**Division**

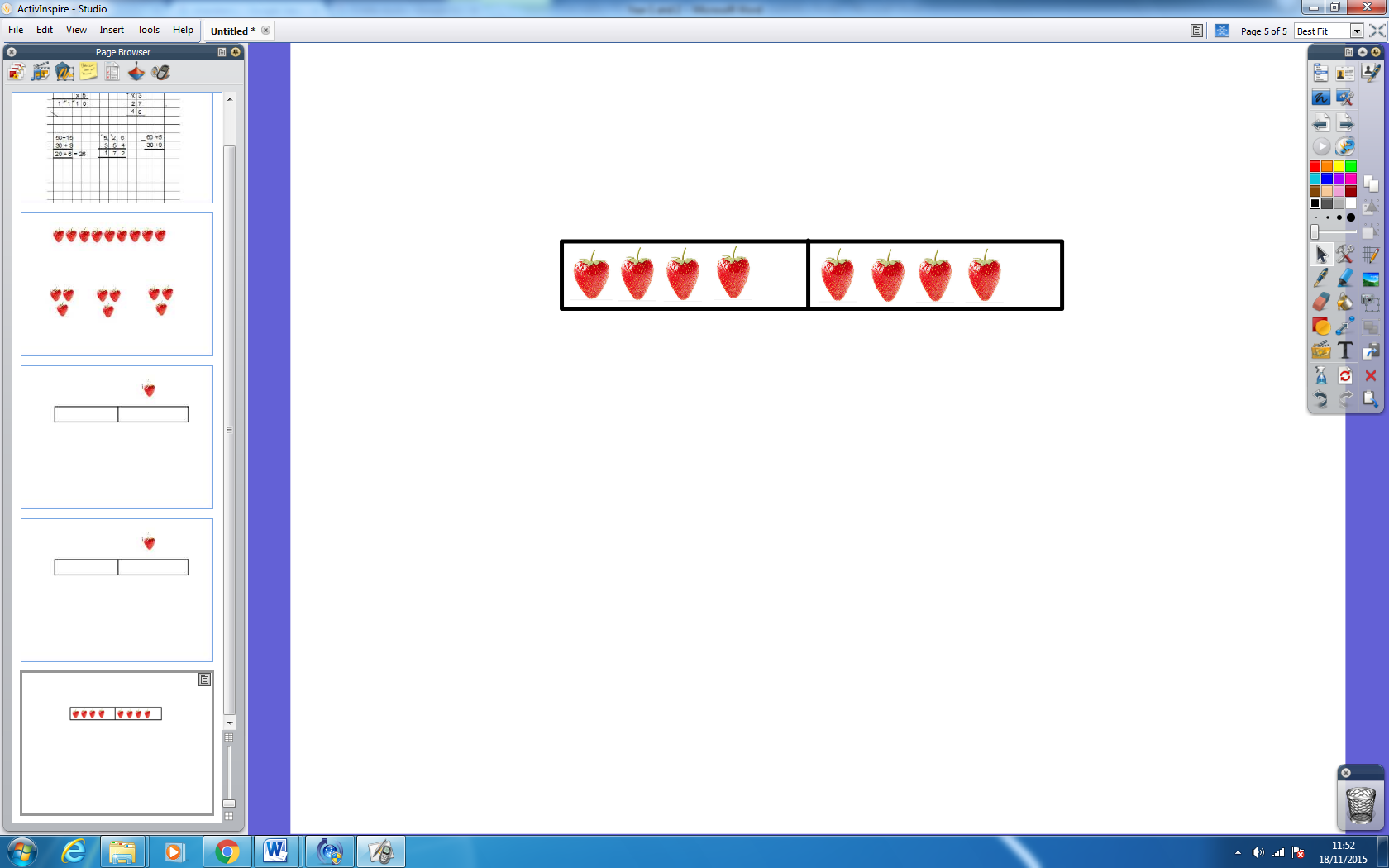
The expectation for year three and four is children will share objects equally between groups. They will begin to draw this as a visual representation in their books. Children then look at using number facts to take out multiples of the divisor and subtract them from the total.

|  |  |
| --- | --- |
| **National Curriculum Expectations** | **Calculation Method** |
| **Stage 3**  Write and calculate mathematical statements for division including two-digit numbers by one-digit numbers, using mental and progressing to formal written methods.  Recall of inverse number facts | 20 ÷ 4 = 5  20   |  |  |  |  | | --- | --- | --- | --- | | 00000 | 00000 | 00000 | 00000 |   5  For larger numbers children can use number knowledge and partitioning to share equally  44 ÷ 4 = 11  40 4   |  |  |  |  | | --- | --- | --- | --- | | 10 + 1 | 10 + 1 | 10 + 1 | 10 + 1 | |
| **Stage 4**  Use place value, known and derived facts to multiply and divide mentally, dividing by 1 | Children then move onto chunking to divide  47 ÷ 3 =  10 x 3 = 30 10 groups of 3 make 30 so this can be subtracted from the total:  47 – 30 = 17  5 x 3 = 15 5 groups of 3 make 15 so this can be subtracted from the new total:  17-15= 2  There are 2 left over, as this cannot be equally shared between 3 it is the remainder.  10 groups made 30, 5 groups made 15 so:  10 + 5 = 15 r 2 |

**Equal Sharing Using the Bar**

Children will continue to share objects equally between the bar.

8 ÷ 2 = 4



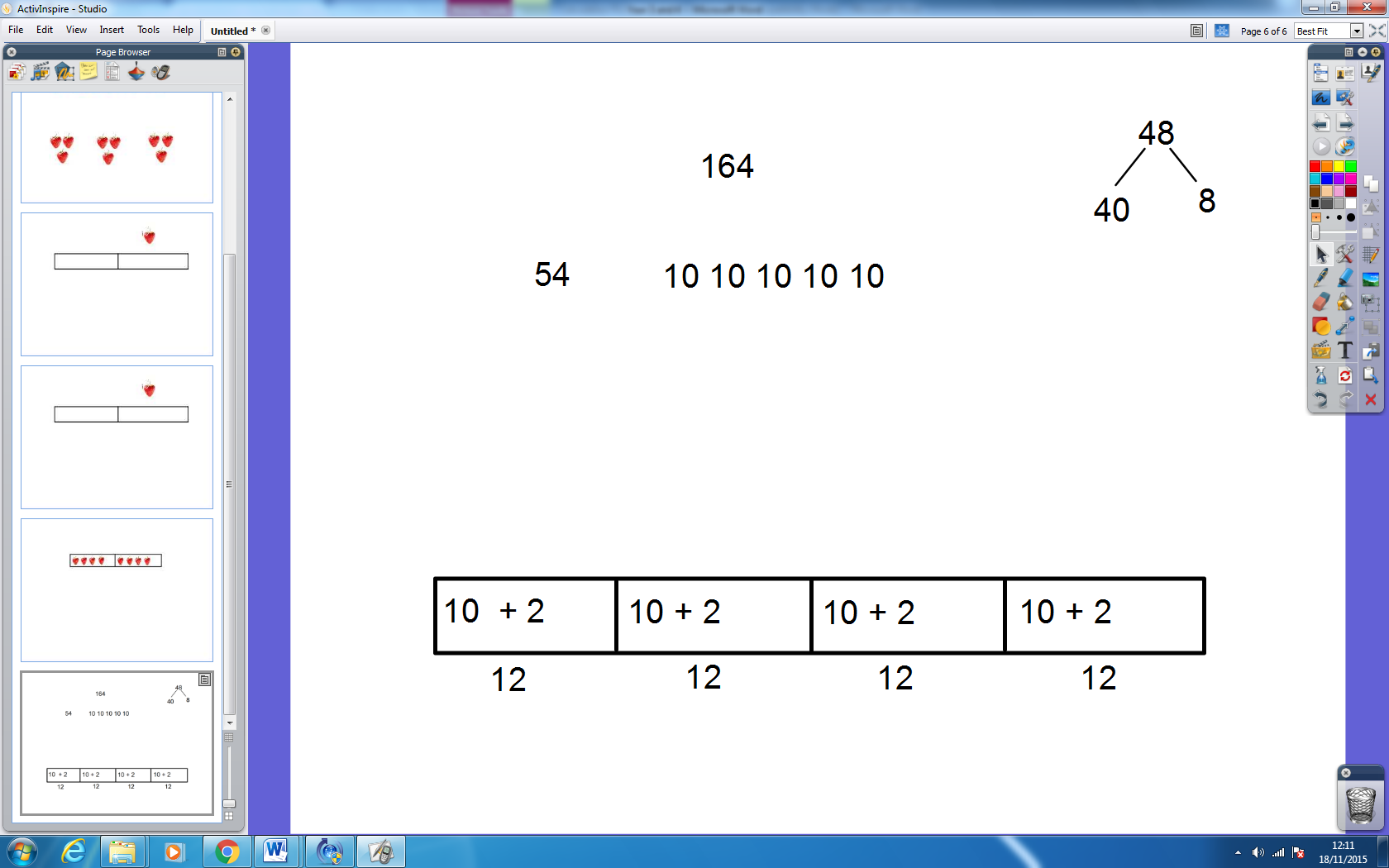
4 4

By sharing objects into boxes or drawing them it is easy for children to see that 8 can equally be shared into 2 groups. It is also enables children to make the link two equal groups of 4 make 8 hence;

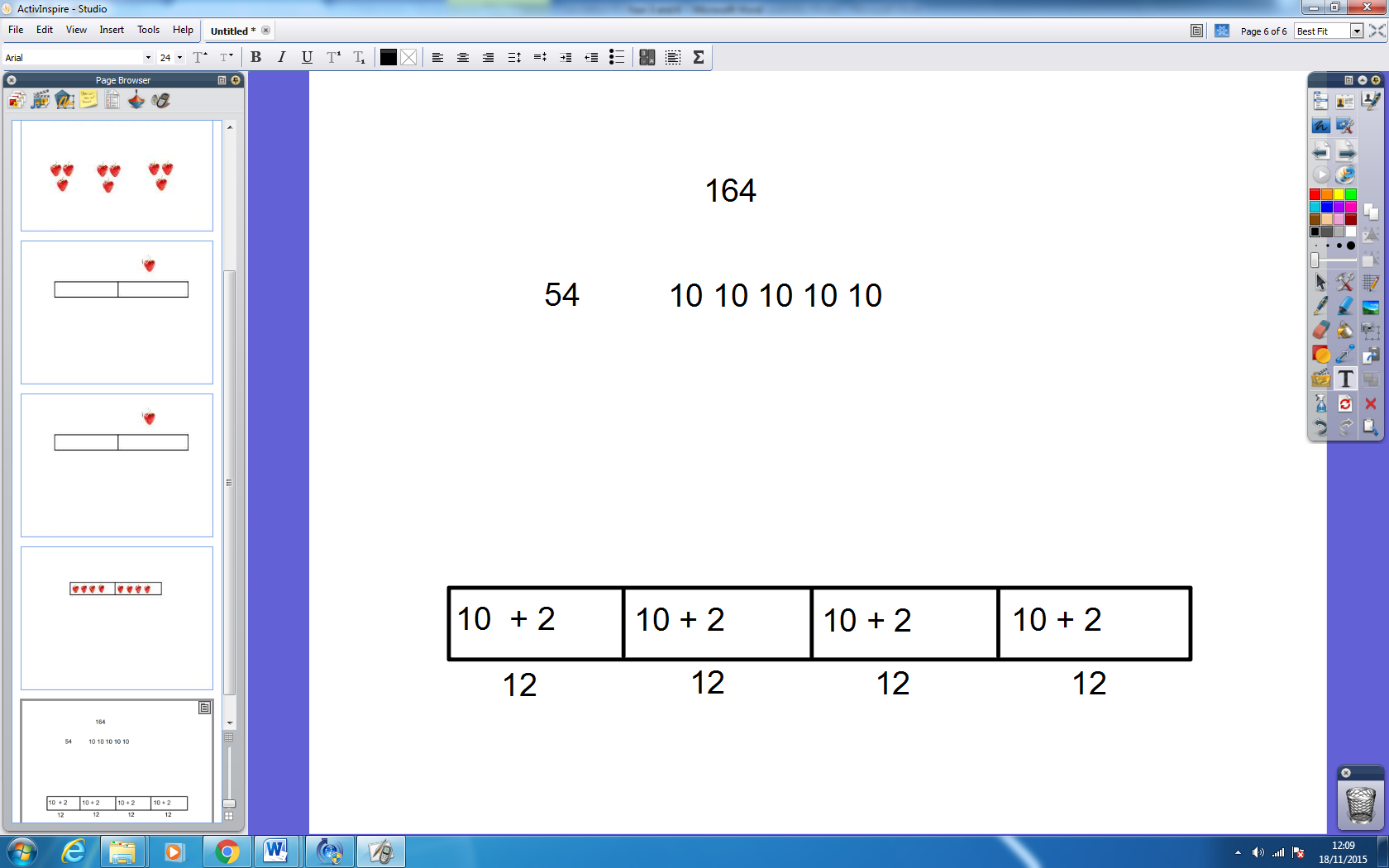
2 x 4 = 8 and 4 + 4 = 8

Children will then move onto partitioning numbers to share larger amounts.

48 ÷ 4 = 12



We know that 48 is made from 4 groups of 10 so we can share 40 in groups of 10 between our 4 boxes. We also know there are 8 units so we can share these between the 4 boxes making a total of 12. 48



**Chunking**

Children use their knowledge of multiplication to subtract chunks from the total amount. For example; 43 ÷ 5 =

Children know that 4 x 5 = 20 so they can subtract this from 43.

43 – 20 = 23

20 can be subtracted again from the total

23 – 20 = 3

Three is left over and cannot be shared between 5 so this is the remainder. As 4 groups of 5 were subtracted from 43 twice the children do the addition 4+4= 8.

This means 43 ÷5 = 8r 3

This can also be done using larger numbers.

158 ÷ 4 = 39 r 2

* We know 10 x 4 = 40 so we subtract 40 from the total.

158 – 40 = 118

* Forty can be subtracted again

118 – 40 = 78

* Forty can be subtracted again

78 – 40 = 38

* Children now use their 4 times tables to find the next number to subtract.

9 x 4 = 36 so this can now be subtracted.

38 – 36 = 2

Two cannot be shared between 4 so it is the remainder.

* The final stage is to add up the groups that have been subtracted.

10 lots of 4 were subtracted

10 lots of 4 were subtracted

10 lots of 4 were subtracted

9 lots of 4 were subtracted

10 + 10 + 10 + 9 = 19 add the remainder 39 r 2

158 ÷ 4 = 39 r 2