Helping your child with fluency in mathematics

Year 1

Aims of the National Curriculum

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 fluency?

Fluency consists of three elements:

Efficiency is about not being bogged down with too many steps or losing sight of the logic of the strategy. An efficient strategy is one that a student can carry out easily, keeping track of sub-problems 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 double checking results.

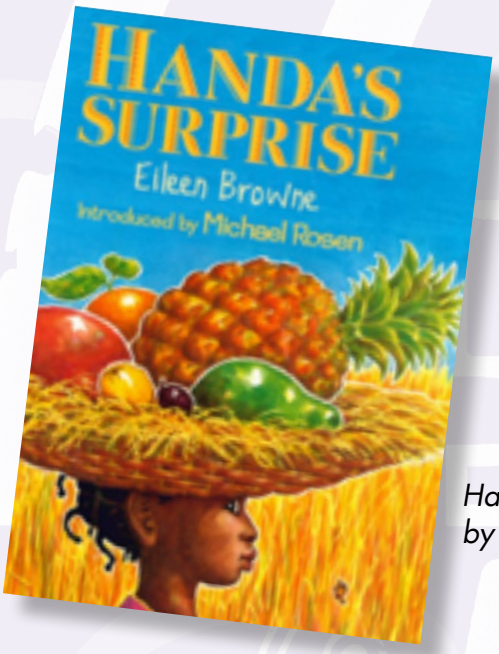
Flexibility requires knowledge of more than one approach to solving a particular kind of problem, such as two-digit multiplication. Students need to be flexible in order to choose an appropriate strategy for the numbers involved, and also to be able to use one method to solve a problem and another method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

So fluency demands more of pupils than memorising a single procedure – they need to understand why they are doing what they are doing and know when it is appropriate to use different methods. *(Russell 2000)*

How can you support your child in becoming fluent in mathematics?

Maths in Stories

When reading with your child look for opportunities to practise maths.



Handa's Surprise by Eileen Browne

The questions and activities below are related to the book 'Handa's Surprise' by Eileen Browne.

Count the fruit. How many leaves on the orange? How many children can you see in the picture? Count up in 2's. Look at the fruits, which is the smallest? Which is the largest? Which weighs more, a pear or an orange? Look at the fruit in your own fruit bowl and get your child to feel the weight of them – can they identify the heaviest? Lightest?

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Games

Dominoes – add the dots on the dominoes, can you spot another domino with the same amount of spots? Snakes and Ladders is another

Walking to School

On the way to school spot shapes e.g. windows, pavements. See how many cuboids, spheres and cylinders you can spot. Which did you see the most of? Choose a shape for the week e.g. a square. How many of these can your child spot in a day or week? (You could include in the home as well).

Count the leaves, cracks in the pavements. Look at door numbers – what does it say? Is it an odd or even number? What is the next number going to be?

In the Kitchen

Choose two tins or packets from your cupboard. Ask your child to hold one in each hand and tell you which is heavier and which is lighter. If they are correct, they keep the lighter one. Then choose another item, try to find one that is lighter still. Ask him/her to compare again, and then switch between choosing heavier items and lighter ones. Fractions – talk about ½ an object (sandwich) when you are cutting food up or ½ of a quantity (eggs in an egg box).

What's the time?

Talk about the passing of time – seasons, months of the year, days of the week as well as yesterday, today, and tomorrow and the day before. Count in fives and tens. Look at an analogue clock and make a point of showing your child o'clock.

Going Shopping

Look at the different coins with your child. Count the money in their purse/money box and then sort it. Spend small amounts of pocket money. Say maths problems like… I have 6p in my pocket. How much more do I need to make 10p? Why? (Because 4p and 6p totals 10p). I have 3 oranges. If I buy 4 more, how many do I have altogether?

When in the shop, get your child to buy a small item, hand over the money and then look at the change – talk through the maths that you do, ask him/her to have a go.

This is some of the maths your child should be able to do by the end of Year 1.

Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number; from a given a number, identify one more and one less; represent and use number bonds and related facts within 20;

Read and write numbers to 100.

Solve problems that involve addition and subtraction using real objects.

Compare, describe and solve practical problems for: Lengths and heights (e.g.long/ short, longer/shorter, tall/short) Time (quicker, slower, earlier, later).

Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, afternoon and evening.

Recognise, find and name a half as one of 2 equal parts of an object, shape or quantitys

Recognise and name common 2D and 3D shapes including:

- 2D shapes (e.g. rectangles (including squares), circles and triangles)
- 3D shapes e.g. cuboids (including cubes) pyramids and spheres

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