

Dereham Church Infant and Nursery School- Mathematics

	Year group: 2	Area/topic: Mathematics- addition and subtraction
	Represent and use number bonds and related subtraction facts within 20 (Y1) 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 2-digit number and 1s, a 2-digit number and 10s, two 2-digit numbers and adding three 1-digit numbers Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs	

Prior learning	Future learning
When in the EYFS children had a wealth of opportunities to add and subtract using concrete resources. During Year One children completed an addition and subtraction within 10 block.	The next block of learning will be multiplication. Addition skills be needed in order to multiply successfully, alongside subtraction skills needed to divide.

What pupils need to know or do to be secure	
Key knowledge and skills	Possible evidence
To consolidate number bonds to 10 Addition and subtraction number bonds to 20 To identify fact families To recognise and identify number bonds to 100	Writing number sentences that match a ten frame Complete number sentences correctly Derive facts from number bonds to 10 Solve a range of problems

Visualise patterns when adding and subtracting 1 Add by making 10 Add three 1 digit numbers Add to the next 10 To add across a 10 To subtract across 10 To subtract from a 10 Subtract a 1 digit number from a 2 digit number To find 10 more and 10 less Add and subtract 10s Add two 2 digit numbers not across a ten Add two 2 digit numbers across a ten Subtract two 2 digit numbers not across a ten Subtract two 2 digit numbers across a ten Compare number sentences Solve missing number problems	Using counters on a ten frame to solve missing number problems Complete missing number problems using denes Using a numberline to add across 10 Using tens frames and counters to solve subtraction problems Using fact families to help complete calculations Completing a part whole model to find the answer Scribing on a hundred square Completed number tracks Bar model Photos of working out using denes Using part whole models identify the missing number Solve problems
Key vocabulary	
Addition, subtraction, exchange, partition, bridge, greater than, less than, equal to, difference, total, represent, value, multiple, bond,	

Common misconceptions	Books linking to this area
Children may not use efficient strategies when working out an answer to a calculation. For example, when calculating $3 + 7$, they may start at 3 and count on 7 rather than start at 7 and count on 3 - When counting on their fingers, children may count the starting number as the first finger, resulting in an incorrect answer. Children may assume that as addition is commutative, then subtraction must also be commutative. - Some children may think that because $4 + 6 = 10$, they can add 10 to each number to give $14 + 16 = 20$ Children may think that if $8 - 3 = 5$, then $80 - 30 = 5$ because the zeros cancel each other out. - Some children may think that, for example, $20 + 30 = 500$ because $2 + 3 = 5$ and there are two zeros When a calculation is written with the smallest number first, for example $2 + 35$, children may try to count on 35 rather than use the commutative property of addition to support them Children may make numerical errors when crossing 10 Calculations presented in a different way can feel more difficult, for example children may find it easier to identify the missing number in $26 + \quad = 30$ than in $\quad + 26 = 30$ or $30 = \quad + 26$ Children may think calculations such as $3 + 19$ are harder than $19 + 3$, but should be encouraged to recognise that these are the same. If children incorrectly partition a number, this will lead	Pete the Cat and the Missing Cupcakes by K & J Dean Underwater Counting by Jerry Pallotta A mathematician like me by Dr Shini Somara

to an incorrect answer Children may try to complete a series of calculations to find the missing number, rather than think about the connections between the numbers in the question.	
Memorable first hand experiences	Opportunities for communication
Using a wide range of manipulatives and representations	Discussing and answering key questions Using sentence stems provided by white Rose

DCINS Reasonable adjustments for pupils with SEND

<i>Communication and Interaction</i> Use a range of visual aids Give clear instructions one at a time Repetition Provide simple instructions Pre teach vocabulary Use working wall where modelling is displayed Give children thinking time Model task	<i>Cognition and Learning</i> Check understanding regularly Allow rest breaks Give thinking time Colour code signs that could be confusing Work checklists Break down tasks into small steps Give opportunities for over-learning
<i>Social, Emotional and Mental health</i> Allow access to a quiet and calm space Give child a special role to increase self esteem Provide a visual support- what to do if you are stuck Provide a movement break Seat pupil by more confident peer Now and next board Sand timers Movement breaks Break down tasks into small steps	<i>Sensory and Physical</i> Consider carpet space position Reduce background noise Provide a range of manipulatives- dienes may be too small Appropriate seating Wobble boards Writing slope Enlarge text Variety of writing tools available