



## How to help your child with their fluency in Maths, Year 4

### 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:**

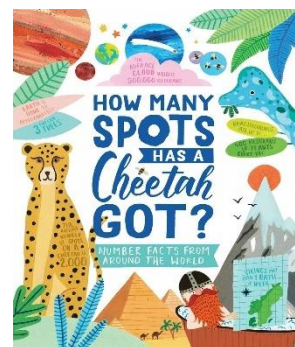
### **Reading books**

Reading books can contain a wealth of opportunities for mathematical discussion. For Year 4 non-fiction books which look at the world or space will contain facts which will use increasingly big numbers and measurements.

Questions such as 'How long do you think it would take to get there?', 'Which planet is the biggest and by how much?' provide your child with the opportunity to explore place value.

There are some excellent non-fiction books such as:

- 'The epic book of epicness' by Adam Frost this is very enjoyable and has a lot of interesting facts.
- 'How many spots has a cheetah got?' by Steve Martin once again a hugely enjoyable book which has a wealth of facts and numbers to explore.



### **Counting**

#### **Year 4s need to learn to count from 0 in multiples of 6, 7, 9, 25 and 1000.**

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).

#### **Year 4s need to learn to count backwards through zero to include negative numbers.**

It is helpful to use real situations to support this learning, such as reading temperature scales/thermometers.

### **Using games In Year 4**

**These have a large focus on improving multiplication and division fluency, there are also some suggestions for widening the vocabulary around times tables.**

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



Practise times tables, say them forwards, backwards and ask your child questions like: What are seven eights? What is 56 divided by 7? What are six sevens? How many nines are there in eighteen? Find the product of six and three. Find factors of numbers.

Taking it further... Ask your child if they know  $4 \times 8 = 32$  what else do they know? e.g.  $40 \times 8 = 320$ ,  $4 \times 80 = 320$ ,  $40 \times 80 = 3200$ ,  $32 \div 8 = 4$ ,  $32 \div 4 = 8$ .

Pairs to 100 (then extend to 1000) This is a game for two players. Each person draws 10 circles. Write a different two-digit number in each circle – but not a multiple of ten (10, 20, 30, 40...). In turn, choose one of the other player's numbers. The other player must then say what to add to that number to make 100, e.g. choose 64, add 36. If the other player is right, he/she crosses out the chosen number. The first to cross out 6 numbers wins. This can then be extended to numbers to 1000.

### **In the Kitchen**



Ask your child to help you weigh things and measure out different quantities when baking and preparing dinner. Ask him/her to work out the recipes for different quantities.

We weighed 250g of sugar from a kilogram bag of sugar to bake a cake. How much sugar is left in the bag? 750g. How do you know? Because  $250\text{g} + 750\text{g} = 1000\text{g}$  and  $1000\text{g} = 1\text{kg}$ .

Talk about how much money a recipe would cost.

### **Time**

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

Ask your child to convert between twelve- and twenty-four-hour times.

Discuss when you will start to watch a programme, it's length and then the finishing time.



### **Money**

When you are shopping take time to ask about which item your child would choose and why? Do they think it is good value?

Discuss why some types of pasta are cheaper than others. Is the bag smaller?

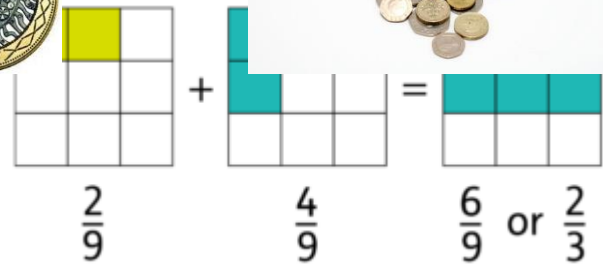
Talk about what you think is good value as a family.

Talk about saving for an item or how you prioritise spending.



### Fractions

Chose a whole number such as 6 and then say the fraction you are going to be thinking about. For example, our number is 6 and we are going to be thinking about fifths. One fifth is 6, so two fifths are 12, three fifths are 18, four fifths are 24 so five fifths are 30.



This can be extended to six fifths and this introduces the idea of improper fractions.

**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.