Freeman Community Primary School

Calculations- Year 6

Please find a calculations guide for the Year 6 curriculum, demonstrating the methods that we teach the children in school.

For each operation you will find different methods as well as images and written calculation to demonstrate how you can support your child at home.

If you would like to discuss any of the methods further, please speak to your child's class teacher.

Mental Maths

To support your child's learning at home, please practise:

- Reading numbers to 10 000 000 (ten million);
- Counting in jumps backwards and forwards through 0 including negative numbers;
- Answering questions using all four operations and increasingly larger numbers;
- Multiplication and division facts for all times tables up to 12 x 12;
- Multiply and divide numbers, including those with up to 3 decimal places, by 10, 100 and 1000;
- Calculate 50%, 25%, 10% of any 3 digit number;
- Converting between units of measurement e.g. mm, cm, m, km or g and kg or ml and l;
- Recalling formula for calculating area for squares and rectangles (length x width), triangles (base x height ÷ 2) and parallelograms (base x height);
- Telling the time to the nearest minute using both analogue and digital clocks;
- Converting times from 12 hour to 24 hour clock and vice versa.

Useful websites

The websites below include games and activities that you can play with your children to support their learning in Maths.

www.topmarks.co.uk

www.bbc.co.uk/bitesize/ks2/maths/

www.ictgames.com

www.primarygames.co.uk

www.mymaths.co.uk

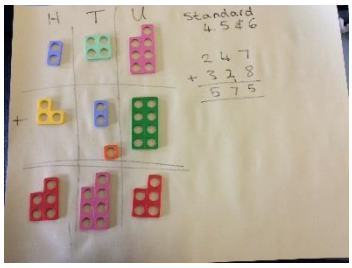
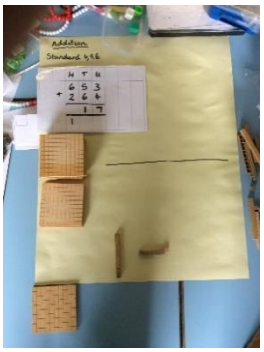
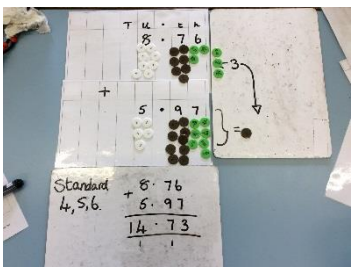
www.coolmath-games.com/

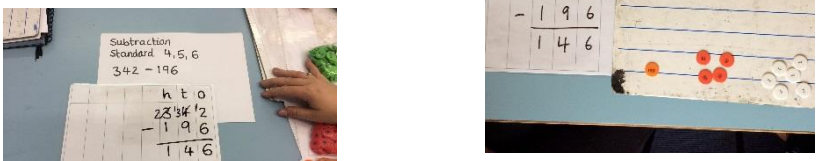
https://nrich.maths.org/

www.primarygames.co.uk/pg3/mwipe/mwipe.html (Good for practising times tables)

www.primarygames.co.uk/pg4/Ghostblasters2006/ghost2006.swf (Good for practising times tables)

Year 6

Addition	**Elaboration and examples**
Standard 4, 5, 6 The shorter method continues to be used.	6814 +2162 8976 
Numbers get carried in to the next column.	247 + 328 575 1   
This method is also used with larger numbers, decimals, and more than 2 numbers. It is also used across different context e.g. measures, money.	£ 8.76 + £ 5.97 £14.73 1 1 267432 + 134098 401530 1 1 1 1 2651 + 1831 + 1096 5578 1 1 

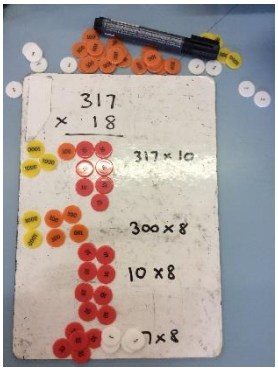
Subtraction	**Elaboration and examples**
This moves to column method where numbers can be borrowed from the column on the left. This is also used with larger numbers, and decimals. It is also used in wider contexts which include measures and money.	$\begin{array}{r} {}^{2}\not{3}\,{}^{3}\not{4}\,{}^{1}2 \\ -\ 1\ 9\ 6 \\ \hline 1\ 4\ 6 \end{array}$ $\begin{array}{r} {}^{5}\not{6}\,{}^{13}\not{4}\,{}^{10}\not{1}\,{}^{1}0\ 7 \\ -\ 3\ 5\ 2\ 3\ 6 \\ \hline 2\ 8\ 8\ 7\ 1 \end{array}$ $\begin{array}{r} £1\,{}^{5}\not{6}\,.\,{}^{13}\not{4}\,{}^{1}2 \\ -\ £1\ 5\ .\ 8\ 8 \\ \hline 0\ 0\ .\ 5\ 4 \end{array}$ 

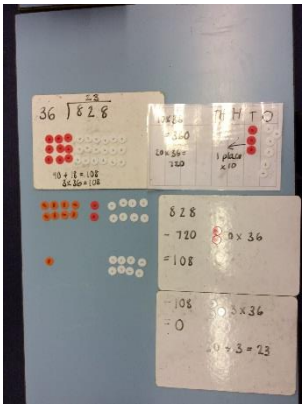
Children in year 6 are expected to learn all times tables up to 12 x 12 as well as their associated division facts

For example:

7 x 12 = 84

84 ÷ 7 = 12

Multiplication	**Elaboration and examples**
In long multiplication, children complete this as they would the grid method but the amount of recording is reduced. In some instances, the amount of recording could be reduced even further, for example, when multiplying by 10.	317 x 18 = 317 x 18 3000 100 70 2400 80 + 56 5706 1 317 x 18 3170 2400 80 + 56 5706 1 

Division	**Examples and Elaboration**
The chunking method, used with larger numbers, and where amounts are divided between numbers with 2 digits or more.	How many packs of 36 can we make from 828 biscuits? 828 ÷ 36 = 36 | 8 2 8 - 7 2 0 (20 x 36) 1 0 8 - 1 0 8 (3 x 36) 0 20 + 3 = 23  7990 ÷ 34 = 34 | 7 9 9 0 -6 8 0 0 (200 x 34) 1 1 9 0 - 1 0 2 0 (30 x 34) 1 7 0 - 1 7 0 (5 x 34) 0 200 + 30 + 5 = 235