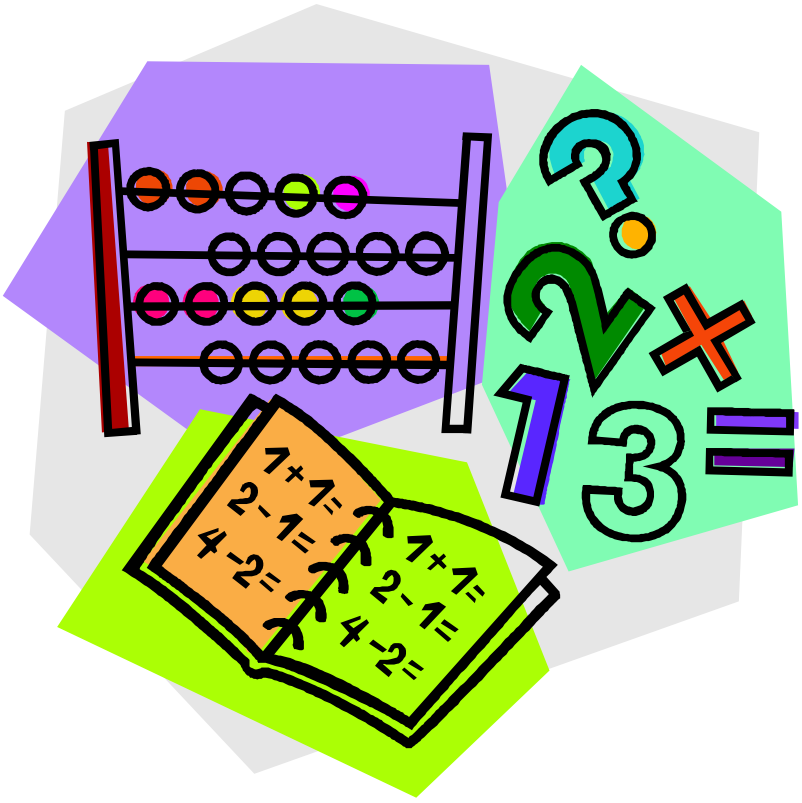
Awbridge Primary School

MAKE YOUR CHILD A MATHS STAR!

A PARENTS' GUIDE TO HELPING YOUR CHILDREN WITH MATHS



Booklet 1 of 3:

Key Stage 1
Stage 1 to Stage 2

"IT WASN'T LIKE THIS WHEN I WAS AT SCHOOL!"

Have you ever wished that you understood current Maths methods better? Many parents find that their children are using methods or strategies, which are very different from those used in the past. This can often cause confusion when trying to support your child at home. This booklet has been prepared to give you a record of the strategies your child will be using in school.

The main methods used in each stage by the majority of pupils for addition, subtraction, multiplication and division are shown. These methods are introduced throughout the teaching year so most pupils should be familiar with all methods by the end of the year. Each sheet also shows typical maths vocabulary that children will be acquiring and using at this stage.

This is a guide only; children will always progress at different speeds. However, support from you will undoubtedly be of great benefit to them at all times. If you have any questions, your child's teacher will be pleased to discuss the strategies with you.

This booklet is part of a series of 3, covering Stage 1 to Stage 6.

Turn your child into a Mathemagician!

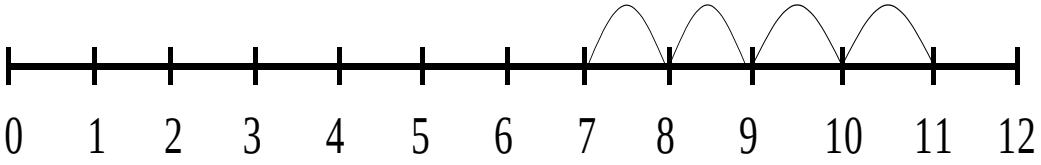
STAGE 1 - Addition

Practical activities using pictures and practical resources (e.g. counters, blocks).

7 + 3

<u>Using number lines for addition:</u>

7 + 4



Start at 7, jump on in 'ones' four times
So the answer is 11

7 + 4 = 11

<u>Using number squares for addition:</u>

Children will use 50 squares then 100 squares for counting on.

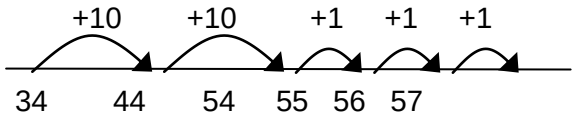
Vocabulary:
+, add, more, plus, make, sum, total, altogether, score, double, one more, two more, … ten more, how many more to make…? how many more is… than…? how much more is…?

STAGE 2 - Addition

Using number lines for addition:

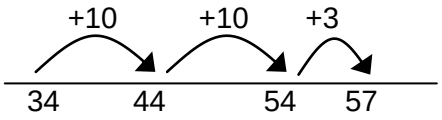
Children will continue to use number lines for addition, but this time they will be 'empty number lines' (they have no numbers already recorded).

First they will count on in tens and ones:
34 + 23



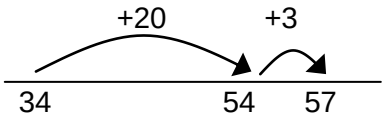
34 + 23 = 57

Then they will add on the ones in one jump:
34 + 23



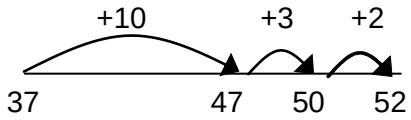
34 + 23 = 57

Then they will add the tens in one jump and the ones in one jump:
34 + 23



34 + 23 = 57

Introduce bridging through ten to help the children become more efficient
37 + 15 = 52



Look at partitioning one number:
23 + 12 = 23 + 10 + 2
= 33 + 2
+ 35

Vocabulary:

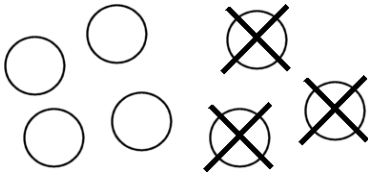
add, addition, more, plus, make, sum, total, altogether, score, double, near double, one more, two more... ten more... one hundred more, how many more to make…? how many more is… than…? how much more is…?

STAGE 1 - Subtraction

Children use lots of practical activities

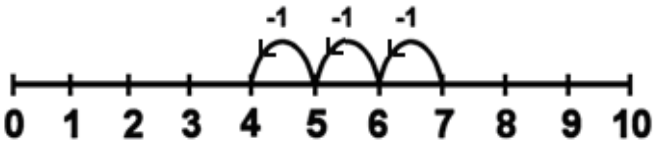
<u>Subtraction as take away:</u>

7 – 3 = 4



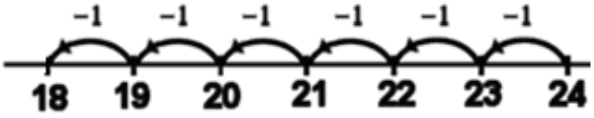
Using objects (e.g. counters, blocks etc.) or draw and cross out.

Using a number line for 7 – 3 (starting with a printed number line, then moving to a blank one)



Start at 7, jump back in 'ones' three times: 7-3=4

Same for TO – O using number line: 24-6

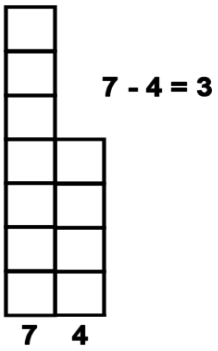


24-6=18

<u>Using number squares for subtraction:</u>

Children will use 50 squares then 100 squares for counting back.

<u>Subtraction as finding the difference:</u>



Use practical apparatus (e.g. counters, blocks etc.) to demonstrate the difference.

Also count up on number lines to find differences e.g. count up from 4 to 7 to find the difference.

Difference = 3

Vocabulary:

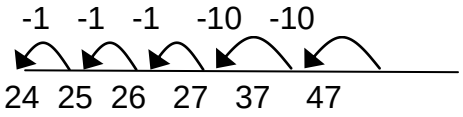
subtract, take (away), minus, leave, how many are left/left over? how many have gone? one less, two less, ten less… how many fewer is… than…? how much less is…? difference between, equals sign, is the same as.

STAGE 2 - Subtraction

Continuing as lots of practical activities, as for Stage1.

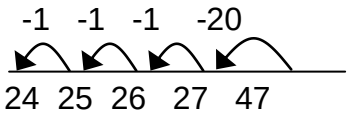
<u>Subtraction as take away using number lines to count back:</u>

47 – 23

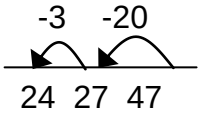


47 – 23 = 24

Then move to subtracting the tens in one jump:



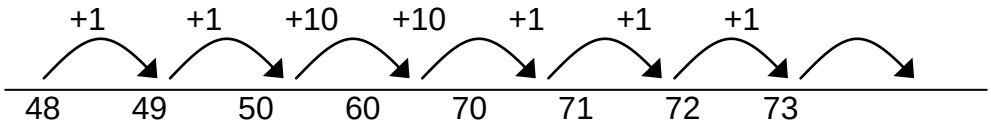
Then the tens in one jump, and the ones in one jump:



<u>Subtraction using number lines to find the difference:</u>

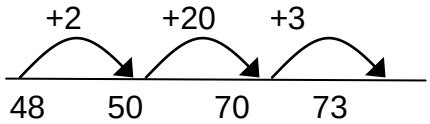
For examples which involve bridging through ten, the children will be introduced to the strategy of counting up in order to find the difference:

73 - 48



73 – 48 = 25

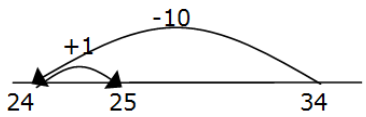
Children are helped to become more efficient by adding on the ones and the tens in bigger jumps:



Compensation:

For subtracting 9, use a compensation strategy:

34 – 9 = 25



Vocabulary:

subtract, take (away), minus, leave, how many are left/left over? how many have gone? one less, two less, ten less…, how many fewer is… than…? how much less is…? difference between, equals sign, is the same as.

STAGE 1 - Multiplication

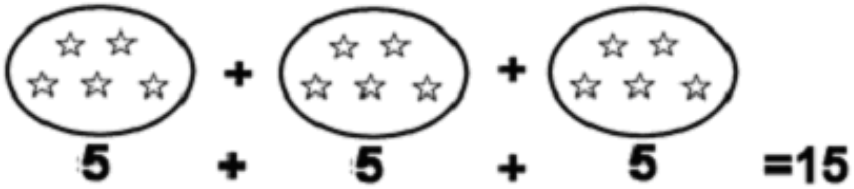
Children experience lots of practical activities and concentrate on x2, x5 and x10

Sequences – counting aloud in jumps of 2, 5, 10:

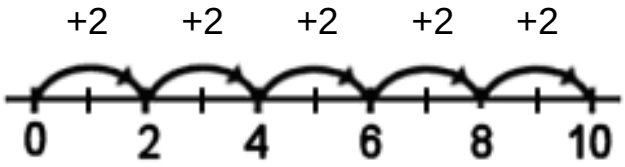
2, 4, 6, 8, 10 ….
5, 10, 15, 20, 25 ….
10, 20, 30, 40 ….

Repeated addition using hands or apparatus or diagrams:

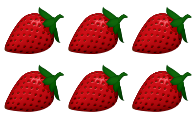
3 groups of 5



Using a number line for jumps of 2, 5, 10 e.g. If I have 5 bicycles, how many wheels would there be?



Multiplication is related to doubling and counting groups of the same size:



Looking at columns: 2 + 2 + 2 or 3 groups of 2

Looking at rows: 3 + 3 or 2 groups of 3

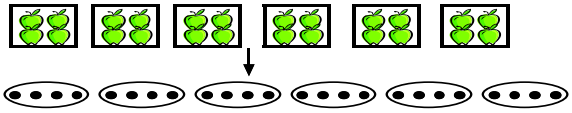
Vocabulary:
Lots of, groups of, multiply, times, add, steps of, jumps of

STAGE 2 - Multiplication

Focus is on x2 x5 x10 tables

Pictures/Marks:

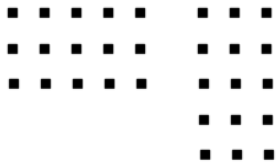
Children are encouraged to use marks to represent objects e.g. There are 4 apples in one box. How many in 6 boxes?



Arrays:

5 x 3 **3 x 5**

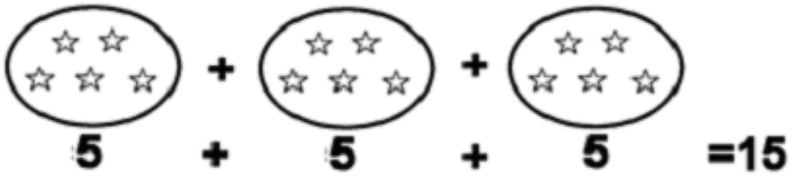
3 rows of 5 or 5 rows of 3



Multiplication as repeated addition:

5 x 3

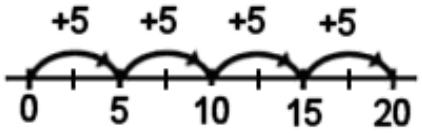
3 groups of 5



Repeated addition also shown on number lines:

5 x 4

4 Jumps of 5



5 x 4 =20

Doubling can be shown by partitioning:

15 x 2

	10	*5*
2	*20*	*10*

=30

Vocabulary:

lots of, groups of , times, multiply, twice, three times… ten times, times as (big, long, wide… and so on), repeated addition, array, row, column, double, triple.

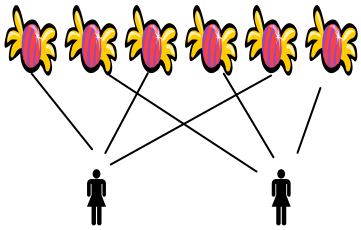
STAGE 1 - Division

Division can be seen as sharing and grouping:

Sharing:

Lots of practical problems using counters, blocks and sharing out objects e.g.

Share 6 sweets between 2 children



Each child has 3 sweets.

Grouping:

In practical tasks, children will sort objects into different sized groups e.g. groups of 2, 3, 4 etc.

Sort the socks into pairs. How many pairs of socks are there?

8 socks can be put into 4 pairs.

12 children get in to teams of 4 to play a game. How many teams are there?

12 children can make 3 teams of 4.

Vocabulary:

share, share equally, groups of, how many groups? half, quarter

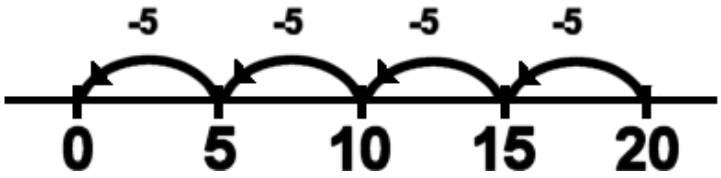
STAGE 2 - Division

Children need to continue to experience practical division including both sharing and grouping as in Stage 1. See previous page for examples.

Division using a number line:

Children need to develop their understanding of division as sharing equally or forming groups of equal size through repeated subtraction. Number lines are a good way to model this. E.g.

20 ÷ 5 = 4



Start at 20
Jump back in 5s to 0
The number of jumps gives the answer –
4 jumps

20 ÷ 5 = 4

Division with remainders:

With remainders - sharing using practical apparatus

Share 14 biscuits between 4 children

Each person gets 3 biscuits and there are 2 left over.

14 ÷ 4 = 3 remainder 2

Vocabulary:
Halve, share, share equally, one each, two each, three each… group in pairs, threes… tens, equal groups of, divide, divided by, divided into, left, left over

The following are some suggested websites that can help support your child's maths.

BBC Maths
http://www.bbc.co.uk/education/subjects/zjxhfg8

Woodlands Junior School Maths Zone
http://www.woodlands-junior.kent.sch.uk/maths/index.html

Ambleside Primary School
http://www.amblesideprimary.com/ambleweb/numeracy.htm
Go to Tools for Teaching section

TopMarks Education Resources
http://www.topmarks.co.uk/

CoolMath4kids (US Site)
http://www.coolmath4kids.com/

Primary Games (evaluation versions but playable)
http://primarygames.co.uk

Counton (more KS2 orientated but some useful resources)
http://counton.org