

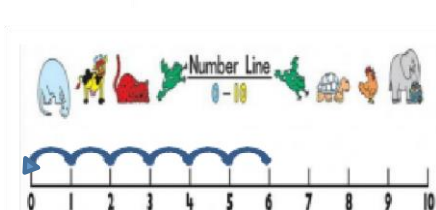
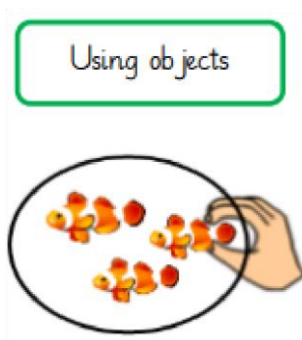
Foundation Stage 1 - Subtraction

Curriculum 2014 Statutory Requirements

Pupils should be taught to:

- Birth to 11 months – notice changes in number of objects/ images, sounds in groups of and up to 3.
- 8 to 20 months - has some understanding that things exist, even when out of sight.
- 16 to 26 months – begins to organise and categorise objects (sorting).
- 22 to 36 months – knows that a group of things changes in quantity when something is added or taken away.
- 30 to 50 months – separates a group of 3 or 4 objects in different ways, beginning to recognise that the total is still the same.
- 40 to 60 months – understands subtraction as taking away objects from a group and counting on how many are left.

In practical activities, discussions begin to use the vocabulary involved in addition and subtraction.



Teaching points:

Use number lines 0-10.

Explore numbers in the environment, both inside and out.

Use a range of objects.

Model in role-play areas.

Key vocabulary

Less, subtract, how many more, how many fewer, less than, most, least, count back, how many left?

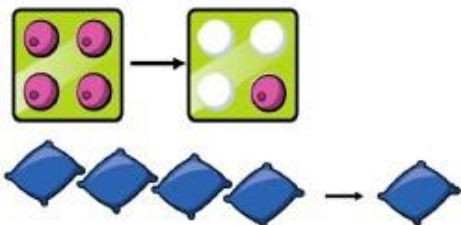
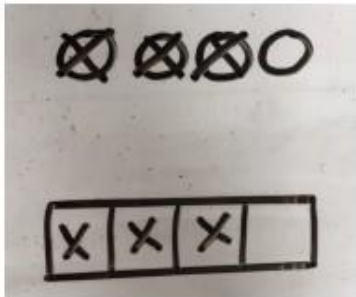
Foundation Stage 2 - Subtraction

Curriculum 2014 Statutory Requirements

Pupils should be taught to:

Early Learning Goal:

- Count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number.
- Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.

Concrete	Pictorial
Physically taking away and removing objects from a whole (ten frames, Numicon, cubes and other items such as beanbags could be used). $4 - 3 = 1$ 	Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used. 

Link the actions to a written number sentence.

1 Using objects



$$3 - 1 = 2$$

2 Drawing using pictures



$$5 - 3 = 2$$

3 Drawing using symbols



$$6 - 4 = 2$$

Teaching points:

Counting and reading objects to 20.

Doubling using objects and numbers.

Halving using objects.

Sharing using objects.

Adding and subtracting two single digit numbers, referring to a number line.

Key vocabulary

Take away, less, subtract, how many more, how many fewer, less than, most, least, count back, how many left, how much less is? How many have gone?

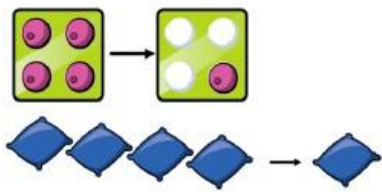
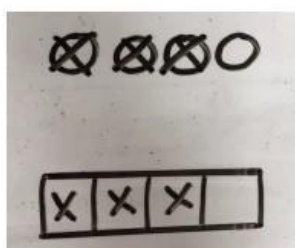
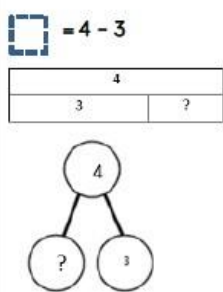
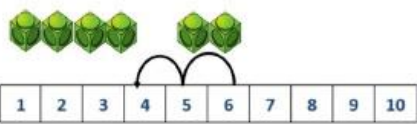
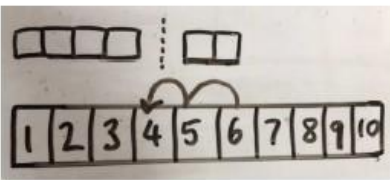
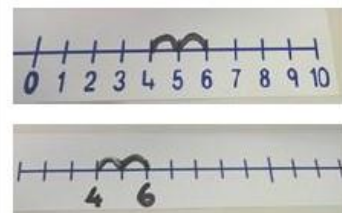
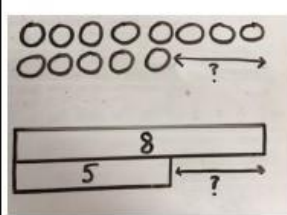
Year 1 - Subtraction

Curriculum 2014 Statutory Requirements

Pupils should be taught to:

- Read, write and interpret mathematical statements involving subtraction (-) and equals (=) signs.
- Represent and use number bonds and related subtraction facts within 20 subtract one-digit and two digit numbers to 20, including zero.
- Solve one-step problems that involve subtraction, using concrete objects and pictorial representations, and missing number problems such as $9 = ? - 7$.

Teaching points:

Concrete	Pictorial	Abstract
Physically taking away and removing objects from a whole (ten frames, Numicon, cubes and other items such as beanbags could be used). $4 - 3 = 1$ 	Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used. 	$4 - 3 =$ 
Counting back (using number lines or number tracks) children start with 6 and count back 2. $6 - 2 = 4$ 	Children to represent what they see pictorially e.g. 	Children to represent the calculation on a number line or number track and show their jumps. Encourage children to use an empty number line 
Finding the difference (using cubes, Numicon or Cuisenaire rods, other objects can also be used). Calculate the difference between 8 and 5. 	Children to draw the cubes/other concrete objects which they have used 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.

Key vocabulary (words new to year 1 are in red)

-, subtract, take (away), **minus**, leave, how many are left/left over? How many have gone? One less, two less, ten less... how many fewer is... than...? How much less is...than...? **Difference between, half, halve =, equals, sign**, is the same as.

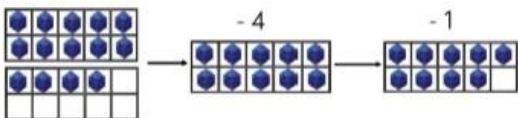
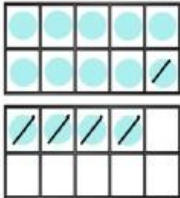
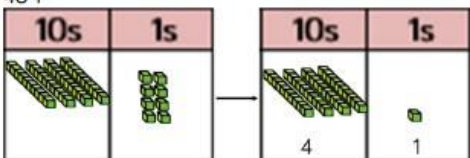
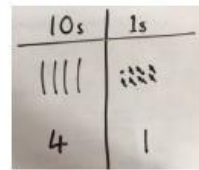
Year 2 - Subtraction

Curriculum 2014 Statutory Requirements

Pupils should be taught to:

- Solve problems with subtraction:
 - Using concrete objects and pictorial representations, including those involving numbers, quantities and measures.
 - Applying their increasing knowledge of mental and written methods.
 - Recall and use subtraction facts to 20 fluently, and derive and use related facts up to 100
- Subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - A two-digit number and ones.
 - A two-digit number and tens.
 - Two two-digit numbers.
 - Subtracting three one-digit numbers.
- Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.
- Recognise and use the inverse relationship between addition and subtraction, and use this to check calculations and solve missing number problems.

Teaching points:

Concrete	Pictorial	Abstract									
Making 10 using ten frames. 14 - 5 	Children to present the ten frame pictorially and discuss what they did to make 10. 	Children to show how they can make 10 by partitioning the subtrahend. $14 - 5 = 9$ $\begin{array}{r} 14 \\ - 5 \\ \hline 9 \end{array}$ 14 - 4 = 10 10 - 1 = 9									
Column method using base 10. 48 - 7 	Children to represent the base 10 pictorially. 	Column method or children could count back 7. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>4</td><td>8</td></tr> <tr><td>-</td><td></td><td>7</td></tr> <tr><td></td><td>4</td><td>1</td></tr> </table>		4	8	-		7		4	1
	4	8									
-		7									
	4	1									

Key vocabulary (words new to year 2 are in red)

-, subtract, take away, minus leave, how many are left/left over? one less, two less... ten less... **one hundred less**, how many less is... than...? how much fewer is...? difference between, half, halve =, equals, sign, is the same as, **tens boundary**.

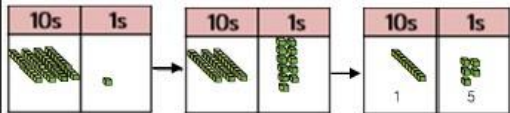
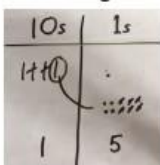
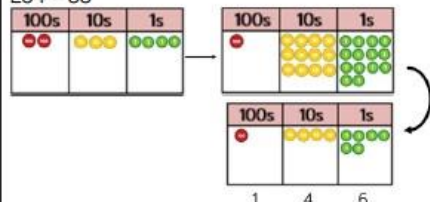
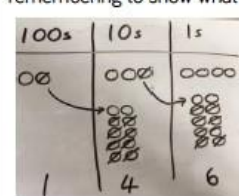
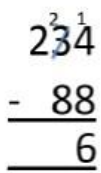
Year 3 - Subtraction

Curriculum 2014 Statutory Requirements

Pupils should be taught to:

- Subtract numbers mentally, including:
 - A three-digit number and ones.
 - A three-digit number and tens.
 - A three-digit number and hundreds.
 - A three-digit number and thousands.
- Subtract numbers with up to three digits, using formal **written** methods of columnar subtraction.
- Estimate the answer to a calculation and use inverse operations to check answers.
- Solve problems, including missing number problems, using number facts, place value, and more complex subtraction.

Teaching points:

Concrete	Pictorial	Abstract
Column method using base 10 and having to exchange. 41 - 26 	Represent the base 10 pictorially, remembering to show the exchange. 	Formal column method. Children must understand that when they have exchanged the 10 they still have 41 because $41 = 30 + 11$. 
Column method using place value counters. 234 - 88 	Represent the place value counters pictorially; remembering to show what has been exchanged. 	Formal column method. Children must understand what has happened when they have crossed out digits. 

Children will then move onto
3-digit subtract 3-digit with
exchanging (not crossing 0's).

Key vocabulary (words new to year 3 are in red)

-, subtract, take away, minus leave, how many are left/left over? one less, two less... ten less... one hundred less, how many less is... than...? how much fewer is...? difference between, half, halve =, equals, sign, is the same as, tens boundary, hundreds boundary.

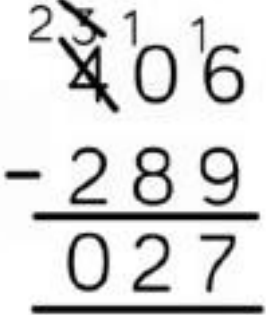
Year 4 - Subtraction

Curriculum 2014 Statutory Requirements

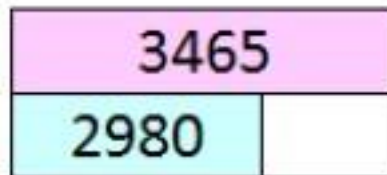
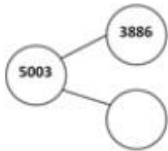
Pupils should be taught to:

- Subtract with up to 4 digits using the formal written methods of columnar subtraction, where appropriate.
- Estimate and use inverse operations to check answers to a calculation.
- Solve subtraction two-step problems in contexts, deciding which operations and methods to use and why.

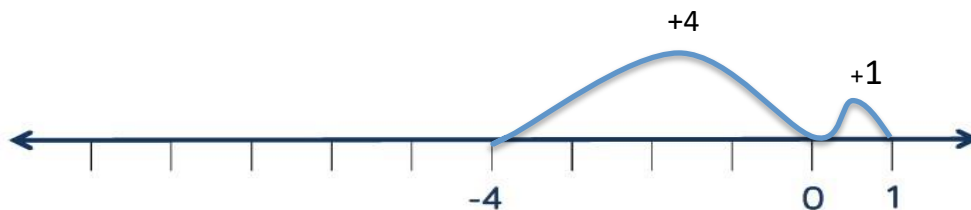
Teaching points:

Concrete	Pictorial	Abstract
Children use place value grids (or Base 10) to physically subtract 1232 from the number below. 	Children draw a representation of a number on a place value chart. 	

Children should also be confident using the cherry and bar method to find subtraction equations



Children should be able to subtract through 0 using a numberline



Key vocabulary (words new to year 4 are in red)

- ,subtract, subtraction, take away, minus, **decrease**, leave, how many are left/left over? difference between, half, halve how many more/fewer is... than...? how much more/less is...? is the same as, equals, sign tens boundary, hundreds boundary, **ones boundary**, **tenths boundary**, **inverse**.

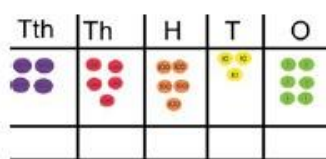
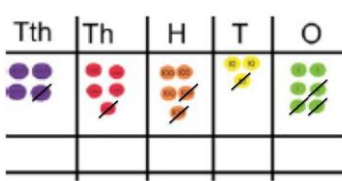
Year 5 - Subtraction

Curriculum 2014 Statutory Requirements

Pupils should be taught to:

- Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction).
- Subtract numbers mentally with increasingly large numbers.
- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.
- Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Teaching points:

Concrete	Pictorial	Abstract
Children should be provided with opportunities to build numbers using base 10, arrow cards etc and physically exchange or remove to show the process of subtraction. $45,536 - 8,426$  This should also be used when developing subtraction with decimals	Children represent numbers using pictures including place value charts, this should allow them to cross out to show the process of subtraction. (This should also be used to show the process of exchanging when crossing boundaries. $45,536 - 11,213 =$ 	$\begin{array}{r} 45261 \\ - 33208 \\ \hline 12053 \end{array}$

Key vocabulary (words new to year 5 are in red)

- ,subtract, subtraction, take away, minus, decrease, leave, how many are left/left over? difference between, half, halve how many more/fewer is... than...? how much more/less is...? is the same as, equals, sign tens boundary, hundreds boundary, ones boundary, tenths boundary, **hundredths**, inverse.

Year 6 - Subtraction

Curriculum 2014 Statutory Requirements

Pupils should be taught to:

- Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Teaching points:

Concrete and abstract strategies should build on those of Year 5 and involve starting numbers of up to 1,000,000 and progressing to 10,000,000.

Pupils apply their learning of subtraction strategies and combine these with other areas of learning to solve problems using a secure abstract method.

$$632,465 + (745,676 - 325,534) = \text{progressing to} \\ 8,675,509 - (9,645,253 - 2,867,675) =$$

125.48 - 72.357

	1	2	5	.	4	8	
-		7	2	.	3	5	7
	5	3	.	1	2	3	

Key vocabulary (words new to year 6 are in red)

- ,subtract, subtraction, take away, minus, decrease, leave, how many are left/left over? difference between, half, halve how many more/fewer is... than...? how much more/less is...? is the same as, equals, sign tens boundary, hundreds boundary, ones boundary, tenths boundary, inverse, **amount, brackets, calculator: clear, display, enter, key, memory, change (money), commutative, complements (in 10, 100), currency, discount, exact, exactly, exchange rate, most/least significant digit**