Key Stage 1 – Subtraction
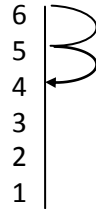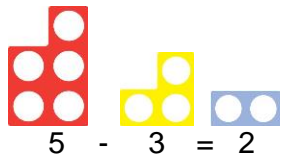
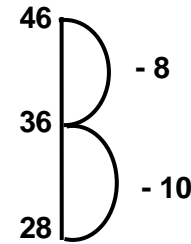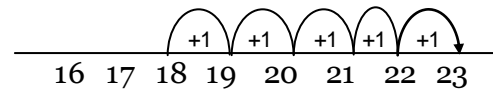| Y1	Y2

Through practical and meaningful contexts and informal written methods.
 	
• We made 6 cakes. We ate 2 of them.
How many cakes are left?
 	
• Link to vertical number line $6 - 2 =$
 	
$5 - 3 = 2$
 	
• Find the difference within 20.
 	
• Represent and use number bonds within 20.
 	
• Record using subtraction (–) and equals signs (=)
 	
• Derive related facts up to 20.
 	
$5 - 2 = \square$ $\square = 5 - 2$
$5 - \square = 3$ $3 = \square - 2$
$\square - 2 = 3$ $3 = 5 - \square$
$\square - \square = 3$ $3 = \square - \square$
 	
• Counting back on a 100 square and a vertical number line.
 	
National Curriculum requirements:
Subtract 1 digit and 2 digit numbers up to 20, including 0.
Represent and use number bonds and related subtraction facts.
	Through practical and meaningful contexts.
	
	• Fluent recall of bonds to 20 and within 20.
	
	• Derive and use related facts up to 100
	e.g. $10 - 7 = 3$ so $100 - 70 = 30$.
	
	• Counting back by partitioning second number. Subtract the ones first to be in line with columnar subtraction
	
	E.g. 46 - 18
	   46 - 10 - 8
	
	46 - 8
	36
	   - 10
	28
	
	• Find the difference by counting up (only when the difference is small).
	$23 - 18 = 5$
	
	+1 +1 +1 +1 +1
	16 17 18 19 20 21 22 23
	
	• Recognise and use the inverse relationship between addition and subtraction
	
	• Show that subtraction is not commutative (done in any order)
	
	• Progressing to the partitioned columnar method in preparation for year 3
	
	• Subtraction of money, including change.
	
	National Curriculum requirements:
	(using concrete objects, pictorial representations and mentally)
	Subtract 2 digit numbers and ones.
	Subtract 2 digit number and tens.
	Subtract two 2 digit numbers.
	Subtract three 1 digit numbers.

Key Stage 2 – Subtraction

Y3	Y4

Y3

- Continue with vertical number line subtraction progressing to the expanded columnar subtraction method.

$$89\text{–}35 = 54$$

$$\begin{array}{r} 80 + 9 \\ - \underline{30 + 5} \\ \underline{50 + 4} = 54 \end{array}$$

- Introduce exchanging through the expanded columnar subtraction method.

72 - 47

$$\begin{array}{r} {}^{60}\cancel{70} + {}^{1}2 \\ - \underline{40 + 7} \\ \underline{20 + 5} = 25 \end{array}$$

- Progressing on to compact columnar subtraction.

T O	H T O	T O
4 7	8 6 4	${}^4\cancel{5}{}^1 1$
- 2 3	- 6 2 1	- 3 6
2 4	2 4 3	1 5

- Emphasise value of digit, e.g. 4 tens subtract 2 tens = 2 tens. Use the correct language for subtraction i.e. exchange rather than borrow.
- Subtract amounts of money to give change.

Video clips:
Subtraction - teaching children to consider the most appropriate methods before calculating

Introducing partitioned column subtraction method, from practical to written

National Curriculum requirements:
Subtract numbers with up to 3 digits using the formal written method of columnar subtraction.

Y4

- Continue with partitioned columnar subtraction progressing to compact columnar subtraction.

H T O	H T O	H T O	Th H T O
${}^3\cancel{4}{}^1 3\ 7$	${}^3\cancel{4}\,{}^{12}\cancel{3}\,{}^1 2$	${}^5\cancel{6}\ {}^9\cancel{1}\cancel{0}\ {}^1 4$	$8\ {}^3\cancel{4}\ {}^{11}\cancel{2}\ {}^1 6$
- 1 8 2	- 1 8 7	- 3 4 7	- 2 1 7 7
2 5 5	2 4 5	2 5 7	6 2 4 9

- Estimate and use inverse operations to check answers to a calculation.

- Subtract amounts of money using columnar method.

Video clips:
Subtraction - teaching children to consider the most appropriate methods before calculating

Introducing partitioned column subtraction method, from practical to written

Moving to the compact column method of subtraction

National Curriculum requirements:
Subtract numbers up to 4 digits using the formal written method of columnar subtraction.

Key Stage 2 – Subtraction

Y5	Y6
• Continue with compact columnar subtraction, including subtraction of decimals.	• Continue with compact columnar subtraction, including subtraction of decimals.

Y5

$$\begin{array}{r} {}^2\cancel{3}\,{}^{10}\cancel{1}\,{}^{'}0\,{}^4\cancel{5}\,{}^{'}6 \\ -\ \ \ \ 2\ 1\ 2\ 8 \\ \hline 2\ 8{,}9\ 2\ 8 \end{array}$$

$$\begin{array}{r} {}^6\cancel{7}\,{}^{10}\cancel{1}\,{}^{'}6\,{}^8\cancel{9}\cdot{}^{'}0 \\ -\ \ \ \ 3\ 7\ 2\cdot 5 \\ \hline 6\ 7\ 9\ 6\cdot 5 \end{array}$$

• Use rounding to check answers to calculations and to determine, in the context of a problem, levels of accuracy.

Video clip:

Moving to the compact column method of subtraction

National Curriculum requirements:
Subtract numbers with more than 4 digits.

Y6

$$\begin{array}{r} {}^0\cancel{1}\,{}^{14}\cancel{5}\,{}^{9}\cancel{0}{,}{}^{'}6\ 9\ 9 \\ -\ \ \ \ \ 8\ 9{,}9\ 4\ 9 \\ \hline 6\ 0{,}7\ 5\ 0 \end{array}$$

$$\begin{array}{r} {}^{'}\cancel{1}\,{}^{10}\cancel{0}\,{}^{'}5\cdot{}^3\cancel{4}\,{}^{'}1\ 9\ \text{kg} \\ -\ \ \ \ 3\ 6\cdot 0\ 8\ 0\ \text{kg} \\ \hline 6\ 9\cdot 3\ 3\ 9\ \text{kg} \end{array}$$

• Use estimation to check answers to calculations and to determine, in the context of a problem, levels of accuracy.

National Curriculum requirements:
Subtract numbers with more than 4 digits.