How to Help your Child with Maths

HIGHWORTH COMBINED SCHOOL & NURSERY

A Quick Guide to the

New Curriculum

Year 1

Year 1

What topics are they taught?

Please see the target tracker statement sheets for individual objectives!

Topics taught in Year 1:
- **Number and place value**
- **Calculations (addition and subtraction)**
- **Calculations (multiplication and division)**
- **Measurement**
- **Fractions**
- **Geometry - shape**
- **Geometry - position and direction**

To help your child develop a good understanding of number we ask you to use every opportunity to explore mathematical ideas in everyday life.

<u>For example:</u>

• Play fun board games with your children like dominoes, snakes and ladders, snap, pairs or connect 4.

• Practise counting in different groups of number while walking up the stairs.
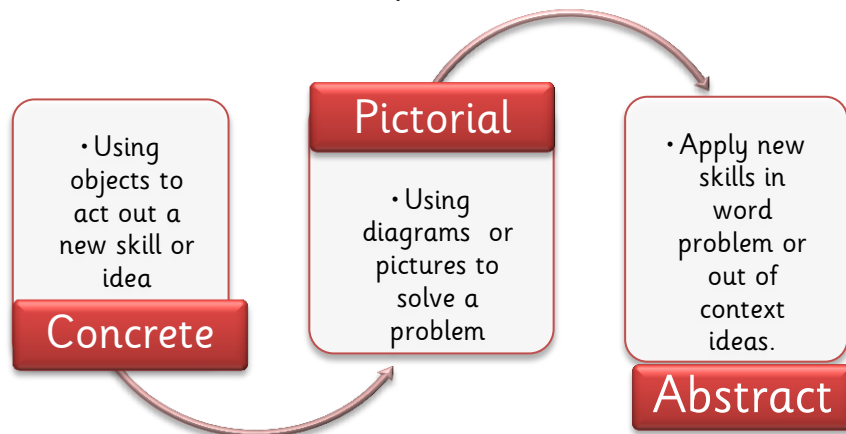
On the way to school, see how many different shapes you can spot. Which did you see most of?

• Find out which number facts your child is learning at school.

(number bonds to 10, times tables, doubles). Try to practise for a few minutes each day using a range of vocabulary.

• 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.

• Look for 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.

• Keep a Maths folder or book including any activities, games or practice that you do together at home!
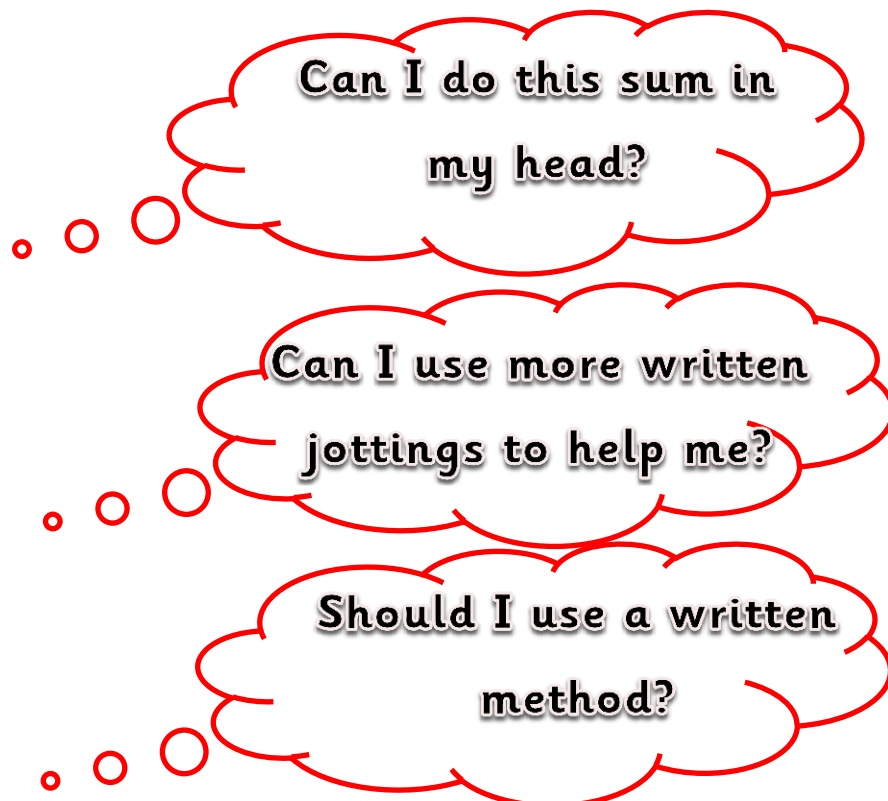
LEARNING

At Highworth, we use three steps (or representations) necessary for pupils to develop understanding of each mathematical concept.

Pictorial

- Using objects to act out a new skill or idea

Concrete

- Using diagrams or pictures to solve a problem

- Apply new skills in word problem or out of context ideas.

Abstract

CALCULATION

Talk to your child about how you work things out. Ask your child to explain their thinking. The work your child is doing at school may look very different to the kind of 'sums' you remember. This is because children are encouraged to work mentally, where possible, using personal 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.
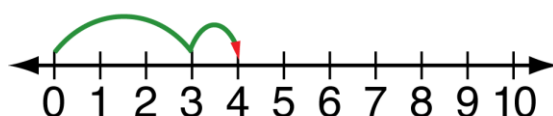
As part of a child's learning in calculation, they need to be taught how to select the best method according to the numbers. The hierarchy of thinking should be:

Can I do this sum in my head?

Can I use more written jottings to help me?

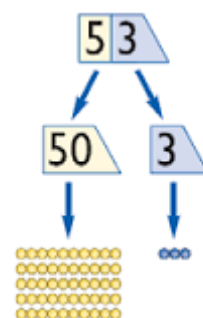Should I use a written method?

Year 1

In Reception, your child was taught to add practically using objects. In Year 1, they move onto adding using a number line. For example: Using a numbered number line to add, by counting on in ones, encouraging children to begin with larger number and count on. Children should solve a addition problem within a context.

$$3 + 1 = 4$$

In Year 1 they also:

- Use a range of equipment e.g. Number lines, counting apparatus, 100 squares and bead strings to count on starting with the bigger number.
- Add numbers in their head using their fingers to support them.
- Read and write number sentences using the = and + signs.
- Interpret number sentences including missing number problems.
e.g. 3 + □ = 8
- Understand the place value of each digit when adding 2 digit numbers. For example 23 is made up to 2 tens and 3 units. This is called partitioning.

Key Skills for Addition at Year 1:

- Read and write numbers to 100 in numerals (1-20 in words)
- Count to and across 100.
- Recall bonds to 10 and 20, and addition facts within 20.
- Count on in ones from a given 2-digit number.
- Add two single-digit numbers by counting on.
- Add three single-digit numbers spotting doubles or pairs to 10.
- Count on in tens from any given 2-digit number.
- Add 10 to any given 2-digit number.
- Use number facts to add single-digit numbers to two-digit numbers, e.g. use 4 + 3 to work out 24 + 3, 34 + 3.
- Add by putting the larger number first.
- Recognise doubles to double 6.

Key vocabulary:

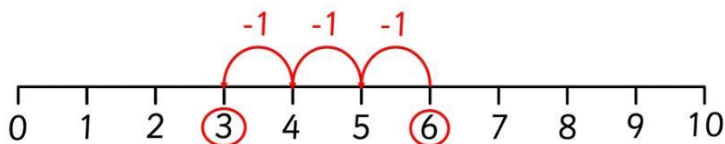**add, more, plus, and, make, altogether, total, equal to, equals, double, most, count on, number line**

Year 1

In Reception, your child was taught to subtract practically using objects. In Year 1, they move onto subtraction using a number line. For example: Using a numbered number line to subtract, by counting back in ones, encouraging children to begin with larger number and count back. Children should solve a subtraction problem within a context.

$$6 - 3 = 3$$

In Year 1 they also:

• Children consolidate understanding of subtraction practically using bead strings, cubes and in real life contexts.
• They are introduced to more formal recording using number lines.
• Model subtraction practically and using objects, number lines and 100 squares and practically.
• Find the difference between - this is to be done practically using the language 'find the distance between' and 'how many more than?'

Key Skills for Subtraction at Year 1:

• Give a number, say one less.
• Count back in ones to from 100 and from any single-digit or 2-digit number.
• Count back in tens from any 2-digit number.
• Locate any number on a 100 square and subtract 1.
• Know number bonds to 10, also know what is left if objects are taken from 10, e.g. 10 fingers, fold down 4, leaves 6 standing.
• Solve one-step problems involving subtraction, using concrete objects (bead strings, objects, cubes) and pictures, and missing number problems.
• Recognise the − and = signs, and use these to read and write simple subtractions.
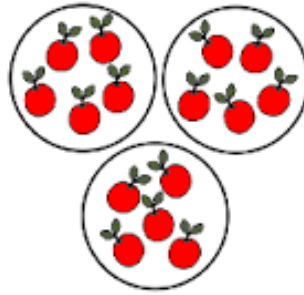
Key vocabulary:
equal to, take, take-away, less, minus, subtract, leaves, distance between, how many more, how many fewer/less than, most, least count back, how many left, how much less is...

Year 1

In Year 1, your child will be taught to multiply with concrete objects; grouping them into 'sets of objects' or 'groups of objects.' The focus is on counting in groups of 2, 5, and 10. Children should solve a multiplication problem within a context.

For example: Apples are in bags 5. We need 3 bags of apples. How many apples is that altogether? Can they solve this and write a multiplication statement e.g. 3 groups of 5 apples is 15 apples altogether or 3 x 5 = 15.

There are 3 equal groups of 5.

In Year 1 they also:

• Use visual and concrete arrays and 'sets of' objects to find the answers to '3 lots of 4', 2 lots of 5'
• Use lots of practical apparatus, arrays and picture representations.
• Are taught to count in multiples of 2s, 5s and 10s.

Key Skills for Multiplication at Year 1:

• Count in multiples of 2, 5 and 10.
• Recognise doubles to double 10 and how doubling is multiplying by 2.
• Solve simple one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. Recognising multiplication through repeated addition
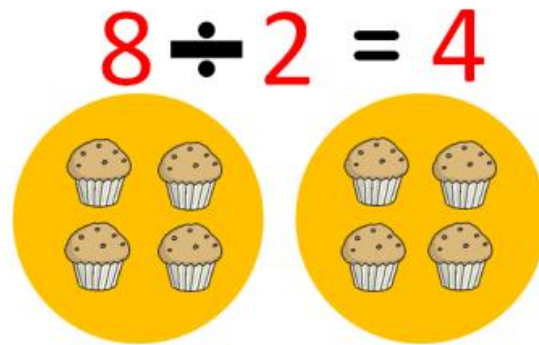E.g. 2 +2+2 =6 is the same as 2 x 3.

Key vocabulary:

groups of, lots of, times, array, altogether, multiply, count

Multiplication x

Year 1

In Year 1, your child will be taught to divide with concrete objects. Using both objects diagrams and pictorial representations, to solve problems involving both grouping and sharing. Children should solve a division problem within a context.

For example: 2 children share 8 cakes. How many does each child get? Can they solve this and write a division statement e.g. 8 cakes shared between 2 children gives 4 each or 8 ÷ 2 = 4

$$8 \div 2 = 4$$

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In Year 1 they also:

• Use lots of practical apparatus, arrays and picture representations.
 • Are taught to understand the difference between grouping objects (How many groups of 2 can you make?) and sharing (Share these sweets between 2 people)
• Taught to count in multiples of 2s, 5s and 10s and how the inverse is ÷
• Find half of a group of objects by sharing into 2 equal groups.

Key Skills for Division at Year 1:

 • Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations arrays with the support of the teacher.
• Through grouping and sharing small quantities, pupils begin to understand, division, and finding simple fractions of objects, numbers and quantities.
• They make connections between arrays, number patterns, and counting in twos, fives and tens.

Key vocabulary:

share, share equally, one each, two each..., group, groups of, lots of, array

Website links

The following web addresses are ones which we use in school as part of our teaching, plus additional ones which your child may find enjoyable. Most of the games are straightforward and your child will be able to play/consolidate their maths skills independently.

> ### Useful online maths vocabulary dictionary:
> http://www.amathsdictionaryforkids.com/dictionary.html

The following websites have links to numerous maths topics:

http://www.bbc.co.uk/bitesize/ks1/maths/

http://www.ictgames.com/resources.html

http://www.topmarks.co.uk/Interactive.aspx?cat=8

http://www.bbc.co.uk/education/dynamo/den/dynamake/make.shtml

http://www.crickweb.co.uk/ks1numeracy.html

http://primarygamesarena.com/Key-Stage-1

http://nrich.maths.org/primary-lower

http://www.bbc.co.uk/schools/websites/4_11/site/numeracy.shtml

http://uk.ixl.com/math/years

Look at our school website to see what websites we use in school.

http://www.highworth.bucks.sch.uk/NEW/default.htm