**Subtraction**

The expectation for year three and four is children will count back and up on a number line to solve subtraction problems. They will then be introduced to the expanded column method, this stage is essential in ensuring children are confident with place value which will enable them to solve harder subtraction problems where they will be borrowing tens and hundreds.

|  |  |
| --- | --- |
| **National Curriculum Expectations** | **Calculation Method** |
| **Stage 3**  Subtract numbers using concrete objects, pictorial representations, and  mentally, including:  o A two digit number and ones  o A two digit number and tens  o Two two-digit numbers | **Take Away Model**  Counting back using an empty number line within 100, in ones…  **34 - 6 = 28**  -1 -1 -1 -1 -1 -1  http://www.helpingwithmath.com/printables/others/numbers0_100hor.gif  …and in tens:  **58 - 30 = 28**  **-**10 -10 -10  http://www.helpingwithmath.com/printables/others/numbers0_100hor.gif  28 38 48 58  **Difference Model**  **Count up** from the smallest number to the largest **to find the difference.**  Introduce complementary addition to find differences (only use for small differences). The use of models is extremely important here to understand the idea of “difference”  **32- 28 = 4**  +1 +1 +1 +1  http://www.helpingwithmath.com/printables/others/numbers0_100hor.gif  **28 29 30 31 32**  ‘The difference between 28 and 32 is 4.’  **76 – 58 = 18**  +2 +10 +6  http://www.helpingwithmath.com/printables/others/numbers0_100hor.gif  ‘The difference between 58 and 76 is 18.’  **58 60 70 76** |
| **Stage 3 / 4**  Expanded written method  add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction | Introduce the expanded written method with the calculation presented both horizontally and vertically (in columns). Use two-digit numbers when introducing this method, initially:  78 – 23 = 55  70 + 8 70 and 8  −20 + 3 -20 and 3  ------------  50 + 5 = 55  **This will lead into the formal written method:**  7 8  - 2 3  5 5 |

**Number Lines**

When using a number line, children put the bigger number at the top of the number line and count back. The early stages of number lines involve jumping up in ones.

32 – 28 = 4

-1 -1 - 1 -1

28 29 30 31 32

Once children are confident using number lines they will begin to use bigger jumps on their number line.

50 – 22 = 28

-10 -10 -2

28 38 48 50 ‘Fifty take away twenty two is 28’

**The Difference Model**

50 – 22 = 28

+10 +10 +8

22 32 42 50 ‘The difference between 50 and 22 is 28’

**The Expanded Column Method**

The children will partition their numbers into tens and units and then subtract each separately. This helps with place value knowledge for when children will cross ten and need to borrow tens and hundreds.

68 – 32 = 36

60 + 8

-30 + 2

30 + 6 = 36

**Formal Column Method**

This is the final stage of calculation when solving subtraction problems. Children will begin using the column method not crossing tens and borrowing. They will then move onto borrowing when they are confident with the method.

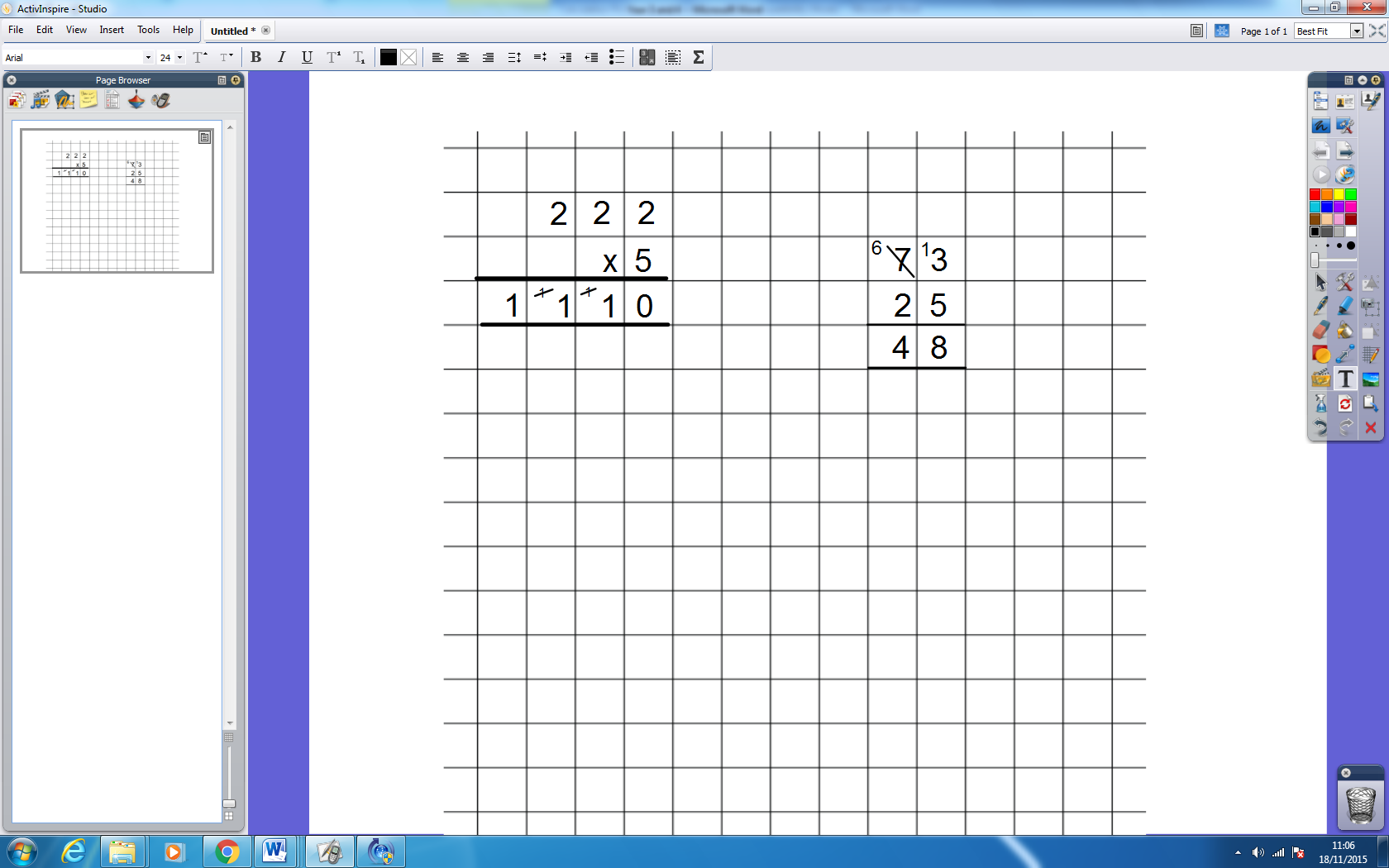
6 8

* 3 2

3 6

**When discussing calculations it is important to say 60 – 30 not 6 – 3 as this will ensure children are confident with place value and will be able to borrow tens and hundreds.**

73 – 25 =



This is where children may become confused and add the ten to the 4 as a 1. If your child says 4 – 5 for the units column they have become confused with place value and believe they have taken 1 from 7 rather than 10 from 70.