SUBTRACTION

Year 1

Subtract from numbers up to 20, including subtracting 0.

Count back in 1s on a number line to take away.

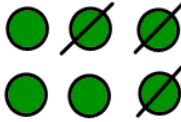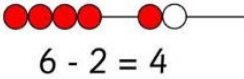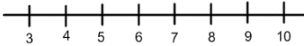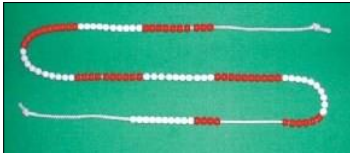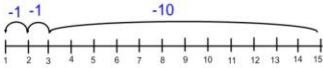Find the 'distance between' including 'how many more?' and 'how many less?' introduced practically by counting on and counting back.

Develop the use of more efficient jumps - jumps of ten and jumps of one.

Recall & use number bonds to 20 and related subtraction facts.

Key Vocab:

Equal to, take, take away, less, minus, subtract, leaves, difference between, how many more, how many fewer/less most, least, count back, how many left, how much less is_? less than, more than, fewer.

	Concrete	Pictorial	Abstract
Taking away 1s	Use of objects (counters, cubes etc.) to model taking away 1s.	Show drawn objects and cross out in 1s to show taking away. 6 - 3 =	Record as number sentences using - and = symbols. 6 - 3 =
Number line to take away 1s	Using a bead string to subtract by counting back in 1s. 6 - 2 = 4	Model using a number line and showing jumps of 1. 9 - 2 =	As above.
Number line to take away bigger jumps.	Jumping back using a bead string, using jumps of tens and ones. 	Model using a number line and showing jumps of tens and ones. 13 - 12 = Subtract increasingly larger numbers using more efficient jumps.	As above.

Children should

- Have access to a range of equipment such as numicon, number lines, bead strings, 100 squares.

- Have opportunities to subtract using concrete objects in a range of real life contexts e.g. subtracting the number of teddies, number of children etc.

- Be exposed to a variety of models and images to support their learning.

- Read and write number sentences using the - and = signs.

- Solve missing number problems.

- Understand the = as "**equals**" or "**balanced**" and not as "the answer".

SUBTRACTION

Year 2

Subtract with 2 digit numbers.

Consolidate counting back in increasingly efficient jumps of tens and ones (crossing the tens boundary).

Use counting on as a mental strategy for finding the difference between two numbers which are close. Eg. 95p and £1.

Introduce expanded and compact column subtraction for 2 digit numbers (regrouping needed to achieve Greater Depth.)

Key Vocab:

Equal to, take, take away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less most, least, count back, how many left, how much less is_? Difference, count on, strategy, partition, tens, units, hundreds, inverse.

	Concrete	Pictorial	Abstract
Number line to take away bigger jumps.	Jumping back on a bead string with jumps of several tens and several ones (consolidation from Year 1)	Model using a number line and showing jumps of several tens and several ones. Initially, children will nee to record as –1 and -10 as before 42 - 27 = 	42 - 27 =
Column method (no exchanging)	Make starting number with dienes, model taking away ones and tens. Make starting number with place value counters, model taking Away tens and ones	Pictorial representation of concrete methods. Draw this alongside column. 	Expanded and compact method for subtraction. **To achieve greater depth at the end of KS1, children will need to understand regrouping when subtracting, eg. 72 - 14** (see year 3 for more detail).

Children should:

- Have experience of subtracting single digit and two digit numbers from 2 digit numbers using concrete apparatus.

- Use numberlines to support counting back in tens and ones. (prepared, then empty).

- Have experience of 'finding the difference' between two numbers which are close to- gether.

- Move to more formal recording - expanded column method, then compact column method. These two methods could be taught in parallel with the pictorial images to support understanding.

- Have experience of applying these methods to a range of different contexts including worded subtraction problems, finding the difference problems, using subtraction and addition as inverse operations & missing number problems.

SUBTRACTION

Year 3
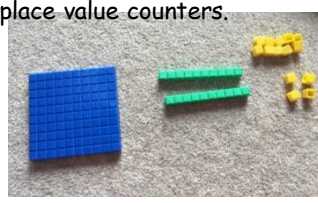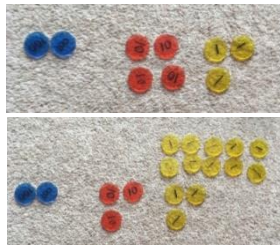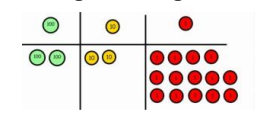
Subtract with 2 and 3 digit numbers.

Consolidate expanded and compact column subtraction for 2 and 3 digit numbers. Introduce regrouping (exchanging). Introduce subtracting money in £ and p using column methods.

Key Vocab:

Equal to, take, take away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less most, least, count back, how many left, how much less is_? difference, count on, strategy, partition, tens, units, hundreds, inverse. Exchange, decrease, hundreds, value, digit.

	Concrete	Pictorial	Abstract
Column method with regrouping/ exchanging.	Use Base 10 to start with before moving on to place value counters. Start with one exchange before moving onto subtractions with 2 exchanges. Make the larger number with place value counters. Start with the ones, can I take away 8 from 4 easily? I need to exchange one of my tens for ten ones.	Model process as for concrete methods using pictorial representations organised in place value columns. Making starting numbers Showing exchange Then model the subtraction in the ones column.	Model the expanded and compact methods alongside each other. $$234 - 88$$ Begin by demonstrating with exchanging in one column only.

Children should

- Have experience of subtracting two digit numbers from 2 digit numbers using concrete apparatus.

- Continue to have experience of 'finding the difference' between two numbers which are close together. This can be particularly useful in the context of money.

- Model expanded and compact methods in parallel with the pictorial images to support understanding.

- Have experience of applying these methods to a range of different contexts including worded subtraction problems, finding the difference problems, using subtraction and addition as inverse operations & missing number problems.

- Estimate answers by rounding before solving. Discuss how appropriate and reasonable estimates are (in relation to the question).

SUBTRACTION

Year 4: Subtract with up to 4 digit numbers.
Introduce decimal subtraction through context of money
Year 5- Subtract with at least 4 digits, including money and measures.
Subtract with decimal values, including mixtures of integers and decimals and aligning the decimal
Year 6—Subtract with increasingly large and more complex numbers and decimal values.

Key Vocab:

Equal to, take, take away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less most, least, count back, how many left, how much less is_? difference, count on, strategy, partition, tens, units, hundreds, thousands, tens of thousands, hundreds of thousands, millions, inverse, exchange, decrease, value, digit. Tenths, hundredths, decimal point, decimal.

	Concrete	Pictorial	Abstract
Column method for whole numbers up to 4 digits.	As for Year 3 with additional Thousands column. (and TTh HTh and M in Yr5/6) 234 - 179 Model process of subtracting with multiple exchanges. Use place value counters to model (as in previous year groups). Later, model process of exchanging with decimals 0.45-0.12 = 0.33	Model the use of pictures to show the numbers in place value columns. 1004 - 65 = 1004 - 65 = Use of bar models as an image. There are 3,160 books in a shop. 1,226 are in English and the rest are in French. How many French books are there? Then show the exchanges: Decimal subtraction with exchanging. 	 Use zeros for place-holders.

Children should

- Have experience of subtracting from numbers with at least 4 digit numbers , increasing to numbers of different sizes, using concrete apparatus.
- Apply mental calculations using increasingly large numbers (Yr6 including mixed operations)
- Have experience of applying these methods to a range of different contexts including worded subtraction problems, 2-step problems, and multi-step problems (Yr5/6), deciding which operations and methods to use and why.