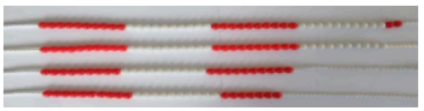
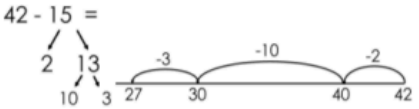
hundreds tens ones

1 ³4 ¹7

- 1 8

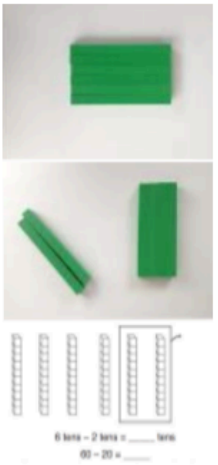
1 2 9

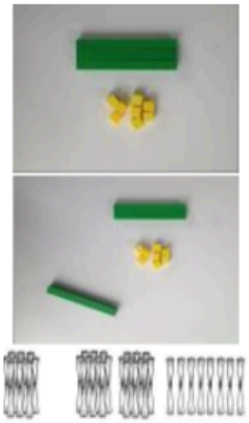
As in Year 1, the focus for the column method is to develop a strong understanding of place value and pupils should always be using concrete manipulatives alongside the pictorial.
Pupils are introduced to calculations that require

SUBTRACTION		
EYFS	**Year 1**	**Year 2**
	second part space. - **Make ten strategy**  14 - 5 = 9  *Single-digit number from a 2-digit number Pupils identify how many need to be taken away to make ten first. Then they take away the rest to reach the answer.* - **Regroup a ten into 10 ones**  20 — 4 = *After the initial introduction, the Dienes cubes should be placed on a place value chart to support place value understanding. This will support pupils when they later use the column method.* - **Taking away from the tens**	*two instances of regrouping (initially from tens to one and then from hundreds to tens), e.g. 232 – 157 and are given plenty of practice using concrete manipulatives and images alongside their formal written methods, ensuring that important steps are not missed in the recording. Caution should be exercised on introducing calculations requiring 'regrouping to regroup' (e.g. 204 – 137) ensuring ample teacher modelling using concrete manipulatives and images.* - **Bridging through ten**    *How pupils choose to apply this strategy is up to them. The focus should always be on efficiency.* - **Using known number facts**

SUBTRACTION		
EYFS	**Year 1**	**Year 2**
	 9 = 15 - 6  16 – 8 = 8 *Pupils should identify that they can also take away from the tens and get the same answer. This reinforces their knowledge of number bonds to 10 and develops their application of number bonds for mental strategies.* - **Partitioning to subtract without regrouping**	 8 – 4 = 4 *leads to* 80 – 40 = 40 *leads to* 800 – 400 = 400 *Dienes cubes should be used alongside pictorial and abstract representations when introducing this strategy.*

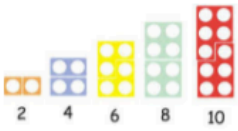
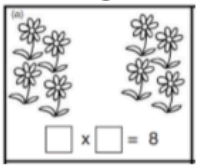
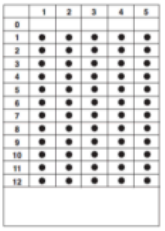
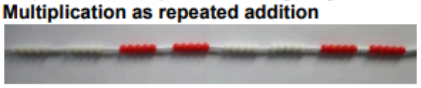
SUBTRACTION		
EYFS	**Year 1**	**Year 2**
	 34 – 13 = 21 *Dienes cubes on a place value chart (developing into using images on the chart) should be used, as when adding 2-digit numbers, reinforcing the main concept of place value for Year 1.* *When not regrouping, partitioning is a mental strategy and does not need formal recording in columns. This representation prepares them for using column subtraction with formal recording.* - **Subtracting multiples of ten**	

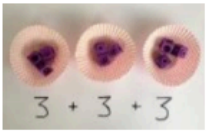
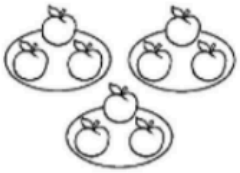
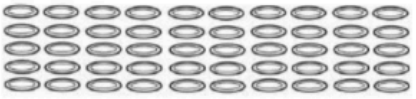
SUBTRACTION		
EYFS	**Year 1**	**Year 2**
	 40 = 60 - 20	

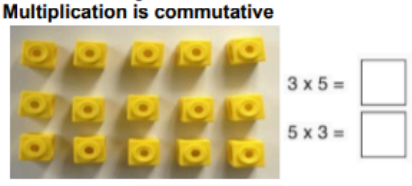
SUBTRACTION		
EYFS	**Year 1**	**Year 2**
	 38 - 10 = 28 *Using the vocabulary of 1 ten, 2 tens, 3 tens etc. alongside 10, 20, 30 is important as pupils need to understand that it is a ten not a one that is being taken away.* - **Column method with regrouping**	

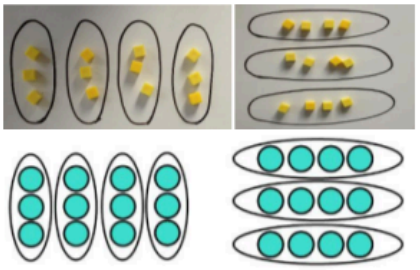
SUBTRACTION		
EYFS	**Year 1**	**Year 2**
	 34 - 17 = 17 *This example shows how pupils should work practically when being introduced to this method.* *There is no formal recording in columns in Year 1 but this practical work will prepare pupils for formal methods in Year 2.*	

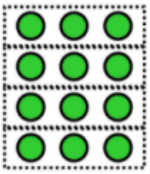
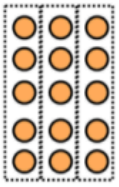
MULTIPLICATION		
EYFS	**Year 1**	**Year 2**
EYFS Framework Objectives: • Have a deep understanding of number to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	**Curriculum Objectives:** • 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.	**Curriculum Objectives:** • Recall and use multiplication and division facts for the 2, 3, 5 and 10 multiplication tables, including recognising odd and even numbers. • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Children will: • In the context of play, and through adult directed learning, children will be encouraged to count groups and say one number for each group and then number each group. • Group by moving objects into smaller groups or by gathering objects and counting in twos. • Children will be encouraged to use specific language 'make four groups of two'. • Be encouraged to share equally and fairly in the context of everyday life in the classroom. • Start to double using apparatus / objects and fingers.	**Children will:** • Use visual models to support counting on and back in twos, fives and tens from any starting point. • Count in multiples of twos, fives and tens and begin to recall the times table facts. • Be encouraged to use known facts such as doubles and halves to support calculations. • Represent multiplication as a repeated addition 2 + 2 + 2 = 6. • Use arrays to read and interpret repeated addition and the inverse relationship between multiplication and division 3 × 5 = 5 × 3 = □. • Use mental methods to work out a	**Children will:** • Count in multiples of twos, threes, fives and tens and begin to recall the times table facts. • Be encouraged to use known facts such as doubles and halves to support calculations. • Represent multiplication as a repeated addition: 2 + 2 + 2 = 6, 3 + 3 = 6. • Use arrays to read and interpret repeated addition, to show commutative relationships and the inverse relationship between multiplication and division 3 × 5 = 5 × 3 = □. • Use mental methods to work out a multiplication.

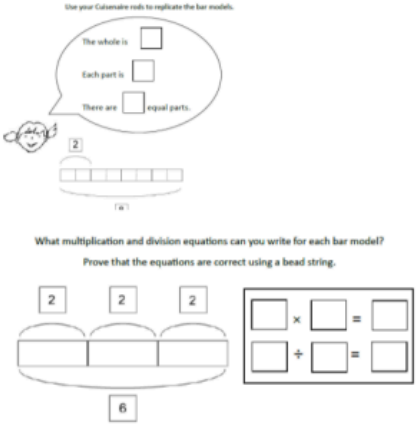
MULTIPLICATION		
EYFS	**Year 1**	**Year 2**
	multiplication.	
Concrete / Pictorial / Abstract: Nursery and Reception By the end of Reception, children are expected to understand the concept of doubling and to be able to double a number up to 10. Before doubling can be introduced, children need to have a secure knowledge of counting, number facts and addition. Children are then introduced to the concept of doubling through practical games and activities, including the use of the outdoor areas. Children act out 'doubling' by physically adding two equal groups together to find out the 'doubles' answer.  Making two equal groups.	**Concrete / Pictorial / Abstract:** - **Skip counting in multiples of 2, 5, 10 from zero**  4 × 5 = 20  2 × 4 = 8 *The representation for the amount of groups supports pupils' understanding of the written equation. So two groups of 2 are 2, 4. Or five groups of 2 are 2, 4, 6, 8, 10.* *Count the groups as pupils are skip counting.* *Number lines can be used in the same way as the bead string.* *Pupils can use their fingers as they are skip counting.* - **Making equal groups and counting the total**   	**Concrete / Pictorial / Abstract:** - **Skip counting in multiples of 2, 3, 4, 5, 10 from 0**   *Pupils can use their fingers as they are skip counting, to develop an understanding of 'groups of'.* *Dotted paper is used to create a visual representation for the different multiplication facts. Each multiplication table has its own template, which is provided during taught units.* - **Multiplication as repeated addition**  5+5+5+5+5+5+5+5= □ 

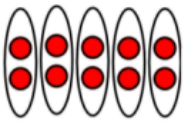
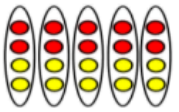
MULTIPLICATION		
EYFS	**Year 1**	**Year 2**
    Physical and real-life examples that encourage the children to see the concept of doubling as adding two equal groups.	Draw  to show 2 x 3 = 6 *How this would be represented as an equation will vary. This could be 2 × 4 or 4 × 2. The importance should be placed on the vocabulary used alongside the equation. So this picture could represent 2 groups of 4 or 4 twice.* - **Solve multiplications using repeated addition**   How many apples are there altogether? 3 + 3 + 3 = 9  5 + 5 + 5 = 15 Use different objects to add equal groups.	   *Pupils will apply skip counting to help find the totals of these repeated additions.* - **Arrays to represent multiplication equations**   

MULTIPLICATION		
EYFS	**Year 1**	**Year 2**
		 *Concrete manipulatives and images of familiar objects begin to be organised into arrays and, later, are shown alongside dot arrays. It is important to discuss with pupils how arrays can be useful.* *Pupils begin to understand multiplication in a more abstract fashion, applying their skip counting skills to identify the multiples of the 2×, 5× and 10× tables.* *The relationship between multiplication and division also begins to be demonstrated.* - **Multiplication is commutative**  

MULTIPLICATION		
EYFS	**Year 1**	**Year 2**
		 12 = 3 × 4 12 = 4 × 3 *Pupils should understand that an array and, later, bar models can represent different equations and that, as multiplication is commutative, the order of the multiplication does not affect the answer.* - **Bar modelling to represent the parts, the whole and the number of parts in multiplication word problems**

MULTIPLICATION		
EYFS	**Year 1**	**Year 2**
		There are 4 bags of sweets with 3 sweets in each bag. How many sweets are there altogether?  There are 3 school bags with 5 books in each one. How many books are there altogether?  *Multilink can be used to create bar models that represent multiplications.* - **Use of part-part whole model to establish the inverse relationship between multiplication and division**

MULTIPLICATION		
EYFS	**Year 1**	**Year 2**
		 *This link should be made explicit from early on, using the language of the part-part-whole model, so that pupils develop an early understanding of the relationship between multiplication and division. Bar models (with Multilink) should be used to identify the whole, the size of the parts and the number of parts.* - **Doubling to derive new multiplication facts**

MULTIPLICATION		
EYFS	**Year 1**	**Year 2**
		 5 × 2 = 10  5 × 4 = 20 *Pupils learn that known facts from easier times tables can be used to derive facts from related times tables using doubling as a strategy.* *At this stage they double the 2× table facts to derive the 4× table facts.*

DIVISION		
EYFS	**Year 1**	**Year 2**
EYFS Framework Objectives: • Have a deep understanding of number to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	**Curriculum Objectives:** • 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.	**Curriculum Objectives:** • Recall and use multiplication and division facts for the 2, 3, 5 and 10 multiplication tables, including recognising odd and even numbers. • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Children will: • In the context of play, and through adult-directed learning, children will be encouraged to count groups and say one number for each group and then number each group. • Group by moving objects into smaller groups or by gathering objects and counting in twos. • Be encouraged to share equally and fairly in the context of everyday life in the classroom. • Start to halve using practical objects. • Children will be encouraged to use specific language 'half', 'share' and 'equally'.	**Children will:** • Use practical apparatus to share equally between a given number 15 ÷ 3 = □ • Use practical apparatus to group equally e.g. 24 into equal groups of 2s (links to arrays). How many groups of 2 in 10? (helps with 'chunking' later on). • Recall related multiplication and division facts and explore inverse relationships.	**Children will:** • Use practical apparatus to share/group equally. • Use mental methods to work out a division. 10 ÷ 2 = How many times does 2 go into 10? • Recall related multiplication and division facts and explore inverse relationships 2 × 4 = 8, 4 × 2 = 8, 8 ÷ 2 = 4, 8 ÷ 4 = 2. I know double 2 is 4, I know half of 4 is 2.
Concrete / Pictorial / Abstract: Nursery and Reception	**Concrete / Pictorial / Abstract:** - **Sharing objects into groups**	**Concrete / Pictorial / Abstract:** - **Division as sharing**

DIVISION		
EYFS	**Year 1**	**Year 2**
By the end of Reception, children are expected to understand the concept of halving and sharing. Before this can be introduced, children need to have a secure knowledge of counting backwards, number facts and subtraction in order to halve and share. Children are then introduced to the concept of halving and sharing through practical games and activities. They act out 'halving and sharing' through activities such as sharing food for their Teddy Bear's Picnic and sharing resources equally to play a game. This is reinforced by opportunities provided in the outdoor area for the children to halve and share out objects such as building blocks, twigs etc. Children have the opportunity to physically cut food, objects or shapes in half. Counting and other maths resources for children to share into two equal groups.	 10 ÷ 2 = 5 There are 10 sweets. Ring groups of 2. There are _____ groups of 2. *Pupils should become familiar with division equations through working practically.* *The division symbol is not formally taught at this stage, although pupils should be introduced to it and recognise it.*	 10 ÷ 2 = 5 *Here, division is shown as sharing. If we have ten pairs of scissors and we share them between two pots, there will be 5 pairs of scissors in each pot.* - **Division as grouping** 10 ÷ 2 = 5 *Here, division is shown as grouping. If we have ten forks and we put them into groups of two,*

DIVISION		
EYFS	**Year 1**	**Year 2**
 Visual supports such as halving mats and part-part-whole, with the physical objects that can be manipulated. Counters and other maths resources for children to explore sharing between 3 or more.		*there are 5 groups.* - **Use of part-part-whole model to represent division equations and to emphasise the relationship between division and multiplication** 20 ÷ 4 = ☐ 20 ÷ 5 = ☐ *Pupils use arrays of concrete manipulatives and images of familiar objects to find division equations.* *They begin to use dot arrays to develop a more abstract concept of division.*

Link to the Maths progression document, updated January 2024.
Maths Progression Document updated Sep 26
Here you can find age specific vocabulary.