



Fluency Overview for Nursery to Year 6

(Revised September 2025)

Fluency in the Jersey Maths Curriculum 2014

One of the three aims of the Mathematics curriculum states that pupils (of all ages, not just primary children) will: *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 the ability to recall and apply knowledge rapidly and accurately.*

What is fluency?

Students exhibit computational fluency when they demonstrate flexibility in the computational methods they choose, understand and can explain these methods, and produce accurate answers efficiently.

Russell (2000) spells this out in more detail and suggests that fluency consists of three elements:

Efficiency - this implies that children do not get bogged down in too many steps or lose track of the logic of the strategy. An efficient strategy is one that the student can carry out easily, keeping track of subproblems and making 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 the 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 be able to use one method to solve a problem and another method to check the results.

Fluency demands more of students 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.

How can we support children in becoming fluent?

As with much of Mathematics, the key to fluency is in making connections, and making them at the right time in a child's learning.

Manipulatives

We learn by moving from the concrete to the abstract and structured apparatus such as Dienes can be helpful for learning about place value or number bonds. However, the meaning isn't in the manipulatives themselves – it has to be constructed by children over a period of time, through playing around with them and connecting them directly to mental and recorded calculation.

Talking about their work

At NRICH we often say you can't do maths unless you talk maths. But the quality of the talk is important. It is not simply children sharing how they did a particular calculation, but describing why and how it worked, and how their method is the same or different to those of others. In other words, giving children opportunities to use those higher-level skills of comparing, explaining and justifying. Russell says 'The reason that one problem can be solved in multiple ways is that mathematics does not consist of isolated rules but connected ideas. Being able to solve a problem in more than one way, therefore, reveals the ability and the predilection to make connections between and among mathematical areas and topics'.

Consolidation in meaningful contexts

By offering children practice in context, we help them to make links between the types of situations that a particular strategy might suit. Russell calls this mathematical memory, which is different from just memorising. She says that important mathematical procedures cannot be "forgotten over the summer" because they are based in a web of connected ideas about fundamental mathematical relationships.

(taken from NRICH 'Developing Number Fluency – What, Why and How')

Fluency Sessions at St Lawrence School

Whilst Fluency is inevitably a part of every Maths lesson, at St Lawrence School, we also ensure that we explicitly teach the skills which enable children to become Mathematically fluent. In addition to the *White Rose* Scheme of Work which teachers follow from Reception upwards, Fluency sessions take place 15 minutes daily in Y1 – Y6. Sessions take place in our EYFS during whole-class sessions as well as small group sessions.

Times Tables must be taught explicitly from Y2 upwards with two of the five Fluency sessions dedicated to times tables only each week.

Resources are given at the end of this document to enable teachers to deliver engaging, interactive Fluency sessions.

Children work towards their 'Number Bonds' achievement certificates where they are assessed by the Maths Coordinator or their class teacher before being awarded the appropriate certificate. These achievements are celebrated in Key Stage Assemblies.

Children work towards their 'Times Tables' Medal which involves them consistently, **over at least half a term**, getting 100% on all times tables in under five minutes.

If we want children to have the fluency to apply learning in a range of contexts, we need to expose the underlying concepts. Concepts need to be explored through a range of representations and strategies. We need to teach children to pull numbers apart, manipulate them, and examine and investigate patterns.

Fluency Overview Guide for Reception to Y6

Year Group	4 Operations + - X. ÷	Number Bonds	Place Value	Fractions
Nursery	Recognise and recite number names to five, and then to ten. Touch count to five. Sort objects and say which group is more / less.	Develop subitising skills – <i>What can you see ?</i> (four can be three and one, or two and two).	Use the language <i>before, next, after.</i>	Name simple shapes.
Reception	Add and subtract small numbers using objects and counting (within 5 and then 10). Understand ‘taking away’ practically. Begin repeated addition and sharing through grouping.	Number bonds to 5 (e.g., 2 + 3 = 5) Use fingers and objects to explore parts of a whole Subitising to three, five and then seven “ <i>What do you see ?</i> ”	Recognise numbers to 10 and then to 20. - Sort objects by size and quantity	Understand halves of shapes and of quantity.

Year 1	Count to and across 100. Add and subtract within 20. Know one more and one less than a given number within 20. Begin multiplication as repeated addition. Understand division as sharing. or grouping. Be familiar with arrays.	Know number bonds to 10. Use bonds to solve addition/subtraction problems. Count in multiples of twos, fives and tens. Subitising, including bonds to 10 and then 20.	Understand place value of tens and ones up to 20. Read and write numbers in digits and words	Recognise $\frac{1}{2}$ and $\frac{1}{4}$ of shapes and quantities Begin to use the language associated with simple fractions.
Times Tables	Count in twos, fives, tens.			
Year 2	Add and subtract: A two-digit number and ones; A two-digit number and tens; Two two-digit numbers; Adding three one-digit numbers. Multiply and divide by 2, 5, 10 using arrays and grouping. Solve simple word problems. Recognise odd and even numbers.	Number bonds to 20 Use bonds for mental addition and subtraction.	Understand place value of 2-digit numbers (tens and ones).	Recognise and find $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$ of length, shape, set of objects and quantities.

Times Tables	2x, 5x, 10x			
Year 3	Mentally add and subtract: Three-digit and ones; Three-digit and tens; Three-digit and hundreds. Use column methods for addition and subtraction of 3-digit numbers. Multiply 2-digit by 1-digit numbers. Short division with remainders.	Number bonds to 100. (first within 5/10 then all number bonds to 100). Use bonds to 100 for mental calculations and relate to multiplication/division	Understand place value in 3-digit numbers (hundreds, tens, ones).	Recognise unit and non-unit fractions Compare and order fractions with the same denominator. Count up and down in tenths. Recognise tenths on a number line and as a decimal using place-value chart.
Times Tables	3x, 4x, 8x (ensure previous tables are embedded).			

Year 4	Find 10, 100, 1000 more or less than a given number. Count backwards through zero to include negative numbers. Round numbers to nearest 10, 100, 1000. Add and subtract 4-digit numbers using column method. Make explicit inverse operations. Multiply 2- and 3-digit numbers by 1-digit numbers. Divide 3-digit numbers by 1-digit numbers. Divide one or two-digit numbers by 10 and 100 – use place value charts.	Quick recall of addition and subtraction facts. Use number bonds to support mental methods. Ensure number bonds up to 100 are embedded.	Understand place value in 4-digit numbers.	Understand and use equivalent fractions. Compare and order fractions with same denominator. Count up and down in hundredths. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.
Times Tables	6x, 7x, 9x, 11x, 12x (ensure all previous tables are embedded)			

Year 5	Count forwards and backwards in steps of powers of ten, including through zero. Round numbers to the nearest 10, 100, 1000, 10000, 100000. Use rounding to check answers to calculations. Add and subtract whole numbers and decimals fluently. Multiply up to 4-digit numbers by 1 or 2 digits. Know long multiplication. Know grid method for multiplication. Use long division or short division for dividing large numbers. Multiply decimals by whole numbers. To know that anything multiplied by zero is always zero.	Fluent recall of multiplication tables and bonds within 100 To be able to find factor pairs of a given number. To be able to give multiples of a given number. To multiply and divide numbers (including decimals) by 10, 100 and 1000. Use place value chart. To know prime numbers. To know square and cube numbers.	Understand place value to 1,000,000 including decimals	Add and subtract fractions with common denominators Convert mixed numbers and improper fractions Multiply proper fractions and mixed numbers by whole numbers. Convert decimals – fractions – percentages using place value chart. Recognise percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$.
Times Tables	All tables, at speed.			

Year 6	To be able to multiply and divide numbers (including decimals) by 10, 100, 1000. Multiply up to four-digits by two-digits. Use both long multiplication and grid method. Divide up to four-digit whole number and by two-digits by any formal method. Multiply decimals by both whole numbers and decimals. Divide decimals by both whole numbers and decimals. <u>Use estimations to check calculations.</u> Perform multi-step calculations with whole numbers and decimals. Give answers to two or three decimal places as required. Use order of operations and brackets.	Use number bonds flexibly with whole numbers and decimals. Apply bonds in algebra and problem solving. Identify common factors. Identify common multiples. To know prime, square and cube numbers.	Understand place value with numbers up to 10 million and decimals	Use common factors to simplify fractions. Use common multiples to create same denominators. Add and Subtract fractions with different denominators. Multiply and divide fractions with different denominators. Solve complex problems involving fractions and percentages. Convert decimals – fractions – percentages using place value chart.
Times Tables	All tables, at speed.			

Resources for developing fluency skills

Big Maths – Beat That

http://www.mathematicshed.com/uploads/1/2/5/7/12572836/bmbt_clc_tests.pdf

Third Space Learning – Fluent in Five Weeks (Y1-Y6) – free download (also uploaded in TSA)

<https://thirdspacelearning.com/resources/fluent-in-five-arithmetic-pack-years-3-6-weeks-1-6/>

Corbett Maths – Five a Day (KS2) <https://corbettmathsprimary.com/5-a-day/>

White Rose – Bar Modelling Word Problems

<https://whiteroseeducation.com/resources/decembar>

NRICH Primary Interactive Resources

<https://nrich.maths.org/primary-interactive-resources>