Supporting Your Child with Maths at Home

Years 1 & 2

Introduction

This guide has been designed to explain some of the ways that your child is taught to solve mathematical problems in school and show ways you can support them. These skills are taught alongside mental strategies. In Year 1 and also in Year 2, the children will use a wide variety of strategies to undertake mathematical calculation, including counting, singing, group activities, practical methods using manipulatives (visual and tactile aids such as counting beads, NUMICON, Base 10) and maths in the outdoors.

Why do you need to know?

When looking through this guide, you may find that the children are taught to solve mathematical problems in ways that look different from the ways you may remember! Often children encounter frustration and difficulty when receiving mixed methods from home and school, and for this reason, we have tried to produce a guide to help you fully support your child in a way that will match the methods their teachers are using in school.

What should you do?

Before any mental or written calculation is undertaken, children are encouraged to discuss which method of solving the problem would be best. And proceed through a number of steps. In school the children will be asked to Read the question, identify the maths involved, estimate an answer, calculate and finally check work is correct. At home…

Talk it through
How would *they* solve this and get your child to explain her thinking.

1. READ
Read the question carefully.

2. Identify
What is the maths? What is needed? + - x or ÷? Should I do it in my head or will I need a written strategy?

3. Estimate
Read the question carefully.

4. Calculate
Use their methods

5. Check
Ask, "Is it a sensible answer?"

Addition

In Year 1, children will use many different visual images to help them count and add. They will have manipulative aids to touch (the school uses counters, NUMICON and Base 10 among other things). In Year 2, as the teachers feel the children are ready, they will begin to use written calculation strategies.

Year 2

There are 12 girls in class 4 and 17 girls in class 5. How many girls are there altogether?

*In Year 2 children are encouraged to solve problems either by **partitioning** the numbers*
Or, as the year progresses…
*By placing numbers on a **number line** to count up in comfortable sized steps.*

Partitioning

12 + 17 = 29

(10 + 10) + (2 + 7)
20 + 9

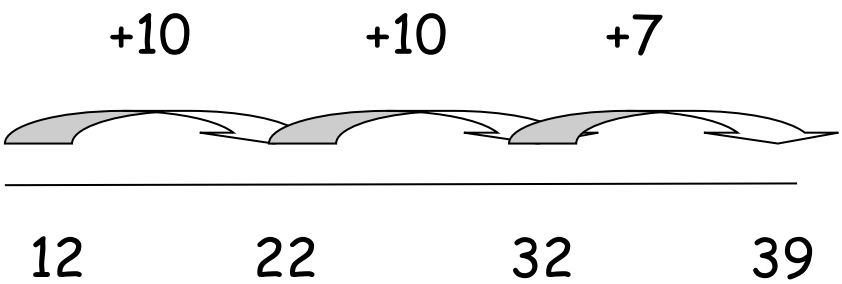
*In this example, the children separate the numbers 12 and 17 into **TENS** and **ONES**.*

The tens are added to make 20 and the ones are added to make 9.

20 and 9 are then recombined to find the final answer.

The Number Line

12 + 27



These steps should be taken in sizes the children feel comfortable with. For example, some children may add 20 in one step, followed by the 7. Others may need to add the 7 in ones! But that's okay. All children move at different speeds. Don't worry.

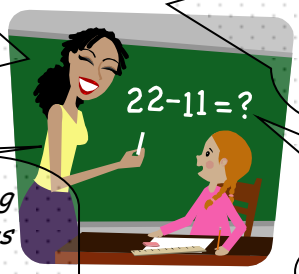
Subtraction

In Year 1 the children will physically **take away** items, **count** back and use a variety of visual images. In Year 2, the children will continue this approach, but will also be introduced to the blank number line for subtraction. It will be used to count backwards (subtract) and count on (to find the difference between two numbers)

Year 2

It's a snowy day!

There are 37 children in Class 1 but 11 of them couldn't make it to school because of the snow. How many children came to school that day?



*Children must take care to **place the smaller number to the left** of the line if they are endeavouring to count up and find the difference.*

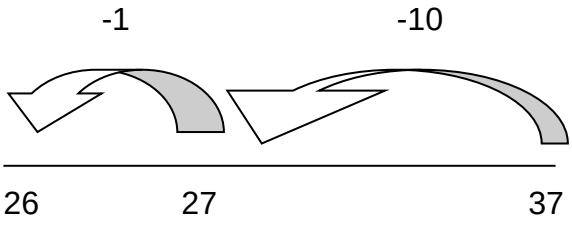
*Equally, if they intend to count backwards, **they must start at the right of the line** placing the larger number here first.*

It is crucial to children's understanding of number that they see subtraction as the inverse (opposite) of addition.

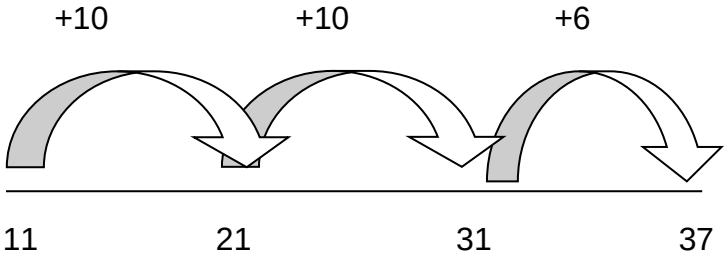
This is one of the reasons that subtraction problems are solved by counting back and also by adding up.

As with addition, the steps in which the children choose to count on or back should be of their own choice, enabling them to solve problems their own way, often with support from an adult.

37 - 11 = 26 (Counting back from the highest number)



37 - 11 = **26** (Counting on from the lowest number)



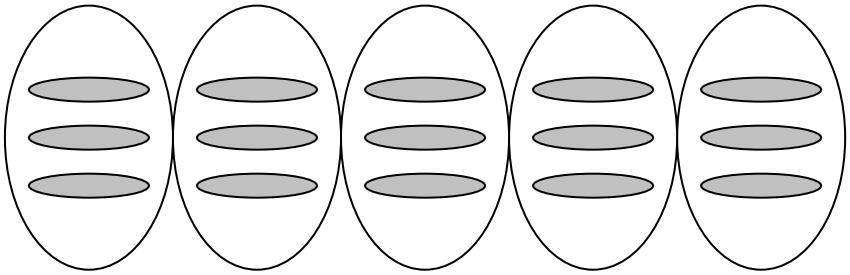
Multiplication & Division

During Year 1 and Year 2 the children will learn the times tables for their year group. They will begin with the 2's, 5's and 10's and this will develop and extend into the use of the 2's 4's and beyond for many children over the two years. In addition to this, children will begin to examine multiplication and problems involving multiplication as repeated addition using manipulatives. The children will be encouraged to share in division and will once again use tangible objects to sort and share to help them solve and explain the answers to their problems.

When the children are taught their first written multiplication calculation strategies, they will use arrays for both division and multiplication.

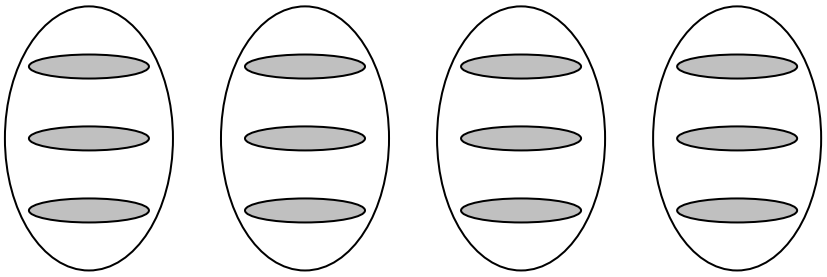
This technique allows them to circle groups when dividing, and draw groups when multiplying.

5 x 3 = 15



Here, the children would draw 5 groups of 3 (or 3 groups of 5) and count up, hopefully in 5's or 3's, although children whose development has not yet progressed to counting in groups can still access this method when counting in 1's.

12 ÷ 3 = 4



Here, the children would draw 12 objects, dots or basic shapes and share them into groups of 3 by circling 3 at a time. Once this is complete, the children would count up the number of groups they have circled.