



## How to help your child with their fluency in Maths, Year 3

### The National Curriculum

This statutory document aims: **For children to become fluent in the fundamentals of mathematics**, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and are able to recall and apply their knowledge rapidly and accurately.

### **What is mathematical fluency?**

Fluency consists of three elements: **Efficiency, accuracy and flexibility.**

**Efficiency** is about not struggling with too many steps or losing sight of the logic of the problem. An efficient strategy is one that a student can carry out easily, keeping track of steps and make use of intermediate results to solve the problem.

**Accuracy** depends on several aspects of the problem-solving process, among them careful recording, knowledge of number facts and other important number relationships and checking results.

**Flexibility** requires knowledge of more than one approach to solving a particular kind of problem, such as two-digit multiplication. Students need to be flexible in order to choose an appropriate strategy for the numbers involved, and also to be able to use one method to solve a problem and another method to check the results.

Fluency requires more of pupils than memorising a single procedure.

**They need to understand what they are doing and why they are doing it.**

### Why support your child's mathematical fluency?

Helping your child to develop their mathematical fluency will lay the foundations for them becoming confident mathematicians and help to support their financial wellbeing in adult life. No-one is born a good or bad mathematician, all pupils have the ability to develop their mathematical fluency and confidence.

## How to support your child's mathematical fluency:

### Reading books

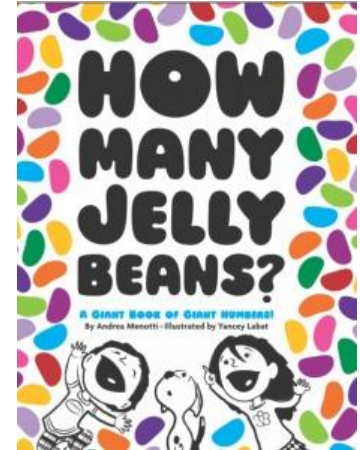
Take the opportunity when reading picture books to count objects, or to discuss the position of things. Compare the amount of objects you can see on different pages.

You can ask questions such as;

"How many different ways can you make 20? What would double that amount be?"

There are some excellent and enjoyable books which have a mathematical focus such as;

- 'How many jellybeans?' by Andrea Menotti
- 'One is a snail, ten is a crab' by April Pulley Sayre



### Counting

**Year 3s need to learn to count from 0 in multiples of 4, 8, 50 and 100.**



Counting objects around the home, is a great way of practising their counting skills. You could count with pasta, sweets, pencils or anything else that you have lying around. Ideally, the objects would all be similar in size and shape.

Comparing these sets of objects with your child and discussing which has more or less is also a brilliant way to get them thinking.

Once your child is more confident counting in these multiples, you might want to do some 'Quick Fire' counting in the car or the bath. It is brilliant to practise counting forwards and backwards and starting at different numbers (not always from 0).

**Using games In Year 3 these have a large focus on improving multiplication and division fluency.**

**Dice** – Roll two dice, find the total and then ask your child to multiply the total by the multiplication table that they are working on Can they also tell you the associated division fact? E.g. the number on the dice are 4 and 5. The total is 9, if your child is working on their 3 times table it would be  $9 \times 3 = 27$ . The associated division fact is  $27 \div 3 = 9$ .

**Bingo** – Each person writes down 6 numbers which are multiples of 4 e.g. 4, 8, 12, 24, 36 and 40. Roll either a twelve sided die or two six sided dice. If you choose two dice then add the numbers together first e.g. roll a 3 and a 4, add these to make 7. Multiply that number by 4. If the answer is on your paper cross it out. The first to cross out all six numbers of their number wins. You can also play the game using a different times table or a combination of two tables.

**Monopoly** – links with money and numbers greater than 100.

Play 'Times tables rockstars' to encourage multiplication and division fluency.



### **In the Kitchen**

Ask your child to help you to weigh things and measure out quantities when baking and preparing dinner. Then ask him/her to double the quantities.

Look at the weights and measure on packets, bottles and tins. Choose 5 items. Ask your child to put them in order, heaviest or lightest first. Talk about how you would scale a recipe up or down to suit a different number of people.

### **Time**

Throughout the day, ask your child the time – to the nearest minute. Use an analogue clock as well as a digital clock.

Ask what the time will be in one hour from now. Investigate various things that they can do in a minute e.g. write their name. Keep a log of these and try to improve the score.

### **Money**

When you are only buying a few things ask your child to estimate how much the total will be.

Find the total of three items and tell you the change from £5, £10.

Look at any reductions and talk about what the language means – 'buy one get one free'.

Talk about what 'good value' means to your family.

Change the values from £ to p and p to £, write these down.

### **Fractions**

Use 12 identical items such as buttons, paper clips or pieces of pasta. Ask your child to find half of the 12 things. Then find one quarter of the same group. Talk about if you know one quarter you can use this to find two quarters which will be the same as one half. You can find three quarters and finally four quarters which is the whole.



**Please remember** that everyone has the potential to be a good mathematician. As adults you will all have very varied experiences of Maths at school and your personal feeling towards the subject. Maths at the federation of Follifoot and Spofforth schools is a positive and life enhancing experience. We really hope you will use these ideas to rekindle an enjoyment of maths in your lives.