

## Progression in Subtraction at Brunswick House



<u>Stage</u>	<u>Objective</u>	<u>Concrete</u>	<u>Pictorial</u>	<u>Abstract</u>
EYFS/Year	Subtract 1	Physically taking away and	Children to draw/have	Introduced in Year 1:
1	digit numbers	removing objects from a whole (ten frames, Numicon,	pictures of the concrete resources they are using	Number sentences:
		cubes and other items such as beanbags could be used). $4-3=1$	and cross out the correct amount. The bar model can also be	4 - 3 =
			introduced.  3 take away 2 is 1 ØØØO	= 4 - 3
				Bar models:
			×××	3 ?
EYFS/Year 1	Subtract 1 digit numbers (counting back)	Counting back using number lines or number tracks.	Draw their own number lines. Moving on to starting at the biggest number and counting back.	Represent the calculation on a number line and show their jumps. Encourage children to use an empty number line or draw their own.
				0 1 2 3 4 5 6 7 8 9
EYFS/Year 1	Find the difference	Use cubes, Numicon or Cuisenaire rods  Calculate the difference between 8 and 5.	Draw the cubes/counters or use the bar model to illustrate what they need to calculate.	Find the difference between 8 and 5. 8 – 5, the difference is  Children to explore why 9 - 6 = 8 – 5 = 7 – 4 have the same difference.
EYFS/Year 1/Year 2	Subtract 1 and 2 digit numbers	Use part/whole model to help explain the inverse between + and - If 3 is the whole and 1 is one of the parts. What is the other part?	Use a pictorial representation of objects to show the part — part - whole model. Draw dots to represent objects.	Year 1 6 - 3 = = 6 - 3  Year 2  Fact families
		part		6 - 3 = = 6 - 3 + 3 = 6
Year 1/2	Make 10	Making 10 using ten frames.  14 – 5 =  Make 14 on the ten frame.  Take away the four first to make 10 and then takeaway	PV Counters: Children to present the ten frame pictorially and discuss what they did to make 10.	Number line: Start at 13. Take away 3 to reach 10. Then take away the remaining 4 so you

Year 2	Subtracting ones from a 2 digit number using a number line	one more so you have taken away 5. You are left with the answer of 9.  Use a physical number line to find the greatest number and count backwards.	16-3=13 13 14 15 16 53-8=45	have taken away 7 altogether. You have reached your answer.  13-7=6 34 34 16-3= 53-8=  If I count back from I get
Year 2	Subtract two digit numbers (No exchange)	Use Base 10/Place value counters to make the first number then take the other number away.  Tens ones  2 3	Draw Base 10 using sticks and ones. Cross out what you are taking away  45-21=  Draw place value counters on a place value grid. Cross out what you are taking away  tens ones	Subtract the ones, subtract the tens, add them together $40 - 20 = 20$ $5 - 1 = 4$ $45 - 21 = 24$
Year 2	Subtract two digit numbers (Exchange)	Use base 10/place value counters to make the first number, exchange 1 ten for 10 ones	Represent the Base 10 pictorially, remembering to show the exchange.  10s 1s 1+10	E.g. 44 - 25  I can't do 4 ones subtract 5 ones so I need to exchange 1 ten for 10 ones $14 - 5 = 9$ $30 - 20 = 10$ $44 - 25 = 19$

Year 3/4	Subtract two numbers up to 4 digits (No exchange)	Represent first number with dienes/place value counters. Take other number away	Represent the place value counters/dienes pictorially;	Formal column method $ \begin{array}{r} 456 \\ -132 \\ \hline 324 \end{array} $
Year 3/4	Subtract two numbers up to 4 digits (Exchange)	As above, but when taking away identify if an exchange is required  1 thousand = 10 hundreds  1 hundred = 10 tens  1 ten = 10 ones	Represent the place value counters/dienes pictorially; remembering to show what has been exchanged.	Formal column subtraction:  Children must understand what has happened when they have crossed out digits.  234  - 88  - 88  - 6
Year 5/6	Subtract with increasingly large and complex numbers and decimal values.	Continue to use place value as above to represent increasingly complex numbers	Continue to represent the counters in a place value chart, crossing out to show subtraction and arrows for exchange  hundreds tens ones tenths 2 0 3  263.4 - 143.1 = 120.3	Formal column  7 7 6 9 0  - 372.5 67 9 6.5
All	Use bar models to represent subtraction calculations and problems		18 - 3 = ?  18  ? 3  18 - 3 = 15	