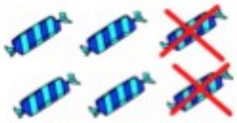
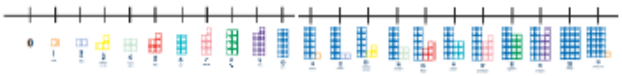
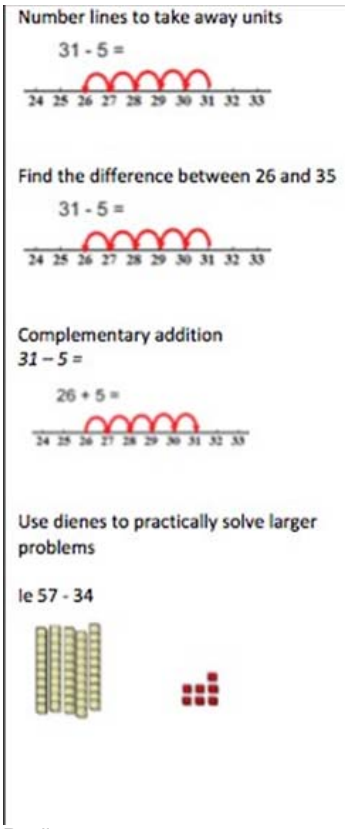
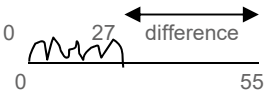
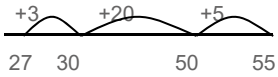
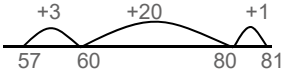
Progression in Subtraction

National Curriculum 2014

	What will subtraction look like?	Notes
		The guidance in italics is taken from the non-statutory guidance in the National Curriculum in England document for 2014
EYFS	Teacher modelling, pictorial representation Practical demonstrations of subtraction relating to 'take away'. E.g. 10 – 1? Use of number tracks. Vocabulary of subtraction in practical activities **Find one less than a number by counting back.** Using numbers on a washing line or jumping back on a **number track** 0 1 2 3 4 5 6 7 8 9 10 **Relate subtraction to finding how many are left when some are removed.** I have 6 sweets. I eat 2. How many are left?  **Relate subtraction to finding the difference in practical contexts** Using Numicon as a practical resource.  Record practical calculations by drawing pictorial representations. **Begin to use – and = signs to record calculations**	
Y1	Number tracks leading to number lines introduced for recording 'jumps' back. **(Counting Back underneath and counting forwards on the top)** 1 2 3 4 5 6 7 8 *Can you count back 5? Take away 5.* Difference introduced practically and then on number tracks and lines, e.g. 12 – 7 **(Counting Forwards)** *Can you make a rod 12 blocks long? My block is 7 blocks long. What's the difference?* *difference* *0 1 2 3 4 5 6 7*	*Pupils memorise and reason with number bonds to 10 and 20 in several forms (e.g. 9 + 7 = 16; 16 - 7 = 9; 7 = 16 - 9). They should realise the effect of adding or subtracting zero. This establishes addition and subtraction as related operations.* *Pupils combine and increase numbers, counting forwards and backwards.* *They discuss and solve problems in familiar practical contexts, including using quantities.* *Problems should include the terms put together, add, altogether, total, take away, distance between, more than and less than, so that pupils develop the concept of addition and*

	0 1 2 3 4 5 6 7 8 9 10 11 12  Pupils use concrete apparatus to experience take away and difference in practical activities. *Count out 16 straws. If you give your friend 7, how many will you have left?*	*subtraction and are enabled to use these operations flexibly.*
Y2	Pupils practice finding the difference by counting on using a number line. They are able to choose when to take away and when to find the difference when answering a subtraction problem.   so 55 – 27 = 28 55 – 27 = 28 27 + ? = 55 55 - ? =27 ? + 26 = 55 (b) Pupils use concrete apparatus to explore exchange in practical activities. E.g. Subtract 18p from 33p (c) Pupils begin to organise their subtractions using expanded columnar methods 87 – 54 80 7 -50 4 30 3	*Pupils extend their understanding of the language of addition and subtraction to include sum and difference* *Pupils practise addition and subtraction to 20 to become increasingly fluent in deriving facts such as using 3 + 7 = 10, 10 - 7 = 3 and 7 = 10 - 3 to calculate 30 + 70 = 100, 100 - 70 = 30 and 70 = 100 - 30. They check their calculations, including by adding to check subtraction and adding numbers in a different order to check addition (e.g. 5 + 2 + 1 = 1 + 5 + 2 = 1 + 2 + 5). This establishes commutativity and associativity of addition.* *Recording addition and subtraction in columns supports place value and prepares for formal written methods with larger numbers.*



Y3	(a) 81-57 = difference +3 +20 +1 =24 57 60 80 81 (b) 81 – 57 = take away 81 = 80 1 "1 take away 7 is tricky so exchange" 70 11 - 57 - 50 7 ~~80~~ ~~1~~ - 50 7 20 4 = 24 and check answers with inverse. Pupils progress to subtract numbers with up to 3 digits 341- 123 30 11 300 ~~40~~ ~~1~~ -100 20 3 200 10 8 or 341- 123 30 11 300 ~~40~~ ~~1~~ -100 20 3 200 10 8 ***** Moving onto columnar subtraction (as below) once children are secure and demonstrate good understanding of place value.***	*Pupils practise solving varied addition and subtraction questions. For mental calculations with two-digit numbers, the answers could exceed 100.* *Pupils use their understanding of place value and partitioning, and practise using columnar addition and subtraction with increasingly large numbers up to three digits to become fluent*
Y4	(a) Pupils continue to calculate difference mentally using a number line (b) Pupils progress to using the compact columnar method for subtraction. 784 = 700 70 ~~80~~ 1 ~~4~~ adjust from T to O 7 1 - 56 - 50 6 7 ~~8~~ ~~4~~ 700 20 8 = 728 - 5 6 7 2 8 Progressing to 4 digit numbers 2754 = 2000 600 700 100 ~~50~~ 4 6 1 -1562 1000 500 60 2 → 2~~7~~54 1192 1000 100 90 2 1562 1192 Pupils use the column method to solve increasingly more complex calculations involving many exchanges, and solve subtractions with at least 4 digits 5 13 16 ~~6~~~~4~~67 – 2684 3783 Pupils to use the 'Shop Keepers Method' to find the difference when using decimal (£ and p). £10.00 - £06.75 5p (£06.80) 20p (£07.00) £3.00 (£10.00) Change = £3.25	*Pupils continue to practise both mental methods and columnar spacing for addition and subtraction with increasingly large numbers to aid fluency.* *Pupils practise using the formal written methods of columnar addition and subtraction with increasingly large numbers to aid fluency. They practise mental calculations with increasingly large numbers to aid fluency*