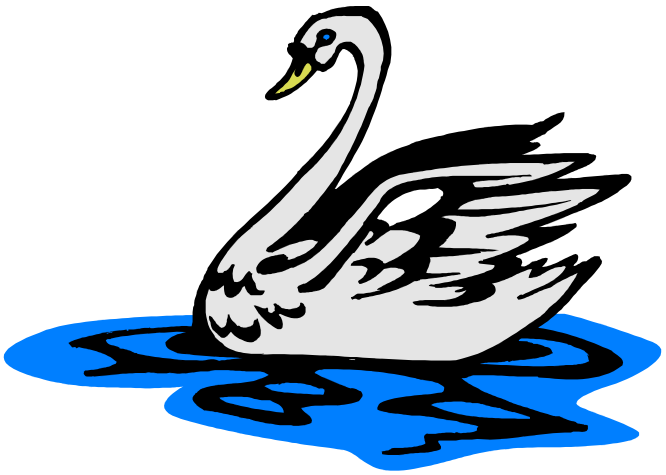
Helping your child make more progress in maths.



If children know their number facts and can quickly recall them they can make quicker progress in maths.

Learning your number facts at Kingsbury Primary

What are number facts?

To begin with its about children being able to quickly recall numbers that make a specific total. Eg number bonds to 10

0+10 and therefore also 10+0 both equal 10

1+9 and 9+1

2+8 and 8 +2

3+7 and 7+3

4+ 6 and 6+4

5+5

Alongside this pupils need to understand that 10-0=10, 10-1=9, 10-9=1 and so on. This means there are families of facts

1+9

9+1

10-1

10-9

The number fact triangles can help practice this. Children also need to be able to recognise other pairs eg what makes 8, so that when they see 5 and 3 rolled on two dice they instantly know it's 8 in total without counting.

Then we move onto number facts to 20 in the same way.

Children who don't have quick recall of number facts as they move through school find that the maths they are expected to do plus maths in everyday life is harder, slower and often full of little mistakes.

Once children have these it helps later with multiples of 100 eg 3+7=10 so 30+70=100 as 0.3 and 0.7 =1. Children and adults who can quickly see (know) their number bonds can solve so many other more complex problems the further up school they get.

How do we ensure children know their number facts? It's down to lots of regular practice. You can help at home by giving a number and asking what goes with it to make 10, or 20 etc.

These basic number facts then lead into children knowing multiplication tables and their associated division facts.

The same methods then help with times tables.

Why is it so important for children to know their multiplication tables?

Knowing your times tables means to be able to correctly answer a times table question in under three seconds (you don't have time to work it out!). This quick recall is important. It is essential that children practice this quick recall until it becomes a permanent memorised fact.

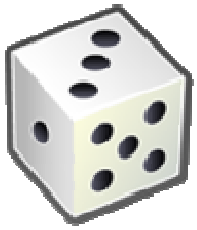
Just like learning to walk before you can run, learning multiplication and memorising the times tables are building blocks for other maths topics taught in school - higher learning such as division, long multiplication, fractions, percentages and algebra. Students who have not mastered their tables will very often fall behind in maths (and other subjects that use maths) and begin to lose confidence. All because they did not memorise the times tables! Children who know their times tables facts will be able to answer questions more quickly and be able to focus on using other maths strategies in more complex problems rather than being slowed down by the multiplication. Knowing times tables can also increase confidence levels as this part of the question becomes easy.

Our times table award system is designed to encourage children to work hard at learning their tables.

Tables in the real world

Knowing your multiplication facts is helpful not only in academics; we frequently use multiplication in our daily lives. We might need it when doubling a recipe, determining a discount at a shop or figuring out our expected arrival time when travelling. Maths calculations are subconscious elements in work, play and daily chores. Knowing the times tables can help simple tasks to be performed rapidly and save time and stress.

- To calculate the cost of a number of items e.g. 1 bar of chocolate costs 75p, how much will 10 bars cost?
- To work out the number of calories in the 10 bars of chocolate we have just eaten if 1 bar contains 250 calories.
- To find out how many miles we will have to run to burn up all the calories if running one mile burns up only 100 calories



There aren't as many facts to learn as you might think, for example once you know 6x4 = 24 you also know 4 x 6= 24.So as you move through the tables there are less and less to learn as you will already know lots.

Multiplication works hand in hand with division, its a good idea to learn the two together. So not only do you know 6x4 = 24 and 4x6 = 24 but also 24÷4 = 6 and 2 4 ÷36 = 4.

Later on knowing this will mean you also know 60 x 4 = 240, 40 x 6 = 240, 0.6 x 4 = 2.4, 0.4 x 6 = 2.4 etc.

It is a really good idea to learn the division facts alongside the multiplication facts. The pack of tables triangles attached can really help with this.

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Maths dictionary

Prime numbers:

Prime numbers are the numbers that are bigger than one and cannot be divided evenly by any other number except 1 and itself. Eg Is 8 a Prime Number? **No**, because it can be divided evenly by 2 or 4 (2×4=8), as well as by 1 and 8. Is 73 a Prime Number? **Yes**, it can **only** be divided evenly by 1 and 73.

Factors:

A number may be made by multiplying two or more other numbers together. The numbers that are multiplied together are called factors of the final number. All numbers have a factor of one since one multiplied by any number equals that number. All numbers can be divided by themselves to produce the number one.

Multiples:

The result of multiplying a number by a whole number. Eg 12 is a multiple of 3, because 3 × 4 = 12, 6 is a multiple of 3, because 3 × 2 = 6 But 7 is NOT a multiple of 3

If there are any maths words you are not sure of look at this online maths dictionary (the link is also on our website under what are we learning- maths)

http://www.mathsisfun.com/definitions/index.html

Some useful websites and apps

http://resources.woodlands-junior.kent.sch.uk/maths/timestable/

http://www.familylearning.org.uk/multiplication_games.html

http://www.transum.org/software/tablesmaster/tablesmaster.asp

Free apps

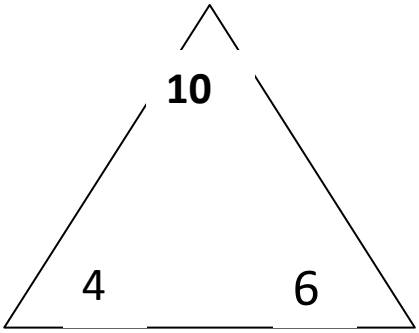
https://itunes.apple.com/us/app/sushi-monster/id512651258?mt=8

Number Triangles

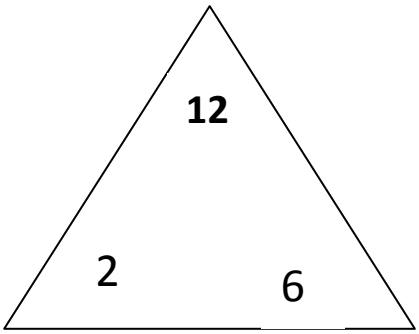
These can be used for number bonds or times tables. They help practice addition and subtraction together and multiplication and division together.

The triangles will be better if you glue them to a piece of card maybe back of a cereal box before you cut them out.

The simple concept is that if you put your thumb over one corner of the triangle you have to work out the missing number.



With the number bond example to the left if you cover the bold 10 at the top you are asking what is the total of 4 plus 6, or what does 6 add 4 make. If you cover the 4 you can ask what is 10 minus 6 if you cover the 6 its what is 10 take away 4.



With the times tables example to the left if you cover the bold 12 at the top you are asking what is 2 times 6, or what does 6 multiplied by 2 equal. If you cover the 2 you can ask what is 12 divided by 6 if you cover the 6 its what is 12 divided by 2 or how many 2s in 12.

Note that in the examples above we have varied the language used eg takeaway, subtract and minus are all used to mean the same thing, its really helpful to do this to help children develop their mathematical vocabulary.