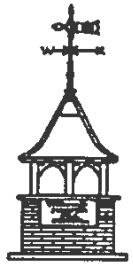
Make maths fun!!

Enjoy finding out about maths

Talk about maths

Everyone can be a mathematician!

Helping your child with maths



Juniper Hill School

Counting Ideas

* Practise chanting the number names. Encourage your child to join in with you. When they are confident, try starting from different numbers - 4,5,6 ...

* Sing number rhymes together - there are lots of commercial tapes and CD's available.

* Give your child the opportunity to count a range of interesting objects (coins, pasta shapes, buttons etc.). Encourage them to touch and move each object as they count.

* Count things you cannot touch or see (more difficult!!). Try lights on the ceiling, window panes, jumps, claps or oranges in a bag.

* Play games that involve counting (e.g. snakes and ladders, dice games, card games, games that involve collecting objects).

* Look numerals in the environment. You can spot numerals at home, in the street or when out shopping.

* Cut out numerals from newspapers, magazines or birthday cards. Then help your child to put the numbers in order.

* Make mistakes when chanting, counting or ordering numbers. Can your child spot what you have done wrong?

* Choose a number of the week e.g. 5. Practise counting to 5 and on from 5. Count out groups of 5 objects (5 dolls, 5 bricks, 5 pens). See how many places you can spot the numeral 5.

* Get children to lay the table

* Matching games

* Learn your tables while at the shops! Count things that come in sets of the following. **Two :** packs of sandwiches, socks. **Three:** bars of soaps, packs of orange juice cartons, packs of biscuits. **Fours:** packs of bread rolls, yoghurts.

Where you can find out more

Useful websites:

* http://www.mathsyear2000.co.uk
* http://bbc.co.uk/schools/numbertime/index.shtml
* http://www.mad4maths.com
* http://coolmaths4kids.com
* http://nrich.maths.org
* http://woodlands-junior.kent.sch.uk/maths
* http://primarygames.com
* http://bbc.co.uk/schools/ks1bitesize
* http://bbc.co.uk/schools/ks2bitesize

Mathematical Vocabulary for Shape

Exploring patterns, shape and space

shape, pattern
flat *line*
curved, straight
round
hollow, solid
corner
point, pointed
face, side, edge, end
sort
make, build, *construct,* draw, *sketch*
centre, radius, diameter
circumference, concentric, arc
net
surface
angle, right-angled
congruent
intersecting, intersection
plane
base, square based
vertex, vertices
layer, diagram
regular, irregular
concave, convex
open, close
tangram

3d Shapes

3D, three-dimensional
cube
cuboid
pyramid
sphere, *hemi-sphere, spherical*
cone
Cylinder, cylindrical
Prism
tetrahedron, polyhedron, octahedron, dodecahedron

2d Shapes

2D, two-dimensional
circle, circular, *semi circle*
triangle, triangular
equilateral triangle, isosceles triangle, scalene triangle
Square, rhombus
rectangle, rectangular, *oblong*
Star
pentagon *pentagonal*
hexagon *hexagonal*
heptagon
octagon *octagonal*
polygon
quadrilateral.
kite
parallelogram, trapezium

Vocabulary in italics is Introduced in Key Stage 2

Real Life Problems

* Go shopping with your child to buy two or three items. Ask them to work out the total amount spent and how much change you will get.
* Buy some items with a percentage extra free. Help your child to calculate how much of the product is free.
* Plan an outing during the holidays. Ask your child to think about what time you need to set off and how much money you will need to take.
* Use a TV guide. Ask your child to work out the length of their favourite programmes. Can they calculate how long they spend watching TV each/ each week?
* Use a bus or a train timetable. Ask your child to work out how long a journey between two places should take? Go on the journey. Do you
* arrive earlier or later than expected? How much earlier/later?
* Help your child to scale a recipe up or down to feed the right amount of people.
* Work together to plan a party or meal on a budget.
* Using a menu - how much does it cost?, what can I buy for £5?
* Use catalogues, work out how long your would need to save to buy an item e.g. a Nintendo Wii, an ipod.

These are just a few ideas to give you a starting point. Try to involve your child in as many problem - solving activities as possible. The more 'real' a problem is the more motivated they will be when trying to solve it.

Practising Number Facts

* Find out which number facts your child is learning at school (addition facts to 10, time tables, doubles etc). Try to practise for a few minutes each day using a range of vocabulary.
* Have a 'fact of the day'. Pin this fact up around the house. Practise reading it in a quiet, loud, squeaky….voice. Ask your child over the day if they can recall the fact.
* Play 'ping pong' to practise complements with your child. You say a number. They reply with how much more is needed to make 10. You can also play this game with numbers totalling 20, 100or 1000, times table facts. Encourage your child to answer quickly, without counting or using fingers.
* Throw 2 dice. Ask your child to find the total of the numbers (+), the difference between them (-) or the product (x). Can they do this without counting?
* Use a set of playing cards (no pictures). Turn over two cards and ask your child to add or multiply the numbers. If they answer correctly, they keep the cards. How many cards can they collect in 2 minutes?
* Play bingo. Each player chooses five answers (e.g. numbers to 10 to practise simple additions, multiples of 5 to practise the five times tables). Ask a question and if the player has the answer, they can cross off all their answers.
* Give your child an answer. Ask them to write as many addition sentences as they can with this answer (e.g. 10 = __+__). Try with multiplication or subtraction.
* Give your child a number fact (e.g. 5+3=8). Ask them what else they can find out from this fact (e.g. 3+5=8, 8-5=3, 8-3=5, 50+30=80, 500+300=800, 15+8=18). Add to the list over the next few days. Try starting with a x fact as well.
* Guess my number? Write a number on a piece of paper and put it in your pocket. Your child has ten guesses, to guess your number. Encourage them to ask sensible questions. Discuss what questions would be good to ask. You can only answer 'Yes' or 'No'.

Mathematical Vocabulary for Calculations cont

Year 3

Adding and subtracting

(as year 2)
hundreds boundary

Multiplication and division

(as year 2)
product
left, left over, remainder

Year 4

Adding and subtracting

(as year 3)
increase
decrease
Inverse

Multiplication and division

(as year 3)
divisible by
factor
quotient
inverse

Year 5

Adding and subtracting

(as year 4)
Units boundary
Tenths boundary

Multiplication and division

(as year 4)

Year 6

Adding and subtracting

(as year 5)

Multiplication and division

(as year 5)

Mathematical Vocabulary for Calculations

Reception

Adding and subtracting

add, more, and, make, sum,
total, altogether, score, double,
one more, two more, ten
more….
how many more to make…?
how many more is …..than….?
Take (away), leave
how many are left/left over?
how many have gone?
one less, two less…..ten less….
how many fewer is …..than
….?
difference between
is the same as

Year 1

Adding and subtracting

plus,
how much more is ….?
subtract, minus
how much less is…?
equals, sign

Multiplication and division

near double
half, halve
lots of
groups of

Year 2

Adding and subtracting

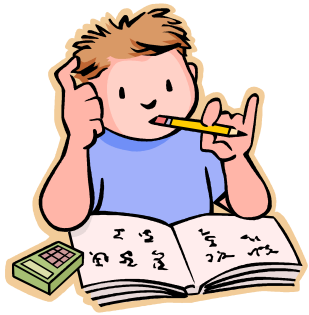
addition
one hundred more
one hundred less
tens boundary

Multiplication and division

times, multiply, multiplied by
multiple of
once, twice, three times, four
times, five times….ten times…
times as (big, long, wide and so
on)
repeated addition
array
row, column
share equally
one each, two each, three
each…
group in pairs, threes ...tens
equal groups of
divide
divided by
divided into

When faced with a calculation problem, encourage your child to ask……..

* Can I do this in my head?
* Could I do this in my head using drawings or jottings to help me?
* Do I need to use a written method?
* Should I use a calculator?



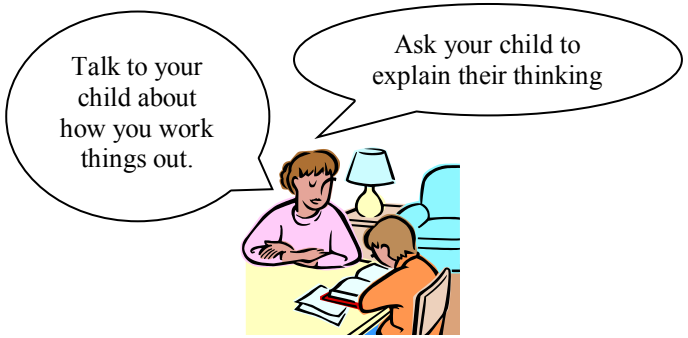
Also help your child to estimate and then check the answer. Encourage them to ask….

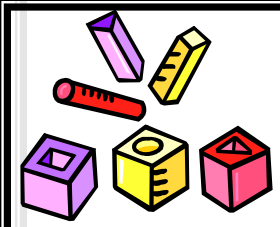
* Is the answer sensible?

Calculation

The maths work your child is doing at school may look very different to the kind of 'sums' you remember. This is because the old methods were not successful - the majority of people could not complete a long multiplication or division correctly. Also the traditional methods relied on 'learning by rote' not 'understanding'. The maths we do with your child encourages them to work mentally, where possible, using jottings to help support their thinking. Even when children are taught more formal written methods (from year 3 onwards), they are only encouraged to use these methods for calculations they cannot solve in their heads.

Discussing the efficiency and suitability of different strategies is an important part of maths lessons.





Shapes and Measures

* Choose a shape of the week e.g. cylinder. Look for this shape in the environment (tins, candles, tubes of sweets etc). Ask your child to describe the shape to you using mathematical vocabulary e.g. 2 circular faces, 2 curved edges….
* Play 'guess my shape'. You think of a shape. Your child asks questions to try to identify it but you can only answer 'yes' or 'no' (e.g. Does it have more than 4 corners (KS1)/vertices (KS2)?, Does it have curved sides?).
* Hunt for right angles around home. Can your child also spot angles bigger or smaller than a right angle?
* Look for symmetrical objects. Help your child to draw or paint symmetrical pictures/patterns?
* Make a model using boxes/containers of different shapes and sizes. Ask your child to describe their model.
* Practise measuring the lengths or heights of objects (in metres or cm). Help your child to use different rulers and tape measures correctly. Encourage them to estimate before measuring.
* Let your child help with cooking at home. Help them to measure ingredients accurately using weighing scales or measuring jugs. Talk about what each division on the scale stands for.
* Choose some food items out of the cupboard. Try to put the objects in order of weight, by feel alone. Check by looking at the amounts on the packets.
* Practise telling the time with your child. Use both digital and analogue clocks. Ask your child to be a 'timekeeper' (e.g. tell me when it is half past four because then we are going swimming).
* Use a stop clock to time how long it takes to do everyday tasks (e.g. how long does it take to get dressed?). Encourage your child to estimate first.
* Look at timetables - bus, train, swimming pool, cinema.
* Look at calendars - calculate how many days/weeks/months until an important event.
* There are patterns all around us. Encourage your child to spot them and describe them. What shapes can they see?