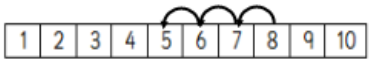
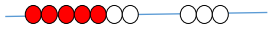
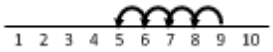
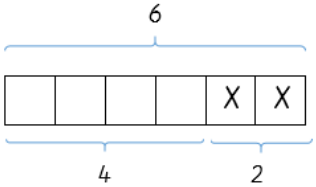
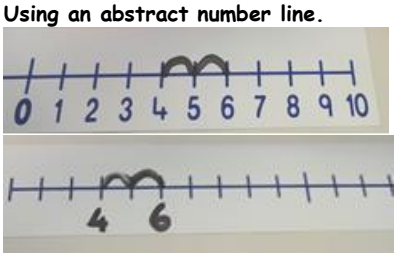
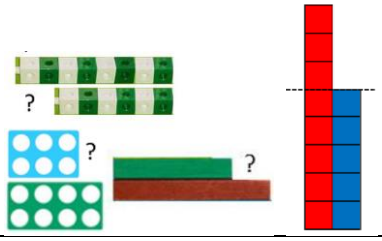
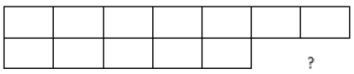
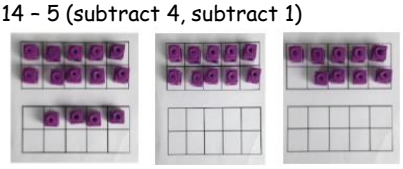
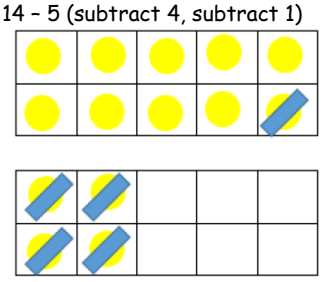
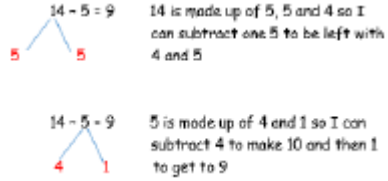
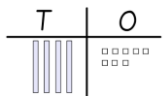
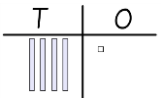
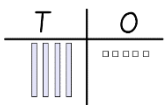
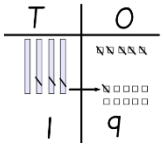
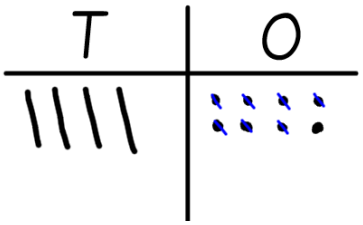
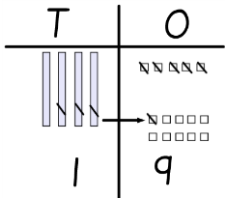
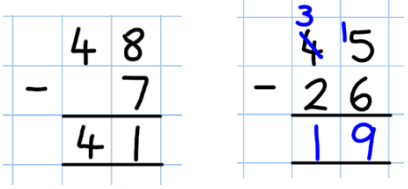
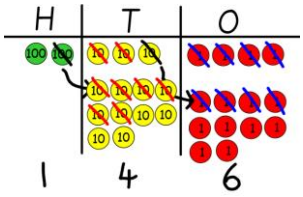
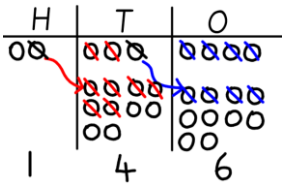
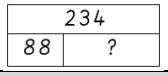
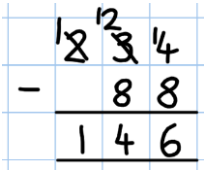
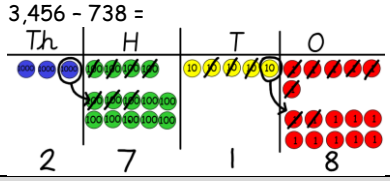
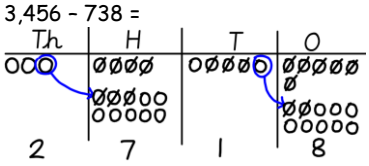
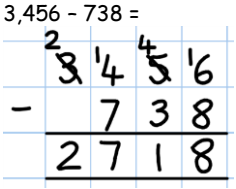
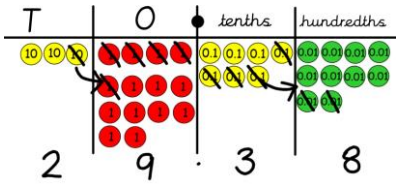
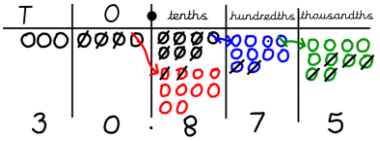
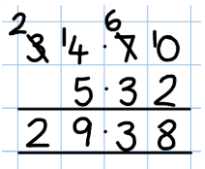
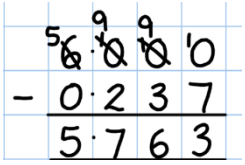
Fourfields Community Primary School

Calculation: Subtraction

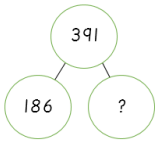
'By end of' indicates the expected standard for children achieving age-related expectations.

By	Concrete	Pictorial	Abstract
End Yr FS	**Physically taking away and removing objects from a whole** (using a variety of resources) rather than crossing out, children will physically remove the objects	**Children to draw the concrete resources they are using (or make a representation of) and cross out.** They could cross out each part on a part whole model too. Use of the bar model:	4 - 3 = = 4 – 3 4 is the whole and 3 is a part of the whole.
End Yr 1	**NC** Add and subtract one-digit and two-digit numbers to 20, including zero. Solve one-step problems that involve addition, using concrete objects and pictorial representations, and missing number problems.		
	Counting back (using number lines,number tracks, beadstrings).   9 – 4 = 5 	**Children to represent what they see pictorially** eg 6 – 2 	**Using an abstract number line.** 
	Finding the difference (using cubes, Numicon, Cuisenaire rods, or other objects) 	**Children to draw the cubes/objects or make a representation of them.** 8 – 6 = XXXXXXXX XXXXXX 7 – 5 = Use of the bar model 	Find the difference between 8 and 6 8 – 6, the difference is ? Children to also explore why 9 -7 = 8 – 6 (the difference of each digit has changed by 1 so the difference is the same)
	Making 10 (using Numicon or ten frames) 14 – 5 (subtract 4, subtract 1)  Children could do this by subtracting a 5 from the 10	**Children to represent their work pictorially** such as the ten frame 14 – 5 (subtract 4, subtract 1) 	Children to represent how they have solved it.  Help children to see related facts and represented in different ways eg 14 – 9 = 5 9 = 14 - 5 14 – 4 – 1 =

<table>
<tr><td>End Yr 2</td><td colspan="3">NC Add and 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; adding three one-digit numbers.</td></tr>
<tr><td></td><td>Use of Base 10 to add TO + O, TO + T, TO + TO, O + O + O. Start initially where no regrouping is required and move on to examples where regrouping is required.
48 – 7 =
 
 
45 – 26 =
 
  </td><td>Children to represent the concrete using own representations…
48 – 7 =
 
Leading to regrouping of ones into tens 45 – 26 =
  </td><td>Introduce column method alongside other methods taught, leading to regrouping of ones to tens.
48 – 7 45 – 26
 
It is crucial that the children understand they still have 45.
45 = 30 + 15</td></tr>
<tr><td>End Yr 3</td><td colspan="3">NC Add numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds.
Add numbers with up to three digits, using formal written methods of columnar addition.</td></tr>
<tr><td></td><td>Use of Base 10 and place value counters to subtract HTO - TO, HTO - HTO. Start initially where no regrouping is required and move on to examples where regrouping is required in just the ones or the tens and then both.
234 – 88 =
  </td><td>Children to represent the concrete using own representations…
234 – 88 =
 
If children are completing a word problem, draw a bar model to represent what it's asking them to do.
  </td><td>234 – 88 =
  </td></tr>
<tr><td>End Yr 4</td><td colspan="3">NC Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. Solve simple measure and money problems involving decimals to two decimal places.</td></tr>
<tr><td></td><td>Use of Base 10 and place value counters to subtract ThHTO - HTO, ThHTO + ThHTO.
3,456 – 738 =
  </td><td>Children to represent the concrete using own representations
3,456 – 738 =
  </td><td>3,456 – 738 =
  </td></tr>
<tr><td>End Yr 5</td><td colspan="3">NC Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.</td></tr>
<tr><td></td><td>Use of place value counters to add whole numbers with more than 4 digits and decimals with different number of decimal places.
34.7 - 5.32
  </td><td>Children to represent the concrete using own representations.
34.7 - 5.32
  </td><td>34.7 - 5.32
  </td></tr>
</table>

End Yr 6	NC Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.		
	As above use place value counters to represent a range of different whole number and decimal number combinations. *Use models as above*	**Children to represent the concrete using own representations.**	**Children need to understand this method but will probably work mentally for this example eg** 6 – 0.237 

Conceptual variation: different ways to ask children to solve 391 - 186



391	
186	?

Raj spent £391, Timmy spent £186. How much more did Raj spend?

I had 391 metres to run. After 186 I stopped. How many metres do I have left to run?

391 – 186

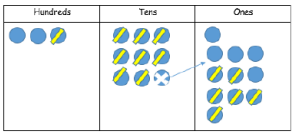
□ = 391 – 186

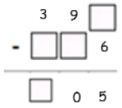
391
-186
———

Find the difference ebtween 391 and 186
Subtract 186 from 391.
What is 186 less than 391?

Missing digit problems

What's the calculation? What's the answer?





Vocabulary:

• subtract • take away • minus • difference	• less • fewer • decrease	• digits • column • ones, tens, hundreds etc • tenths, hundredths etc	• regroup • exchange