

Calculation Policy Age Related Expectations

	+	-	X	÷
Y1	<p>Methods I should teach: Combining groups to find the total. Counting on method.</p> <p>What I should use: Concrete objects. Models & images, including the Part/part/whole model and the Bar model. Deines. Number lines/100 squares. Blank number lines. Numicon.</p>	<p>Methods I should teach: Taking away from a group. Counting on/back to find the difference.</p> <p>What I should use: Concrete objects: counters, cubes. Models & images. Number lines/100 square. Blank number lines.</p>	<p>Methods I should teach: Making lots of using concrete objects and pictorial representations, including arrays.</p> <p>What I should use: Concrete objects. Models and images. Bead strings. Numicon. 100 square/Number lines. Blank number lines.</p>	<p>Methods I should teach: Sharing method using concrete objects and pictorial representations, including arrays.</p> <p>What I should use: Concrete objects. Models and images.</p>
	<p>Skills the children will need for addition and subtraction in Y1: Number bonds to 10/20. Counting on and back in 1s. Place value to 20. Addition vocab: add, more, plus, increase, altogether, total. Subtraction vocab: subtract, less, fewer, take away, minus, difference, reduce. Be able to put the biggest number first. Understanding that addition is commutative and subtraction is not.</p>		<p>Skills the children will need for multiplication and division in Y1: Doubles and halves. Counting in 2s, 5s and 10s. Multiplication vocab: times, multiply, lots of, groups of. Division vocab: divide, share, group. Understanding of the commutative principle.</p>	

	+	-	X	÷
Y2	<p>Methods I should teach: Partitioning method. Exchanging using Deines. Counting on method.</p> <p>What I should use: Deines, Models and Images, including pictorial representations of Deines horizontally. Blank number lines, 100 squares.</p>	<p>Methods I should teach: Taking away method. Exchanging using Deines. Counting on/back to find the difference.</p> <p>What I should use: Deines, Models and Images Deines horizontally. Blank number lines, 100 squares.</p>	<p>Methods I should teach: Repeat addition and extend use of arrays.</p> <p>What I should use: Concrete objects. Models and images. Numicon. Blank number lines.</p>	<p>Methods I should teach: Sharing. Grouping including small remainders. (1 left over)</p> <p>What I should use: Concrete objects. Models and images. Numicon.</p>
	<p>Skills the children will need for addition and subtraction in Y2: Number bonds to 10/20/100. A sense of number for 10/20 that can be applied to larger numbers. Understanding of place value. Counting on and back in 1s, 10s. Confidently partition TOs and understanding that 10 ones=1 ten. Add ones first. Addition vocab: add, more, plus, increase, altogether, total. Subtraction vocab: subtract, less, fewer, take away, minus, difference, reduce.</p>		<p>Skills the children will need for multiplication and division in Y2: Doubles and halves and near doubles Knowledge of times tables previously taught. Counting forwards and backwards in 2s, 5s and 10s. Multiplication vocab: times, multiply, lots of, groups of. Division vocab: divide, share, group.</p>	

	+	-	X	÷
Y3	<p>Methods I should teach: Partitioning method. Extended and compact methods for columnar addition of TOs leading to HTOs and decimals for money. Counting on method.</p> <p>What I should use: Deines, Models and images, including pictorial representation of Deines vertically. Blank number lines.</p>	<p>Methods I should teach: Decomposition through columnar subtraction of TOs leading to HTOs and decimals for money. Counting on/back to find the difference.</p> <p>What I should use: Deines, Models and images, including pictorial representation of Deines vertically. Blank number lines.</p>	<p>Methods I should teach: Repeat addition. Upscaling of multiplication facts. Grid method.</p> <p>What I should use: Concrete objects. Models and images. Blank number lines. Multiplication squares.</p>	<p>Methods I should teach: Sharing. Grouping. Repeat subtraction for 2 digits.</p> <p>What I should use: Concrete objects. Models and images. Blank number lines.</p>
	<p>Skills the children will need for addition and subtraction in Y3: Number bonds to 100. Apply knowledge of number bonds to larger numbers. Partitioning of HTOs. Counting on in 1s, 10s & 100s. Understanding of place value to 1000. Counting on/back in 1s, 10s & 100s. Understanding of inverse operations.</p>		<p>Skills the children will need for multiplication and division in Y3: Knowledge of multiplication tables for 2, 3, 4, 5, 8 & 10. Counting forwards and backwards in appropriate times tables and extending to multiples of 10/100. Links to learning of fractions.</p>	

	+	-	X	÷
Y4	<p>Methods I should teach: Formal written method-Compact columnar addition for ThHTOs and decimals up to two places.</p> <p>What I should use: Models and images, including pictorial representation of Deines vertically.</p>	<p>Methods I should teach: Decomposition through columnar subtraction for ThHTOs and decimals up to two places.</p> <p>What I should use: Models and images, including pictorial representation of Deines vertically.</p>	<p>Methods I should teach: Multiplication of 2 and 3 digit numbers using the grid method. Short multiplication.</p> <p>What I should use: Models and images. Formal written methods.</p>	<p>Methods I should teach: Repeat subtraction. Chunking for 3 digits. Short division method.</p> <p>What I should use: Models and images. Formal written methods.</p>
	<p>Skills the children will need for addition and subtraction in Y4: Understanding of place value to 10,000. Partitioning of ThHTOs. Understanding of exchanging. Knowledge of number bonds. Understanding of decimals and number bonds for money. Counting on back in 1s, 10s, 100s, 1000s</p>		<p>Skills the children will need for multiplication and division in Y4: All times tables up to 12x12. Counting in appropriate times tables and extending to multiples of 10/100/1000 plus decimals including tenths and hundredths. Explore patterns between multiples and tables facts. X and ÷ 10/100/1000 linked to units of measure. Links to learning of fractions.</p>	

	+	-	X	÷
Y5	<p>Methods I should teach: Formal written method-Compact columnar addition for more than 4 digits and 2 decimal places.</p> <p>What I should use: Formal written method.</p>	<p>Methods I should teach: Decomposition through columnar subtraction for more than 4 digits and decimals up to two places.</p> <p>What I should use: Formal written method.</p>	<p>Methods I should teach: Grid method. Short multiplication. Long multiplication.</p> <p>What I should use: Formal written method.</p>	<p>Methods I should teach: Chunking. Short division method for 4 digits. Long division method for 4 digits.</p> <p>What I should use: Formal written method.</p>
	<p>Skills the children will need for addition and subtraction in Y5: Understanding of place value beyond 10,000. Partitioning of 4 digit numbers +. Understanding of decimals and number bonds for money and measures. Consolidation of number bonds for application. Counting on back in 1s, 10s, 100s, 1000s, 10000s.</p>		<p>Skills the children will need for multiplication and division in Y5: All times tables up to 12x12 10/100/1000 plus decimals including tenths and hundredths. Explore patterns between multiples and tables facts. Links to learning of fractions.</p>	

	+	-	X	÷
Y6	<p>Methods I should teach: Formal written method-Compact columnar addition for more than 4 digits and 3 decimal places.</p> <p>What I should use: Formal written method.</p>	<p>Methods I should teach: Decomposition through columnar subtraction for more than 4 digits and decimals up to three places.</p> <p>What I should use: Formal written method.</p>	<p>Methods I should teach: Grid method. Short multiplication. Long multiplication.</p> <p>What I should use: Formal written method.</p>	<p>Methods I should teach: Short division method for 4 digits + Long division method for 4 digits +</p> <p>What I should use: Formal written method.</p>
	<p>Skills the children will need for addition and subtraction in Y6: Understanding of place value beyond 10,000. Partitioning of 4 digit numbers +. Understanding of decimals and number bonds for money and measures. Consolidation of number bonds for application. Counting on back in 1s, 10s, 100s, 1000s, 10000s etc.</p>		<p>Skills the children will need for multiplication and division in Y6: All times tables up to 12x12 10/100/1000 plus decimals including tenths and hundredths. Explore patterns between multiples and tables facts. Links to learning of fractions.</p>	